ISSN: 2716-9189 E-ISSN: 2676-1750
Journal of Studies in Language, Culture, and Society (JSLCS). (08) 01, 2025 (PP. 93-110)
Received: 12/02/2025 Accepted: 16/04/2025 Published: 30/04/2025

ALGERIAN EFL STUDENTS' PERSPECTIVES AND PRACTICES ON AI-ENABLED LEARNING AT THE UNIVERSITY OF MEDEA

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Abstract: This exploratory research investigates Algerian university students' perspectives and practices toward AI-enabled learning and redraws relevant pedagogical conclusions. With this aim in mind, a self-designed questionnaire was administered to a sample of 205 students enrolled in both undergraduate and master's programs at the Foreign Languages Department (English Section), Medea University, Algeria. The quantitative results revealed that the majority of EFL students had already integrated AI-powered instruments into their learning, particularly ChatGPT, which was the most widely used. The subjects primarily employed AI for writing, grammar, and vocabulary development, with less emphasis on speaking and listening skills. The analysis also showed that students displayed significantly positive viewpoints toward AI-assisted EFL learning because it offered a streamlined learning process, immediate feedback, target language development, and personalized learning. However, students identified several drawbacks, namely excessive reliance on AI, negative impact on their critical thinking, and the problem of unreliable AI-generated data. They also faced some challenges, such as limited access to advanced AI tools, privacy and security issues, and a lack of guidance on how to use AI thoughtfully and responsibly. The findings may lead policymakers and educators to address the often-problematic relationship between AI-based systems and the EFL learning/teaching practice at the University of Medea in Algeria and other similar higher education institutions, wherein a comprehensive framework for AI-enabled education, at this juncture at least, remains enveloped in a veil of uncertainty.

Keywords: Artificial intelligence, EFL learning, higher education, students' perspectives, students' practices

How to cite the article:
Boukhelkhal, O. (2025). Algerian EFL students' perspectives and practices on AI-enabled learning at the University of Medea. *Journal of Studies in Language, Culture, and Society*, *8*(1), 93-110.

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1. Introduction

Artificial intelligence (AI), a vital part of Industry 4.0 technologies, is gradually expanding its presence in individuals' modern lives. Of all its diverse applications, second/foreign language education stands out as one of the most critical areas where the former is redefining already-established methodologies. The prospect of infusing AI in Higher Education (HE) has recently become a hot topic in academia. Being no exception, the Algerian higher education system has also been obligated, if not pressured, to consider AI in various sectors, including education. That being the case, a significant body of scientific debate has also come to light between proponents of AI integration and those skeptical of its possible incorporation within the educational context (Chen et al., 2022). It is clear that such academic discourse is vital for both parties to stay ahead of the curve and remain curious about inevitable, cutting-edge innovations for the sake of successfully navigating any challenges that may arise in our new information age.

A systematic review conducted by Zawacki-Richter et al. (2019) underscores the limited engagement of educational scientists in AI-driven research. AI, without exaggeration, holds profound potential to transform second/foreign language education more than any technology that has ever existed before. Unlike traditional technologies, AI tools are constantly being developed in accordance with established frameworks and philosophies of teaching, learning, and assessment. To interact effectively with these tools, Ng et al. (2021) propose a framework of AI literacy, which involves four competency levels: understanding AI, using and applying AI, evaluating and creating AI, and addressing AI ethics. However, the integration of AI into Algerian HE, particularly in the context of English as a Foreign Language (EFL), is an understudied area. As a result, many Algerian EFL educational stakeholders today exhibit hesitation, resistance, or perhaps a misunderstanding of the pedagogy of AI as both a secure and rescue strategy. It is urgently needed to examine the role of "AI tools at all levels of education and prepare future generations to take action and make change" (Idri, 2024, p. 17).

Although some research has been forthcoming in recent years around students' engagement with AI, there remains, in effect, limited data uncovering the extent to which students utilize AI-powered instruments for EFL learning, which specific tools they employ, and how this engagement is perceived to either strengthen or, under certain conditions, handicap their learning. Aiming to listen to local voices, the current study was carried out to address the stated gap in the literature and illuminate the reported perspectives of Algerian EFL students, who are enrolled in their first, second, third, and master's years at Medea University, Algeria. Investigating their perspectives and practices on the use of AI-based tools might eventually lead to practical implications and will decipher the massive influx of skepticism surrounding this novel approach within Algerian HE.

The findings of the research are significant as they would provide practical insights, reshape pedagogical approaches and student engagement with AI-powered instruments, highlight assumptions that need to be challenged, and identify areas where practices can be rectified to overcome possible challenges and achieve better learning outcomes. In light of these objectives, the investigation sought to answer the following research questions:

RQ1: To what extent do Algerian EFL students use AI-powered instruments at the University of Medea?

RQ2: What types of AI-powered instruments do they prioritize to enhance their English language skills?

RQ3: What are their perspectives toward AI-enabled learning?

2. Literature Review

2.1 Theoretical Underpinnings

This work is informed by Ryan and Deci's (2020) comprehensive framework of human motivation. According to their model, Self-Determination Theory (SDT) suggests that all individuals, regardless of background, share three core psychological needs: the desire for self-determination, the need for competence, and the need for social connection. These needs are deeply rooted in human nature (Ryan & Deci, 2020). The choice of SDT was based on the ground that, first, AI-driven tools emphasize the importance of autonomy, which puts students in a perfect scenario to make their own decisions and choices, making personalized learning experiences, as will be discussed in the following sections, at the heart of the learning process. Second, AI-based tools, if used appropriately, are able to improve students' proficiency levels, thereby promoting a sense of competence. Last but not least, AI-based tools add a sense of relatedness through instant human-like interactions, where students feel more connected and engaged. Eventually, it is by now a truism to state that SDT provides a solid foundation for understanding how AI tools can support students' self-determination, competence, and relatedness.

2.2 Artificial Intelligence and the Search for Definition

To fully comprehend the nuances of AI integration in HE, a clear understanding of artificial intelligence is a necessary first step to establish. AI, as a branch of computer science, is a crucial element of the modern technology industry. AI is a term often considered slippery and loosely defined, with varying interpretations and no universally accepted definition. AI, in other words, can be viewed as a multifaceted phenomenon. Minsky and McCarthy, who were the pioneers in the field, first coined the term "Artificial Intelligence" in 1956 at Dartmouth College, USA. McCarthy (2007) and other scholars define AI as the simulation of human intelligence within machines, which enables them to perform a wide range of intelligent, human-like tasks. In particular, McCarthy et al. (2006) predicted that machines of the future would "use language, form abstractions and concepts, solve kinds of problems now reserved for humans, and improve themselves" (p. 6). Along the same lines, and as broadly defined by Baker and Smith (2019), AI means "Computers which perform cognitive tasks, usually associated with human minds, particularly learning and problem-solving" (p. 10). Based on these task-based definitions, one may assert that the main objective of AI is to enable machines or computers to imitate human intelligence qualities, such as reasoning, comprehension, problem-solving, decision-making, and learning. This may contribute to a clearer understanding of what AI entails. However, the exact nature of AI remains ambiguous or vague without a detailed specification of its aforementioned tasks/functions (Sheikh et al., 2023).

2.3 Current Applications of AI in Language Learning and Assessment

In their work, Zawacki-Richter et al. (2019) identified four primary areas where AI applications are changing education: (a) profiling and prediction, where AI technologies analyze learner data as a means to identify students in need of orientation and predict their academic trajectory; (b) intelligent tutoring systems, which provide personalized instructional support and may replace aspects of human tutoring; (c) assessment and evaluation, which involve the automation of grading and feedback processes to assess students' weak areas; and (d) adaptive systems and personalization, which tailor learning experiences by adjusting content and pacing to meet students' individual needs. Together, these innovations highlight AI's potential to personalize learning and reduce some instructional or administrative burdens.

2.4 AI in EFL: A Necessary Evil or a Force for Good?

From a foreign/second language learning standpoint, numerous researchers have recently illuminated the undeniable and decisively positive role that AI-powered instruments can play in learning, which might bring about a promising future for language students (Barrett & Pack, 2023; Batista et al., 2024; Dizon, 2017; Schmidt & Strassner, 2022; Xu et al., 2023). For example, AI-powered tools, as discussed by Schmidt and Strassner (2022) and Xu et al. (2023), can equip students with more personalized and adaptive learning experiences, which may allow for a deeper and more engaging approach to language acquisition tailored to individual student learning needs and pace. The judicious use of AI-driven instruments in language learning is also considered to be of paramount importance as it offers timely and contextual feedback (Barrett & Pack, 2023; Batista et al., 2024). The latter is an indispensable component for success in language learning. Xu et al. (2023) add that AI-assisted technologies are useful because they automate repetitive tasks, which, in turn, can enable deeper focus on more meaningful aspects of second/foreign language acquisition.

Nevertheless, not every study that explored the potential of AI in EFL has yielded conclusive evidence of positive findings. Yu and Guo (2023), for example, identified four main issues that can arise due to AI in education: opacity and unexplainability, data privacy and security, personalization and fairness, and ineffectiveness and unreliability. These concerns necessitate that users of AI should exercise caution to ensure an efficient, secure, and safe learning experience. Another recent study has introduced more serious and ethical challenges associated with AI, including hallucinations, interaction risks, and potential negative impacts on human creativity, writing, and research skills (Hagendorff, 2024). In addition, Spector and Ma (2019) state that overreliance on AI-powered language learning systems may negatively impact the critical thinking abilities of students. Kerma's (2025) study further supports this concern and, according to teachers' perspectives, revealed that using AI tools excessively has a high likelihood of impairing students' engagement, as well as their analytical and evaluative thinking skills. In stark contrast, students' engagement with AI can foster deeper cognitive engagement, which may lead to higher-order thinking skills development (Ilgun Dibek et al., 2024). These divergent findings on AI and students' critical thinking call for more research in the field.

Perhaps, as Popenici and Kerr (2017) and Spector and Ma (2019) argued, a more carefully balanced approach to AI in HE, where AI is solely used as a facilitator instrument, rather than replacing human educators and traditional learning methods, to enhance academic achievement with the development of human intelligence at the forefront, is more than necessary. It is noteworthy that AI-based technologies can significantly contribute to EFL education by automating simpler "decision-taking" tasks that require low or trivial cognitive practices, whereas complex "decision-making" processes, requiring higher and complex cognitive efforts, should remain the sole and exclusive craft of human intelligence. Using AI-integrated strategies exclusively as learning tools for students is akin to building a house on sand. To put it differently, the premise that there must be an emphasis on treating any information and communication devise as a means, not an end in itself, may also be applied to AI-assisted technologies; its incorporation should not be at the expense of neglecting its challenges, limitations, and ethical implications. Societal implications must also be carefully considered to maintain this balance, so that technological advancements are in harmony with their broader and unique social implications (Vrabie, 2024).

2.5 Algeria's Sociolinguistic Landscape in the Digital Intelligence Age

Algeria's current complex language situation, shaped by the coexistence of Modern Standard Arabic (MSA), Derja (colloquial Arabic), Tamazight, and French, may lead to both affordances and obstacles for the learning/teaching of English. The latter is expanding in Algeria in an unprecedented fashion. Until recently, the Algerian Minister of Higher Education and Scientific Research, in line with global trends, instituted a language policy shift from French-based towards endorsing English as a medium of instruction (EMI), a phenomenon Galloway and Rose (2021) refer to as "Englishization". In the words of Macaro et al. (2018), EMI is defined as "The use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language of the majority of the population is not English" (p. 37). In Algeria, EMI was adopted as a "prêt-à-porter system" to meet educational needs, such as to better the quality of teaching and training in order to address social and economic concerns, to adapt to international and European educational standards, to improve and create new job opportunities, and to modernize ways of management and pedagogy (Djebbari, 2024).

On the other hand, a multilingual approach within HE can be crucial for a nation like Algeria in its pursuit of modernity (Afkir, 2020). Belmihoub (2017) argued that the rise of English in Algeria does not necessitate a decline in French. Supporting this view, Negadi's study (2015) demonstrated that French and other home or family languages are indeed valuable assets to Algerians and stepping stones toward success in English. It could also be argued that the monolingual norms that position English as the sole medium of instruction may contradict Algeria's multilingual context. Notably, translanguaging, a pedagogical approach that has gained global attention in recent years, encourages learners to use their full linguistic resources/repertoires and suggests an alternative view to monolingual instruction (García & Wei, 2014). It facilitates comprehension and engagement by using students' existing linguistic resources, particularly in multilingual settings (Mazak & Carroll, 2016). For students whose native language is not English, the English classroom alone cannot provide all the instructional support needed to achieve proficiency in the target language. Therefore, these students benefit from the teacher-like guidance that AI-powered tools can offer. To better reflect Algeria's sociolinguistic realities and enhance English proficiency, the dominant lingua franca of international communication, a promising strategy may be to integrate AI-powered technologies within a translingual framework in Algerian HE.

2.6 Supporting EFL in Algeria through an AI-enabled Approach to Learning

The Algerian Ministry of Higher Education has recently begun considering the transition to the University 4.0 model, which necessitates an emphasis on artificial intelligence. With regard to the EFL context, scholarly research is increasingly concentrating on implementing AI-enabled education. Therefore, it seems vital to examine recent and relevant studies that have addressed this topic within the Algerian setting.

Boumaza (2024) investigated how first-year EFL students at École Normale Supérieure (ENS) Constantine use AI-powered tools, such as speech recognition applications, to improve oral communication. Her study reveals that AI provides real-time feedback, reduces anxiety, and enhances fluency and pronunciation skills. Similarly, Rabehi and Hadfi (2024) investigated the role of ChatGPT in the development of writing skills among fourth-year students at ENS Ouargla. They found that students rely on AI for generating ideas, correcting grammar, and receiving personalized feedback. The study also found that ChatGPT was a dominant choice among students. Along similar lines, Sebbah (2025) examined how graduate and undergraduate EFL students at the University of Algiers 2 engage with AI-powered tools. Her study, which surveyed 305 participants, revealed that most students were familiar with a

number of chatbots and AI applications. Additionally, she found that students exhibit a favorable and optimistic disposition toward AI, but also express concerns with regard to exaggerated reliance on the tool and its potential negative influence on students' motivation, creativity, and critical thinking skills. Moreover, Guemide and Sahraoui (2023), relying on EFL students' perceptions from the University Mohammed Boudiaf of M'sila, show that AI's interactivity can provide immediate feedback and foster engagement, which leads to better EFL learning. Broadly speaking, the mentioned studies demonstrate significant opportunities for AI to address EFL learners' diverse needs and improve the target language.

Notwithstanding the possible and evident merits of AI in EFL classrooms, as discussed above, other studies have raised several challenges associated with its implementation. For instance, Merdassi and Belmekki's (2024) study, relying on 20 teachers' perspectives from different Algerian universities, revealed that over-reliance on AI might gradually weaken students' independent problem-solving skills, especially in contexts where students view AI as a shortcut rather than an additional and helpful instrument. The latter qualities are unavoidable in the learning-teaching process. In another study, Benaicha and Semmoud (2024) surveyed 200 EFL teachers from various Algerian universities to examine their attitudes toward AI. Their study also raised concerns about AI's impact on teachers' roles and the risk of over-reliance on technology, which could overshadow traditional teaching methods. Therefore, a balanced approach toward AI, with respect to Algerian EFL instruction, is of critical importance. The complex question that remains unanswered is how to define the features of such a balance.

The present study seeks to contribute to the existing literature and ongoing discussion on AI-enabled EFL education in Algeria. However, our exploration of the matter takes a step back from the detailed focus of existing research to ask foundational questions about students' current engagement with artificial intelligence. That is to say, rather than zooming in on specific language skills or AI applications, it aims to zoom out and obtain broader or wide-ranging perspectives of the frequency, the tools students rely on, and their perceptions of AI's overall impact on EFL learning. Notably, addressing the basic yet fundamental research questions stated earlier may pave the way and provide a starting point for future studies to build upon. Furthermore, this broader perspective may help policymakers and educators develop strategies grounded in an understanding of students' actual practices and perspectives.

3. Methodology

The purpose of the present study is to explore the reported practices and perspectives of EFL students toward AI-driven tools. It seeks to examine the extent to which study participants access and employ AI-assisted tools in or outside the classroom, the types of AI applications/tools they prioritize, and their perspectives regarding the impact of these tools on their learning and studies.

To answer the research questions mentioned earlier, the researcher adopted an exploratory design to investigate students' perceptions and practices related to AI-based learning. Exploratory studies are particularly helpful for researching topics that have not yet been thoroughly researched (Swedberg, 2020). The researcher employed a quantitative method using a self-designed questionnaire as the data collection instrument. According to Kothari (2004), quantitative research focuses on examining variables that represent shared characteristics within a group, which are quantified through methods such as counting, scaling, or assigning values to categorical data. The questionnaire consisted of two parts. The first part focused on participants' personal information, such as gender, age, academic level, and English proficiency level. The second part of the questionnaire consisted of multiple-choice questions and other items based on a 3-point Likert scale, ranging from 2 (agree) to 0

(disagree), with 1 representing neutral. The participants were asked to rate the items based on their level of agreement or disagreement to identify their perspectives on the use of AI-powered instruments in their EFL practice. The questionnaire was designed, reviewed, and shared in students' classes with the assistance of university teachers, as well as online via platforms such as Gmail, WhatsApp, Google Classroom, and Facebook. Data collection occurred from November to December in 2024.

A non-probability convenience sample was used in this study, specifically convenience sampling, where participants were selected based on their willingness and availability to participate, aiming to increase the response rate. Dornyei (2007) identifies convenience sampling as the most common method in second language research. He adds that participant selection is based on practical considerations, such as geographical location, availability, ease of access, and volunteer status. While this method may limit the ability to generalize findings to the broader population, it can still yield valuable data pertinent to the research questions.

4. Results

This section aims to analyze and interpret data collected from an online questionnaire administered to Algerian EFL university students at Medea University, Algeria. Out of 674 students (the entire population), a total of 205 students consented to participate in the research (a 30.41% response rate). The questionnaire findings are presented as percentages, means, and standard deviations. Moreover, the analysis is guided by the study's research questions and questionnaire items, with a focus on the quantitative data to reveal general trends among respondents.

Table 1:

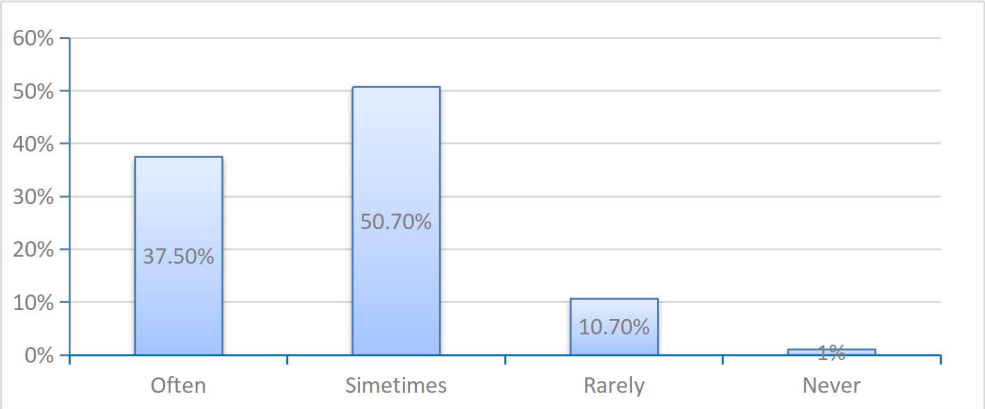
Participant Demographic Information

Variable	***Categories***	***N***	***Percentage (n=205)***
Gender	Male	49	23.90%
	Female	156	76.10%
Age	Under 20	78	38%
	20-25	107	52.20%
	26-30	18	8.80%
	Over 30	2	0.90%
Academic Level	License1 (First Year)	83	40.50%
	License2 (Second Year)	22	10.70%
	License 3 (Third Year)	49	23.90%
	Master 1	38	18.50%
	Master 2	13	6.30%
English Proficiency	Beginner	28	13.70%
	Intermediate	141	68.80%
	Advanced	36	17.60%

As shown in Table 01, the researcher targeted Algerian EFL university students, including 205 participants (N=205) from Dr. Yahia Fares University in Médéa, Algeria. These participants were undergraduate students (Licence 1, 2, and 3) and master's students (Master 1 and 2). The sample consisted of 49 males (23.9%) and 156 females (76.1%), aged between 18 and 44. Regarding their academic level, 83 participants (40.5%) were in License 1 (First Year), 22 (10.7%) in License 2 (Second Year), 49 (23.9%) in License 3 (Third Year), 38 (18.5%) in Master 1, and 13 (6.3%) in Master 2. In terms of English proficiency level, 28 participants (13.7%) identified as beginners, 141 (68.8%) as intermediate, and 36 (17.6%) as advanced users of English.

Figure 1:

Frequency with Which Algerian EFL Students Use AI-Powered Instruments



As Figure 1 illustrates, among the participating EFL students, 50.7% reported using AI-powered instruments 'sometimes,' while 37.5% indicated that they use them 'often.' A smaller proportion, 10.7%, stated they 'rarely' rely on such tools, whereas only 1% of the respondents reported 'never' engaging with AI-powered learning instruments. These findings suggest that a significant majority of students already incorporate AI tools into their learning processes to some extent.

Table 2:

Types of AI-Powered Instruments Used by EFL Algerian Students

AI Tool	***Number of Users***	***Percentage (%)***
ChatGPT	176	85.9%
QuillBot	34	16.6%
Gemini	68	33.2%
Grammarly	51	24.9%
Copilot	16	7.8%
Perplexity	25	12.2%
Aithor	16	7.8%
Claude	04	2%
Other AI tools	01	≤1%

As shown in Table 2, the majority of participating EFL students reported using ChatGPT (85.9%) as their primary AI-powered tool for learning. Gemini, the second most used tool, was used by 33.2% of respondents. Grammarly was used by 24.9% of respondents, and QuillBot by 16.6%. In addition, 12.2% of students used Perplexity AI, while Copilot and Aithor each had 7.8% of users. A small percentage of respondents (2%) reported using Claude, whereas less than 1% stated that they used other tools, such as Duolingo, Google Translate, Snapchat AI, Gamma, Canva, SciSpace, Midjourney, and Poe. These findings indicate a strong preference for ChatGPT and similar advanced AI-driven applications among EFL students.

Table 3:

The Perceived Impact of AI-powered Instruments on Language Skills

Language Skill	***N***	***Percentage (%)***
Reading	89	43.4
Listening	54	26.3
Speaking	64	31.2
Writing	128	62.4
Vocabulary	141	68.8
Grammar	87	42.4

Informants were asked to identify the language skills for which AI-powered instruments had provided the most assistance; they were allowed to select multiple skills. As detailed in Table 3, vocabulary was the most frequently mentioned skill (68.8%), followed by writing (62.4%) and then grammar (42.4%). Moreover, respondents reported greater benefit from AI support for reading (43.4%) than for speaking (31.2%) or listening (26.3%). Hence, these findings suggest that students are less likely to use AI-powered instruments for speaking and listening practice, as opposed to other language skills.

Table 4:

Algerian EFL Students' Perspectives on the Importance of AI-powered Instruments

Benefits	***Agree (2)***	***Neutral (1)***	***Disagree (0)***	***M***	***SD***
I think AI tools help me save time and effort.	147	35	23	1.6	0.68
I think AI tools provide immediate feedback and assistance.	83	73	49	1.17	0.79
I think AI tools help improve my language skills.	70	81	54	1.08	0.77
I think AI tools make learning fit my own level.	67	83	55	1.06	0.77
I think AI tools make learning enjoyable.	43	97	65	0.89	0.72

In response to the study's third question, "What are EFL Algerian students' perspectives on AI applications in their learning?", and based on Table 4, which presents the participants' perspectives concerning the importance of AI-powered instruments in the EFL context, the data reveals a generally positive but varied perception of AI tools among participants. As evidently shown in the data, the mean scores of the items range from 0.89 to 1.6 (SD values range from 0.68 to 0.79), indicating a moderate level of agreement. The highest mean score (M = 1.6, SD = 0.68) was recorded for the statement "I think AI tools help me save time and effort," reflecting strong agreement. However, the lowest mean score (M = 0.89, SD = 0.72) was recorded for the statement "I think AI tools make learning more enjoyable,". The latter suggests a lower level of agreement. These findings support the conclusion that participants generally hold positive attitudes toward AI-powered tools in their English learning. Thus, respondents acknowledge the usefulness of AI tools, particularly in providing a streamlined learning process and immediate feedback, enhancing language skills, and facilitating personalized learning, though they express slightly less acceptance regarding the role of AI-assisted tools in making learning enjoyable.

Table 5:

Algerian EFL Students' Perceived Drawbacks of Using AI-powered Instruments

Drawbacks	***Agree (2)***	***Neutral (1)***	***Disagree (0)***	***M***	***SD***
I think AI tools make me depend too much on AI.	122	50	33	1.43	0.75
I think AI tools reduce my critical thinking.	118	52	35	1.4	0.76
I think AI tools distract me from other important tasks.	54	91	60	0.97	0.75
I think AI tools sometimes give incorrect information.	107	59	39	1.33	0.78
I think AI tools lead to plagiarism or academic dishonesty.	79	76	50	1.14	0.78

Table 5 summarizes the findings concerning the participants' perspectives on the potential drawbacks of AI-powered instruments in EFL learning. As can be clearly seen from the data, the mean scores range from 0.97 to 1.43 (SD values between 0.75 and 0.78), demonstrating a moderate level of agreement among respondents. In particular, the highest mean score (M = 1.43, SD = 0.75) was recorded for the statement "I think AI tools make me depend too much on AI," demonstrating a strong level of agreement. Similarly, the statement "I think AI tools reduce my critical thinking" received a mean of 1.4 (SD = 0.76), showing that participants acknowledge the risk of overreliance on AI in their learning. The statement "I think AI tools sometimes give incorrect information" had a mean of 1.33 (SD = 0.78), suggesting a notable concern regarding the reliability of AI-generated content. Additionally, the statement "I think AI tools lead to plagiarism or academic dishonesty" had a mean of 1.14 (SD = 0.78), demonstrating a moderate level of agreement among respondents. On the other hand, the lowest mean score (M = 0.97, SD = 0.75) was recorded for the statement "I think AI tools distract me from other important tasks," which means that the latter issue is perceived as less problematic. These results indicate that while Algerian EFL students acknowledge certain risks associated with AI-assisted learning, concerns about excessive dependency (M = 1.43), reduced critical thinking (M = 1.4), and misinformation (M = 1.33) are more pronounced compared to those related to academic dishonesty (M = 1.14) or distraction from important tasks (M = 0.97).

Table 6:

Algerian EFL Students' Perceived Challenges of Using AI-powered Instruments

Challenges	***Agree (2)***	***Neutral (1)***	***Disagree (0)***	***M***	***SD***
I have limited access to advanced AI tools and features.	64	85	56	1.04	0.76
I still prefer other learning methods.	57	89	59	0.99	0.75
I am not able to use AI tools well.	56	89	60	0.98	0.75
I have concerns about privacy and security.	56	89	60	0.98	0.75
I lack the motivation to use AI tools.	43	97	65	0.89	0.72

Table 6 shows the results of the questionnaire regarding the challenges EFL students face when using AI tools for learning English. It is clear from the data that the mean scores range from 0.89 to 1.04 (SD values between 0.72 and 0.76), which shows a generally

moderate level of concern among the responses. The highest mean score (M = 1.04, SD = 0.76) was recorded for the statement "I have limited access to advanced AI tools and features," suggesting that accessibility is the most salient challenge faced by students. This implies that a considerable number of participants experience restrictions in accessing sophisticated AI tools, which might impede the efficient use of these tools in their EFL learning. In the same vein, the statement "I still prefer other learning methods" received a mean score of 0.99 (SD = 0.75), which may reflect that a notable proportion of students still favor traditional or non-AI-based approaches over AI-based learning. The statements "I am not able to use AI tools well" and "I have concerns about privacy and security" both recorded a mean score of 0.98 (SD = 0.75), which reveals a moderate level of concern. These findings show that students understand the potential of AI tools, but some struggle with effective use, while others have privacy and security concerns. A lack of motivation to use AI tools had the lowest mean score (M = 0.89, SD = 0.72), which shows that it is a less critical issue compared to accessibility, learning preferences, or usability issues.

5. Discussion

The research at hand has identified various issues relevant to understanding Algerian university students' perspectives and practices on AI-enabled learning in EFL. Therefore, the study's findings, when interpreted, provide answers to the research questions posed earlier.

5.1 University Students' Use of AI-Powered Instruments in EFL Learning

There is a noticeable lack of studies that have attempted to examine the extent to which students engage with AI-powered tools for language learning in Algeria. In this study, the questionnaire results reveal that a significant number of Algerian EFL students are actively using AI tools. These findings, in response to RQ 1, provide evidence that AI has become an integral, no longer trivial, component of students' learning strategies. Moreover, the subjects' proactive and independent engagement with AI tools further aligns with SDT's (Ryan & Deci, 2020) emphasis on autonomy. On the same train of thought, it was found that students are aware of the shortcomings of AI tools and might benefit from tasks and activities that are not only AI-generated but also those that challenge their higher thinking and develop their critical thinking skills. That is, teachers should implement a balanced approach that encourages both the effective use of technology and the development of students' autonomy and critical thinking. Due to the lack of training on AI integration, most of those students, if not all, learned how to use these innovations independently. It is worth noting that focusing solely on the frequency of use may not provide a comprehensive understanding of how students integrate AI into their learning process.

Furthermore, in response to RQ 2, this study explored the types of AI-powered instruments students use in their EFL learning. The questionnaire participants prefer text-based applications, particularly those that support writing, grammar, and vocabulary development. For example, ChatGPT was the most popular tool among participating students. This goes hand in hand with the findings of Rabehi and Hadfi (2024) and Sebbah (2025), who also identified ChatGPT as the most popular app among EFL students in Algeria. Arguably, the fact that students rely on AI primarily for text-based production or editing of mostly lower-order errors may suggest their desire to achieve immediate outcomes, such as correcting written assignments, rather than deeper engagement and immersion with the language learning itself. Grammarly and QuillBot, both designed for grammar and writing enhancement, were also frequently used. This reinforces the idea that AI is mainly approached to edit or enhance grammar and writing, and not as a means to upgrade one's language

learning skills. Yet, they should turn AI from a simple information source into an interactive tool that fosters deeper language learning.

The data also displayed that students perceive AI as particularly beneficial in expanding their vocabulary, refining their writing, and improving grammatical accuracy. Interestingly, the results of this work, similar to the findings of Boumaza (2024) and Rabehi & Hadfi (2024), indicated that students believe that AI-assisted tools are more helpful in reading and writing than in speaking and listening. The findings suggest that EFL students do not use AI for spoken language practice due to a lack of awareness or perhaps a preference for human interaction.

All in all, these findings address the first and second research questions. Given the dramatic increase of AI and the Algerian Ministry of Higher Education's push for its integration, a thorough understanding of students' AI practices and preferences may be required to develop AI literacy in both students and teachers, ensure the proper functioning of existing tools, and deliver training programs on the latest AI developments, which continue to grow day after day, in English language learning, assessment, and teaching. To this end, it seems important to shed light on EFL students' opinions regarding AI's advantages, disadvantages, and challenges (RQ3).

5.2 Benefits of AI-Powered Instruments in EFL Learning

Most of the data indicate that the majority of respondents agreed that using AI-powered instruments in EFL learning has multifaceted benefits. Most participants agreed on AI's role in saving time and effort, which would enhance streamlining and efficiency. This was in agreement with Sebbah's study (2025). Also, Xu et al. (2023) found that AI automates repetitive tasks, which would enable learners to focus on higher-order language acquisition. Previous studies have identified AI's potential in providing immediate and contextual feedback (e.g., Barrett & Pack, 2023; Batista et al., 2024). This claim is consistent with the current study's findings. Immediate feedback, however, does not necessarily guarantee reliable and accurate feedback. Similar to the findings of Schmidt and Strassner (2022), most respondents indicated that AI-powered instruments can deliver personalized and adaptive learning experiences. The latter benefit may address the diverse needs of learners in multilingual contexts, such as Algeria. Studies in Algeria further underscore AI's role in reducing anxiety, fostering fluency, and supporting self-regulated learning (Guemide & Sahraoui, 2023). Such benefits encourage instructors to integrate AI into their classes. While respondents strongly agreed and seemed to acknowledge the importance of AI, their agreement was considerably lower for the notion that AI makes learning more enjoyable. Based on the SDT tenets (Ryan & Deci, 2020) and these findings, it is crucial to consider how the subjects viewed the usefulness of AI tools in fostering autonomy, competence, and relatedness. Their consensus on AI's capacity to provide timely feedback, support target language competence, enable personalized learning, and encourage instant, human-like interactions stresses the relevance of autonomy, competence, and the feeling of connectedness, respectively, to their positive views of AI. Yet, further investigation is needed to fully understand AI's impact on the affective aspects of learning.

5.3. Drawbacks of AI-powered Instruments in EFL Learning

Although EFL students recognize the value of AI-enabled learning, the findings of this study suggest that AI is a double-edged sword. For example, the majority of respondents reported the issue of excessive reliance on AI. These results were reinforced by the respondents who agreed that AI reduces one's critical thinking. In support of this view,

overdependence of AI-powered systems can weaken students' critical thinking (Spector & Ma, 2019; Benaicha & Semmoud, 2024; Sebbah, 2025; Kerma, 2025) and independent problem-solving skills (Merdassi & Belmekki, 2024). According to Ilgun Dibek et al. (2024), however, AI can help students enhance higher-order thinking skills. Effective AI integration in EFL may mostly depend on the strategies students employ to engage with the technology. Further research could investigate strategies to develop students into critical consumers and proficient users of AI tools. In line with the results identified by Yu and Guo (2023) and Hagendorff (2024), our respondents were also aware of the ineffectiveness and unreliability of AI-generated content. There must also be an emphasis on training students to critically evaluate any AI-generated work in order to avoid misinformation issues. Academic dishonesty and plagiarism, though with less agreement, were other concerns highlighted by our respondents. The findings show that EFL students acknowledge the risk of plagiarism, but they do not consider it a paramount issue. Yet, Hagendorff (2024) pointed out that AI-powered tools lead to ethical challenges in academic writing and research, as well as creativity. There is a need to instruct students on academic integrity when using AI. Although the risks outlined above are serious, there are also several barriers to AI integration that must be addressed.

5.4 Barriers to AI-powered Instruments Integration into EFL Learning

Researchers who have investigated AI integration into education mention, as discussed earlier, many barriers in this respect. Similarly, most respondents in our study acknowledged that using AI is not unchallenging. The most commonly reported barrier among respondents was limited access to advanced AI tools and features. This may justify their lack of ability in using AI tools for more creative and interactive learning purposes, as mentioned earlier. To address the latter barrier, institutions should explore and invest in affordable and user-friendly AI tools, including open-source options or readily accessible platforms, to ensure equitable access and help both students and educators to explore the full creative and interactive potential of AI in EFL learning. Another major challenge is that some students still prefer traditional learning methods over AI-powered tools, which reinforces the argument that AI should be a valuable addition to human language instruction (Popenici & Kerr, 2017). The findings also indicate that some students struggle to effectively use AI tools. Being unfamiliar with some AI tools may be an obstacle for many EFL learners; sufficient training on how to integrate these tools becomes vital. Moreover, and in line with the findings of Yu and Guo (2023) and Hagendorff (2024), our respondents were also aware of the risks linked to their data privacy and security when engaged with AI. It is crucial to educate students about data privacy and guide them in using secure AI platforms. Last but not least, the lack of motivation to use AI tools was the least reported issue among respondents. Thus, the findings show that EFL students, although some face technical and ethical issues, are willing to use AI because of its practical utility.

6. Conclusion and Implications

The fast-paced growth of AI-supported education has led to a broad field of research and raised many unanswered questions. Yet, the present paper's efforts were to investigate the perspectives and practices of 205 students regarding the use of AI-powered instruments in their own EFL learning, taking the Department of Foreign Languages, English Section at the University of Medea as a case in point. In addition, some limitations must be acknowledged in this study: reliance on self-reported data, a single-university sample, the use of only one research tool (a questionnaire), and the absence of teachers' perspectives.

In light of the findings obtained, it is concluded that: 1) Although AI tools are not yet incorporated into Algerian higher education curricula, a significant majority of participants have already used them in their own learning, especially ChatGPT, followed by Gemini and

Grammarly. 2) Similarly to some studies, most of the data indicate that AI is primarily used for writing, grammar, and vocabulary development, but speaking and listening receive less attention. 3) The results indicate that participants hold favorable and optimistic perspectives on AI-assisted tools, considering their benefits in streamlining, immediate feedback, language development, and support for personalized learning; however, they also expressed concerns about over-dependence on AI, decline in students' critical thinking skills, and risk of misleading information/content. 4) Key challenges identified include limited access to advanced AI tools, concerns regarding privacy and security, and a lack of structured guidance, which, in turn, underscores the need for institutional support and collaborative teacher-student AI initiatives in HE. Consequently, the findings illuminate several key pedagogical implications. These are as follows:

- Decision makers could use this exploratory study to expand current research and potentially build a framework for seamlessly integrating AI into Algerian higher education in order to embrace the digital intelligence era.
- The Algerian Ministry of Higher Education should invest in AI literacy training programs for students, researchers, and teachers. Today's university students are key to the effective implementation of AI in the near future.
- Universities should organize workshops, contribute to the ongoing dialogue, and offer actionable insights into the strategic and systematic integration of AI at the tertiary level in Algeria.
- To harness its powerful advantages in learning, EFL students should adopt a mindset that views AI as a highly interactive tool that can boost deeper learning in the four English language skills, rather than merely a provider of knowledge.
- To address the concerns and challenges raised in this research, institutions should develop clear and sustainable policies on AI ethics, data privacy, and academic integrity to ensure thoughtful and responsible AI use among students and teachers alike.

It is increasingly apparent that Artificial Intelligence possesses a transformative potential exceeding the impact of digitization, the internet, and social media. Therefore, English language education appears to be currently at the dawn of a nascent era. If approached and implemented strategically, AI-enabled learning could equip students with English language skills and significantly enhance their learning experience. Furthermore, it can build a community of learning that promotes 21st-century skills (Idri, 2024), so as to pave the way for them to play a central role in the process of their EFL learning and academic success.

Acknowledgment

I would like to express my appreciation to Prof. Zakia Djebbari for her invaluable support, to the teachers and students of English at the University of Medea for their help in the data collection process, and to the Algerian Online Writing Lab (AOWL) team for their consultation and fine-tuning feedback on this work.

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Appendix: Questionnaire – Algerian EFL Students' Use of AI-Powered Tools

Dear Student, if you have time and are willing to contribute to research, you are kindly invited to complete this questionnaire. The data collected through this questionnaire will be used for research purposes only. Therefore, the confidentiality of the data and anonymity of the participants are of the utmost importance to the researcher. Your cooperation is highly appreciated. Thank you!

For single-choice questions, please select one option; for multi-choice questions, select all that apply.

What is your gender?

Male ( ) Female ( )

What is your age?

Under 20 ( ) 20-25 ( ) 26-30 ( ) Over 30 ( )

What is your academic level?

License 1( ) License 2( ) License 3( ) Master 1( ) Master 2( )

How would you evaluate yourself in English?

Beginner ( ) Intermediate ( ) Advanced ( )

How often do you use AI-powered instruments for learning?

Never ( ) Rarely ( ) Sometimes ( ) Often ( )

Which AI-powered tools do you use? (Select all that apply)

ChatGPT ( ) QuillBot ( ) Gemini ( ) Grammarly ( ) Copilot ( ) Perplexity( ) Aithor ( )
Claude ( ) Other (Please specify) ( )

Which language skills have AI-powered instruments helped you with the most? (Select all that apply)

Reading ( ) Listening ( ) Speaking ( ) Writing ( ) Vocabulary ( ) Grammar ( )

Perspectives about the use of AI-powered tools	**Agree**	**Neutral**	**Disagree**
I think AI tools help me save time and effort.			
I think AI tools provide immediate feedback and assistance.			
I think AI tools help improve my language skills.			
I think AI tools make learning fit my own level.			
I think AI tools make learning enjoyable.			
I think AI tools make me depend too much on AI.			
I think AI tools reduce my critical thinking.			
I think AI tools distract me from other important tasks.			
I think AI tools sometimes give incorrect information.			
I think AI tools lead to plagiarism or academic dishonesty.			
I have limited access to advanced AI tools and features.			
I still prefer other learning methods.			
I am not able to use AI tools well.			
I have concerns about privacy and security.			
I lack the motivation to use AI tools.			

Thank you for your cooperation.