

تعلم المفردات بمساعدة الذكاء الاصطناعي واستقلالية المتعلم: التصورات والتحديات لدى طلبة الجامعة متعلمي اللغة الإنجليزية كلغة أجنبية

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AI-Assisted Vocabulary Learning and Learner Autonomy: Perceptions and Challenges Among EFL University Students

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المخلص

يُعدّ تعلّم المفردات جانباً هاماً من جوانب تعلّم اللغة. ومع التطورات التي شهدتها الذكاء الاصطناعي في السنوات الأخيرة، ظهرت العديد من أدوات التعلّم التي تستخدم الذكاء الاصطناعي لدعم متعلّمي اللغة الإنجليزية في تحسين مهاراتهم اللغوية. ومن سمات هذه الأدوات، مثل ChatGPT المستخدم في هذه الدراسة، أنها تدعم تعلّم المفردات في بيئات تعليمية تركز على المتعلّم، وتوفّر العديد من الميزات كالتعريفات، وجمالاً نموذجية، ومعلومات حول كيفية استخدام الكلمات والعبارات في الكتابة والتحدث، بالإضافة إلى التغذية الراجعة الفورية للمتعلّمين. تهدف هذه الدراسة إلى فحص تصورات طلاب اللغة الإنجليزية كلغة أجنبية من الأكّراد في الجامعات، الذين يستخدمون أدوات التعلّم المدعومة بالذكاء الاصطناعي لبناء مفرداتهم، وتحديد آرائهم حول الدور الذي يمكن أن تؤديه هذه الأدوات في تعزيز استقلالية المتعلّم. وتعتمد الدراسة على منهجية البحث المختلط. استُخدم استبيان لجمع بيانات كمية تتعلق باستخدام طلاب اللغة الإنجليزية كلغة أجنبية لأدوات تعلم المفردات القائمة على الذكاء



الاصطناعي، وجوانب تعلم المفردات التي يمكن أن تُسهّلها هذه الأدوات، واستقلالية المتعلم، ثم أُجريت مقابلات معمقة شبه منظمة مع المشاركين. كما تكشف النتائج عن مدى قدرة هذه الأدوات القائمة على الذكاء الاصطناعي، وغيرها من الأدوات التعليمية القائمة على التكنولوجيا، على دعم المتعلمين وتشجيعهم على تحمّل مسؤولية أكبر عن تعلمهم للمفردات من خلال الدراسة الذاتية، وتحديد جوانب مفرداتهم التي تتطلب مزيداً من التدريب، ووضع أهدافهم الخاصة بالمفردات، وتطوير خطط واستراتيجيات التعلم، وتحديد الموارد التي يمكن أن تساعد على تحقيق تلك الأهداف، وتطوير استراتيجيات وتقنيات التقييم الذاتي. تدعم النتائج فكرة أنه على الرغم من أن استخدام التكنولوجيا وأدوات التعلم التي تستخدم الذكاء الاصطناعي لديه القدرة على تعزيز استقلالية المتعلم، إلا أن دعم المعلم وتوجيهه وتوفير الدعم له لا يزال مهماً جداً لتسهيل التعلم بشكل عام وتعزيز استقلالية المتعلم في تعلم المفردات على وجه الخصوص.

Abstract

Vocabulary learning is an important aspect of language learning. Along with advances in artificial intelligence (AI) in recent years, a number of learning tools that employ AI have emerged to support English language learners to improve their vocabulary skills. One of the features of these learning tools, such as ChatGPT used in this study, is that they support vocabulary learning in learner-centered environments, provide a number of features such as definitions, sample sentences, information on how to use words and phrases in writing and speaking, and instant feedback to learners. These types of resources have a lot of potential to enable learners to be more autonomous in their learning. The aim of this study is to examine the perceptions of Kurdish EFL university students, who use AI-assisted learning tools for vocabulary building and identify their views regarding the role that these tools can play in enhancing learner autonomy. The study applies a mixed-methods approach. A questionnaire is used to collect quantitative data related to obtain information about EFL students' use of AI-based vocabulary tools, aspects of vocabulary learning that AI-assisted learning tools can facilitate, and learner autonomy, and then follow up with in-depth semi-structured interviews of participants. The findings of this study provide information on the use of vocabulary learning tools employing AI and how they can be used in classroom instruction to motivate learners and promote vocabulary learning. The findings also reveal the extent to which these AI-based learning tools and other technology-based instructional tools can support and encourage learners to take more responsibility for



their own vocabulary learning by studying on their own, identifying areas in their vocabulary that require more practice, setting their own vocabulary goals, developing learning plans and strategies, identifying resources that can help them to achieve those goals, and developing self-evaluation strategies and techniques. The findings support the notion that, even though the use of technology and learning tools that utilize AI has the potential to enhance learner autonomy, teacher support, guidance, and scaffolding are still very important for facilitating learning in general and enhancing learner autonomy in vocabulary learning, in particular.

1. Introduction

Vocabulary is one of the essential components of EFL learning, because it is necessary for understanding and using language proficiently in all skills (listening, speaking, reading and writing). At the university level, vocabulary development is also crucial, since students need an adequate lexical range to cope with academic tasks and reading assignments. Vocabulary learning is still an issue of relevance to language teachers and learners alike, and the topic is therefore the object of continuing debate and research. Teaching vocabulary and fostering learner autonomy have become increasingly important priorities for language teachers at all levels. Given the constraints of many EFL classes, where students receive little or no English contact outside class, the need for independent learning skills is often particularly acute. When students learn to manage their learning, to use learning strategies and to continue learning with or without teacher support, the result is a more autonomous learner.

Emerging trends in artificial intelligence have been adopted to develop tools to support language learning, particularly vocabulary acquisition. This paper reports on the use of ChatGPT, a state-of-the-art conversational AI model, in generating explanations, contextually-driven examples, and customized learning tasks to facilitate vocabulary acquisition and encourage learner autonomy and responsibility. The study concludes that such tools have the potential to empower learners to assume a greater role in their learning, thus increasing learner independence in EFL university education.

Vocabulary is one of the critical elements for Kurdish EFL university students to achieve academic success; however, learners encounter problems to learn and acquire adequate vocabulary through classroom activities. The Kurdish post-conflict environment probably provides students with few opportunities to experience English language beyond

the EFL classroom contexts, but not much will be gained unless they learn how effectively and independently to manage their vocabulary learning.

Although current developments in AI have provided teachers and students with a number of programs that can provide instant feedback and countless opportunities for students to engage in meaningful vocabulary practice, including receiving individualized explanations. While there is a marked increase in the use of AI in language teaching, most research has tended to focus on general uses of AI as well as writing and speaking skills. There is thus a need to investigate the role of AI in vocabulary learning in order to determine whether it can foster learners' autonomy, particularly among Kurdish EFL university students.

This study explores the contribution that AI-assisted approaches can make to vocabulary learning as well as to learner autonomy in the Kurdish university EFL context. Addressing this issue will offer insight into the pedagogical value of such technology and its role in empowering learners to take greater responsibility for their own learning.

1.1 Aims of the Study

- 1.To examine the role of AI-assisted vocabulary learning in promoting learner autonomy among Kurdish EFL university students.
- 2.To explore Kurdish EFL university students' perceptions of using AI-assisted tools for vocabulary learning and autonomous learning.
- 3.To identify the challenges of using AI-assisted tools for vocabulary learning among Kurdish EFL university students.

1.2 Research Questions

- 1.To what extent does AI-assisted vocabulary learning contribute to learner autonomy among Kurdish EFL university students?
- 2.What are Kurdish EFL university students' perceptions of AI-assisted tools in vocabulary learning and learner autonomy?
- 3.What challenges do Kurdish EFL university students encounter when using AI-assisted tools for vocabulary learning?

1.3 Significance of the Study

In the context of Kurdish EFL university, this study explores the effectiveness of an AI-assisted vocabulary learning approach in development of learners' vocabulary knowledge and autonomy. There is a limited range of studies in the field that have sought to investigate how AI-assisted vocabulary learning can foster learner autonomy particularly





in EFL contexts in which learners receive limited exposure to opportunities for independent learning. The study is also believed to have practical implications for classroom instruction and provide insight into how AI tools can be incorporated into the learners' vocabulary development in EFL university settings to facilitate more independent learning. Besides, the results of this study may offer some further recommendations for implementation of AI tools in a university context to the EFL teachers, material developers and language education institutions as well. Finally, this study will add to the body of work with regards to the use of artificial intelligence (AI) applications in language learning and teaching contexts, particularly in the context of Kurdish students' experience with EFL.

2. Literature Review

2.1 Learner Autonomy in EFL Contexts

Learner autonomy has been characterized as a central educational aim in current language education, preparing students to look after themselves and take responsibility for their learning and self-management. Research on learner autonomy in EFL learning environments, where students mostly have limited access to English in or outside of formal education, has been gaining traction. Autonomy is understood by some scholars to be more than independent study, which Benson [1], for example, associates with learner-centered approaches within which supportive teaching practices encourage learning autonomy. Later studies reported in the literature point to the important role motivation, self-direction and pedagogical practices in promoting autonomous learning [2-4].

However, Stockwell and Reinders [5] caution against viewing autonomy as an automatic outcome of educational reform or the adoption of technology. While Saeed [6] and Yuliani and Lengkanawati [7] report positive findings regarding the promotion of autonomy when learners are afforded opportunities to make decisions and take responsibility for their learning. These studies, additionally, underscore the need for ongoing support. These findings prompt the current study to treat claims regarding autonomy enabled by AI with considerable skepticism. Learners using a tool autonomously, i.e. outside of class without teacher support, does not necessarily equate with learners becoming more autonomous in a deeper sense.

2.2 Vocabulary Learning, Strategy Use, and Autonomy

Vocabulary is an important aspect of the EFL learners' ability to understand and effectively communicate in the four skills of language learning. The importance of lexical knowledge is also evident in spoken

interaction. Awdi and Sabir [8] observed that Kurdish EFL learners sometimes employed hesitation markers when experiencing difficulty retrieving appropriate words, indicating a relationship between lexical accessibility and fluent oral production. As Nation [9] indicates, the process of vocabulary learning involves exposure, retrieval, meaningful use of vocabulary, and the use of vocabulary strategies. Learners employ a number of strategies in attempting to learn vocabulary such as those related to repeating and encountering words (e.g., through reading and listening), noting down words, use of dictionary, testing self, and guessing vocabulary from context. These strategies have differing degrees of efficacy with respect to different individuals and contexts.

Vocabulary strategy use has been found to relate to learner autonomy. Abad and Baradaran [10], Nosratinia et al. [11], and Tilfarlioglu and Sherwani [12] have found that more autonomous learners make use of a range of vocabulary learning strategies more frequently. Furthermore, generative strategy use has been linked to self-regulation, which involves planning and adjusting one's study approach. However, most of these studies predate the advent of generative AI and thus are unable to describe the relationship between autonomy and vocabulary strategies in contemporary university settings where AI tools are frequently incorporated in EFL instruction and study [13, 14].

2.3 AI-Assisted Vocabulary Learning in EFL

While paper-based tasks provided learners with autonomous learning opportunities, technological tools can further facilitate this process. Like previous technology, the main way in which technology can support learner autonomy is by extending the learning environment, allowing learners to control where and when learning takes place. According to Lai [15], digital tools can connect formal lessons with informal study situations, thus allowing learners to engage independently in self-directed learning practices. However, as Stockwell and Reinders [5] point out, having access to the latest technology does not automatically translate to motivation and autonomy; the tasks and implementation within the learning environment are critical. As we are on the cusp of a new era of AI-assisted learning, it is timely to question whether more “sophisticated” technology automatically results in better learner outcomes.

Improvements in AI technology also introduce new interaction modes, and additional potential advantages for language acquisition [16-19]. In particular, ChatGPT and the like enable instant provision of information about words and contexts for practical use in vocabulary learning and



drill. Although Aldowsari and Aljebreen [20] and Abdelhalim and Alsehibany [21] assert that AI applications could promote vocabulary knowledge and maintain it, AI has started to become important in teaching vocabulary, and there is mounting evidence of its use in EFL instruction [22, 23]. Although research to date includes both literature reviews and perception-based studies, as well as studies focused on particular countries and cultures, evidence is presently not strong enough to claim that AI-assisted vocabulary learning can foster gains that go deeper and are transferable across EFL contexts.

2.4 AI, Self-Regulated Learning, and Research Gap

While newer evidence supports the idea that AI can assist vocabulary acquisition, there is limited knowledge about how it relates to self-regulated learning. Self-regulation is a constellation of cognitive and socio-affective processes in which learners plan, monitor, control and evaluate their learning goals. This construct is relevant to learner autonomy, defined as a practical expression of independence and volition in learning [13, 14]. In exploring this relationship, Chang and Sun [24] and Zhang et al. [25] explored how AI technology can support and enhance aspects of self-regulated language learning. The studies demonstrated that AI can promote vocabulary learning through personalization strategies, immediate feedback and providing learners with choice and autonomy during the learning process. From a more exploratory stance, Jalambo et al. [26] found that implementing chatbots could foster self-regulated vocabulary learning, while Guan et al. [27], Hu and Zhang [28], and Trinovita et al. [29] discussed the impact of AI on learners' learning behaviours and routines, namely learning organization.

Previous studies have shown both the actual use and potential affordances of AI tools for language learning in general as well as specifically in improving self-regulated learning, including some affordances addressing learner autonomy; however, research investigating how an AI-assisted vocabulary learning helps enhance learners' autonomy is currently lacking. Most of existing research is based on general applications in AI or language domains like writing and speaking, but vocabulary learning specifically remain unexplored. Additionally, there is a lack of empirical research that investigates Kurdish EFL university students' attitude towards AI-assisted vocabulary learning, the degree to which these tools promote autonomous vocabulary learning and the difficulties learners encounter when using them. Thus, this current study aims to fill this gap

by exploring the link in between AI-based vocabulary learning and learner autonomy in the context of Kurdish EFL university students.

3. Methodology

3.1 Research Design

The present study adopted a mixed-methods design in examining the effectiveness of an AI-assisted vocabulary learning system in promoting learner autonomy of Kurdish Learners of English. A mixed-method is the way in which an analytical study is performed to analyze qualitative and quantitative data. Hence, in the current study, the quantitative method (a questionnaire) provided evidence concerning frequency of using AI-assisted vocabulary learning tools and the degree of association between such practice and learner autonomy. On the other hand, the qualitative data (semi-structured interviews) provided in-depth insight into participants' perceptions, attitudes and experiences when utilizing AI-assisted vocabulary learning tools. The data was supplemented by a smaller number of semi-structured interviews so as to derive qualitative insight into the perception and behavior of individual learners, focusing on how their independent learning behavior may change as a result of engaging in AI-assisted vocabulary learning activities.

From a design perspective, the two constructs of learner autonomy and AI-assisted learning both encompass not only overt practice but also the individuals' beliefs, experiences and perspectives, thus requiring a particular research design that incorporates quantifiable data with qualitative descriptions in order to establish a comprehensive relationship between AI-assisted vocabulary learning and learner autonomy.

3.2 Participants

The participants of the study consisted of 100 students from the English Department at Salahaddin university in the Kurdistan Region of Iraq. The students are Kurdish EFL university students. They were chosen as they were relevant to the study's objectives, who are dealing with vocabulary acquisition, artificial intelligence and learner autonomy at the post-secondary stage. As a result, they are better-placed to provide informed views about the perceptions of and experiences of using AI-assisted vocabulary learning approaches within the Kurdish EFL context.

3.3 Data Collection Procedure

The data collection process was performed in two stages. Firstly, all participants completed the questionnaire to gain general information about





how the participants were using the AI-assisted vocabulary learning tools, their views on vocabulary learning and learner autonomy. Secondly, selected participants from each group were chosen to complete a semi-structured interview. The qualitative data collected from the interviews supported and expanded on the findings obtained from the quantitative results.

3.4 Data Analysis Technique

For the quantitative part obtained from the questionnaire, analysis using SPSS was performed in the form of basic descriptive statistics including frequencies, percentages, means and standard deviations. These statistics summarized students' general attitudes and perceptions towards the AI-assisted lexis learning, as well as learner autonomy. Interviews were recorded and analyzed thematically. The results have been categorized into themes based on the participants responses which are related to vocabulary acquisition, AI employment and autonomy.

4. Findings

This section includes the results of the study based on two data sources from Kurdish EFL university students: the questionnaire and semi-structured interviews. Findings are provided as demographic, use of AI tools, perceptions of Kurdish EFL students towards using AI tools for utilizing vocabulary with reference to perceived support of an AI tool for learner autonomy and challenges related to usage.

4.1 Demographic Information

The table below illustrates the demographic characteristics of participants as gender, academic level and English proficiency.

Table 1: Demographic Characteristics of Participants

Category	Subgroup	Frequency (n)	Percentage %
Gender	Female	62	62%
	Male	38	38%
Academic Level	Fourth-year students	55	55%
	Third-year students	45	45%
English Proficiency	Intermediate	72	72%
	Advanced	28	28%

As indicated in Table (1), the sample of the questionnaire consisted of 100 students. 62% of them were female and 38% were male. In terms of academic level, 55% were fourth-year students and 45% were third-year students. Regarding English proficiency, the majority of participants were at the intermediate level (72%), while 28% reported an advanced level. These results demonstrate that the sample mainly represented upper-level university students with enough academic experience to comment on vocabulary learning and the use of AI-based tools.

4.2 Frequency of AI Use

The figure below demonstrates the frequency of AI use in 5 Likert-scales

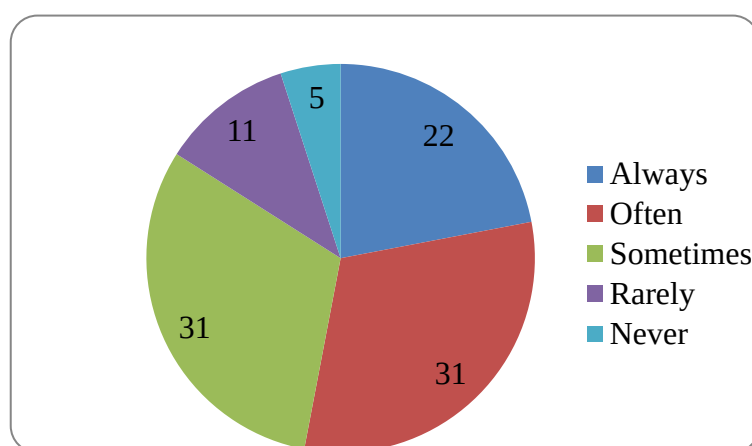


Figure 1: Frequency of AI use

Figure (1) shows how frequent AI uses of respondents. The greatest number of the responses come from “Often” (31%) and “Sometimes” (31%) meaning that generally people use AI on a regular basis. What this means is that “always” accounts for 22% of the responses, indicating that nearly one out of four individuals responding rely heavily on AI to get through their daily activities. In contrast, 11% indicated “Rarely” using AI, while just 5% chose “Never. Overall, the data indicates widespread adoption of AI, with 84% of respondents using it at least some of the time. This shows how AI is a great and essential tool that has been accepted by users.

4.3 Most-Used AI Tools

The figure below illustrates significant variations in use between AI tools including ChatGPT, Gemini, Grammarly, AI dictionary/app, and other tools.

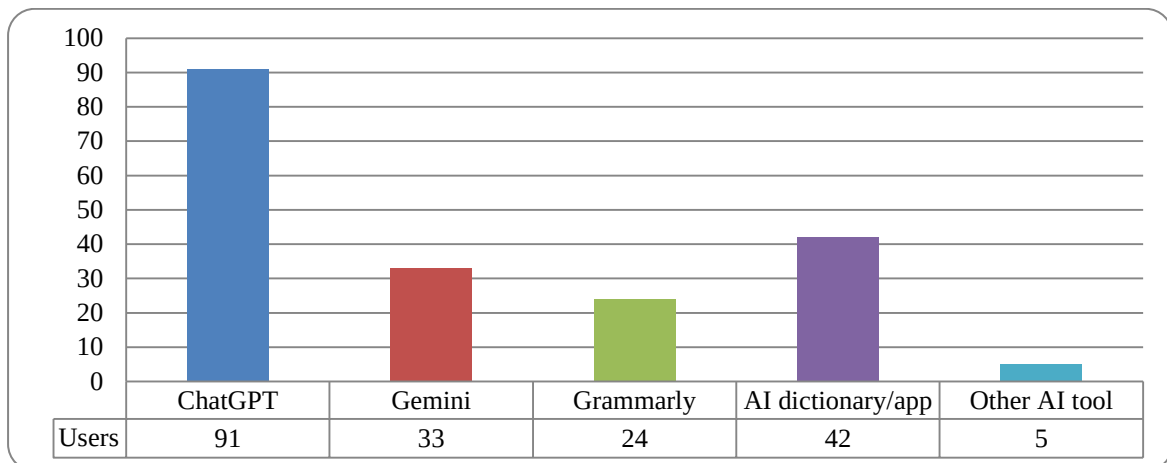


Figure 2: Most-Used AI Tools

As indicated in Figure (2), there was marked popularity with ChatGPT at 91%, the rest of tools showing decreasing usage. The next most frequently used tools were the AI dictionary/application at 42%, with Gemini and Grammarly used by 33% and 24% of students respectively. Moreover, 5% of the students reported using other types of AI tools.

These findings suggest that ChatGPT has a dominant position in AI-assisted vocabulary learning among the participants. This may be because it provides immediate explanations, examples, and interactive responses that are useful for vocabulary study.

4.4 Use of AI Tools for Vocabulary Learning

The table below shows the mean scores of the students' perception of AI assistance on different aspects of vocabulary learning and development.

Table 2: Use of AI Tools for Vocabulary Learning

Item	Mean
Learning Meanings of new words	3.87
Understanding collocations	3.83
Learning vocabulary outside classroom	3.83
Learning synonyms and antonyms	3.65

The results in Table (2) showed that there were many instances in which students used AI for a variety of vocabulary related activities. The highest mean scores for using AI for vocabulary learning were for: learn meanings of new words ($M = 3.87$), understanding collocations ($M =$

3.83), and vocabulary learning outside the classroom ($M = 3.83$). The findings also indicate that most of the time, students used AI tools to study for class, review, and supplement their homework—primarily for meaning and usage sections.

Compared to the higher means of the preceding section, the lowest mean was found in using AI tools to learn synonyms and antonyms ($M = 3.65$), but still within the range of agreement. These findings demonstrate how students employ AI tools in practical ways in a range of situations including gaining insight into word meanings and usage, and using tools outside of school to extend their word knowledge.

4.5 Perceptions of AI-Assisted Vocabulary Learning

The mean students' perceptions about AI-assisted learning benefits as an enhancement of engagement, understanding, vocabulary development and memory support are shown in the following figure.

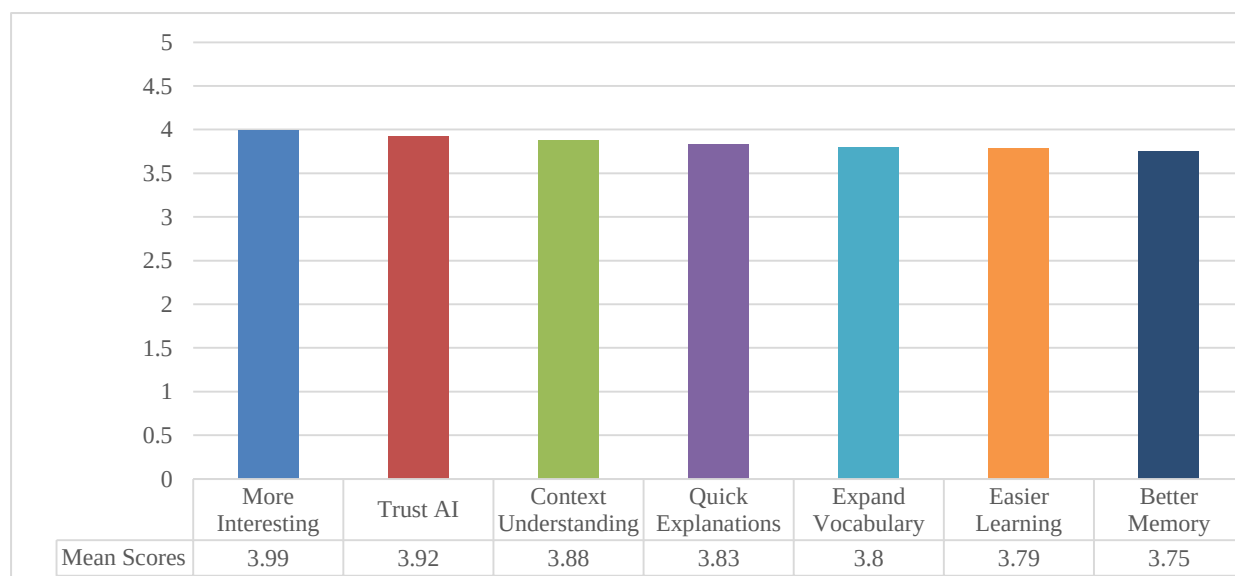


Figure 4.3: Perceptions of AI-Assisted Vocabulary Learning

Students' perceptions of AI-assisted vocabulary learning were generally positive. The highest mean scores were recorded for the statements that AI tools make vocabulary learning more interesting ($M = 3.99$), that students trust the explanations provided by AI tools ($M = 3.92$), and that AI tools help learners understand vocabulary in context ($M = 3.88$). These findings indicate a strong appreciation of AI tools in enhancing engagement, clarity, and contextual understanding.

Support was found for additional features, including the provision of quick definitions for unfamiliar words ($M = 3.83$), the expansion of



English vocabulary ($M = 3.8$), and the facilitation of vocabulary learning ($M = 3.79$). The lowest score of the set was for the belief that AI tools can help students remember vocabulary better ($M = 3.75$). This score suggests that, although positive, students generally view AI tools as being more effective for supporting initial comprehension and engagement rather than long-term vocabulary retention.

4.6 AI-Assisted Vocabulary Learning and Learner Autonomy

The table below displays students' mean scores on their perceptions of the effects of AI on using vocabulary, such as learning new words, collocations and word associations.

Table 4.3: AI and Learner Autonomy

Item	Mean
Learning Meanings of new words	3.87
Understanding collocations	3.83
Learning vocabulary outside classroom	3.83
Learning synonyms and antonyms	3.65

Table (4.3) illustrates that the average mean score of the four aspects related to vocabulary showed that learning meanings of new words had a high mean ($M = 3.87$) and thus students strongly agree that AI can help them comprehend difficult vocabulary. The item "Understanding collocations" and another "Learning vocabulary beyond the classroom" both reached a mean score of 3.83, indicating that AI helps learners successfully to realize word combinations and expands learning vocabulary outside the formal classroom. Learning synonyms and antonyms had the lowest mean score ($M = 3.65$) yet still indicates a positive perception.

In general, the results show that students regarded using AI devices for vocabulary acquisition positively, as indicated by their overall mean scores of all above 3.5. The results indicate that AI plays a beneficial role in improving several aspects of vocabulary development, especially in understanding word meaning types and autonomous learning.

4.7 Challenges of Using AI Tools

The next figure shows the mean scores of students on challenges and issues with AI-based learning, namely guidance, accuracy, usability and support concerns.

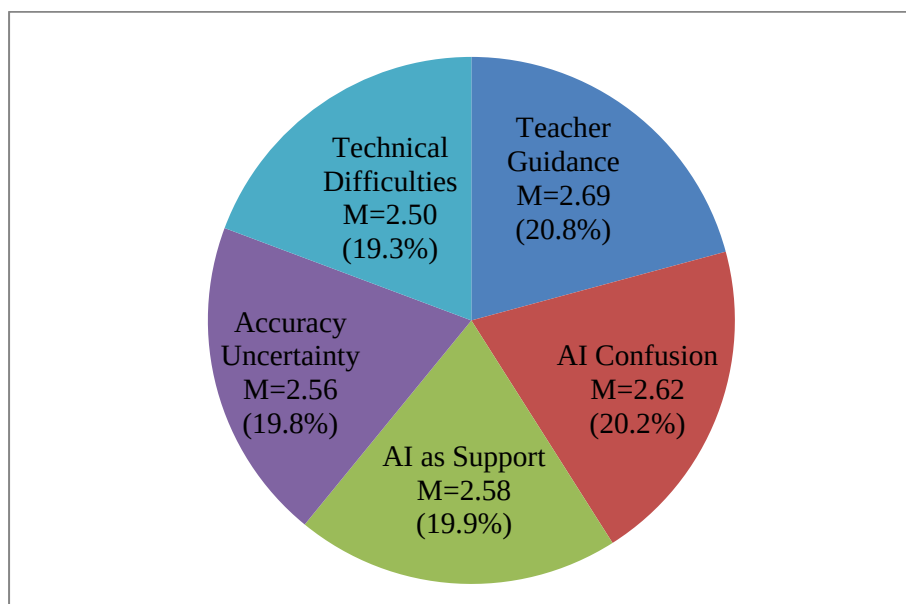


Figure 4: Challenges of Using AI Tools

The results reported in Figure 4.4 shows that although students had overall positive opinions on the use of AI for vocabulary learning they also highlighted a number of concerns surrounding its usage. The highest mean was related to the need for teacher guidance ($M = 2.69$, 20.8%) indicating students continue to require teachers in their learning with AI tools and value the educator role in assisting this process. Next was AI confusion ($M = 2.62$, 20.2%), where students occasionally experienced difficulty understanding or interpreting the explanations generated by AI.

In addition, students considered AI to facilitate learnings rather than an alternative tool for in-class instruction ($M = 2.58$, 19.9%); thus, again highlighting a collaborative nature of AI in classroom interaction as opposed to a substitution one over other form. Stemming both from the inaccuracy of AI-generated information, ($M = 2.56$, 19.8%) and technical issue ($M = 2.50$, 19.3%). However, the low mean scores mentioned above with a tight distribution of mean score indicates that these were not major obstacles. Overall, although students did identify the various limitations of AI, they remained optimistic towards it and found it useful as a complementary learning tool.

4.8 Interview Findings

To get more detailed insights into participants' perceptions and experiences of responding to the questionnaire, a smaller subgroup of participants was invited to take part in semi-structured interviews. The



audio recorded interviews were transcribed verbatim and thematically analyzed to derive the themes that had emerged; four major themes are identified and reported in Table (4).

Table 4: Summary of Interview Themes

Theme	Description
AI as an immediate source of vocabulary learning	Students used AI tools to get quick meanings, examples, and contextualized explanations
AI and independent vocabulary learning	Students felt AI helped them study vocabulary on their own and rely less on the teacher
Challenges in using AI tools	Students reported concerns about accuracy, clarity, and the need for teacher guidance
AI as a supportive tool, not a replacement for the teacher	AI as a supportive tool, not a replacement for the teacher

4.8.1 AI as an Immediate Source of Vocabulary Support

One of the themes visible in the interviews was how AI tools could be used as an immediate source of vocabulary support. The participants used AI tools such as ChatGPT to find the meanings of unfamiliar words as well as example sentences, synonyms, antonyms and collocations. They found AI tools useful because they delivered rapidly and accurately information from several sources, clear and concise explanations and characterizations of vocabulary items.

Participants also commented how the AI technology allowed them to learn vocabulary in context, not just memorize cold definitions from the dictionary. Seeing words used in sentences in a more meaningful and natural way really helped them understand their usage and aided their word- acquisition. See findings from survey- questionnaire as well.

One participant stated “When I find a new word, I ask ChatGPT and it gives me meaning, example, and sometimes similar words. It is faster than searching in many places”.

“AI helps me understand how the word is used in a sentence, not only the meaning”.

(Participant 7)

4.8.2 AI and Independent Vocabulary Learning

Another theme was independent vocabulary learning using AI support was also present in the interviews. Several of the interviewees used AI

software outside of the classroom for independent vocabulary study. They appreciated being able to ask questions anytime and receive almost instantaneous results, reducing their reliance on their teacher.

In addition, many of the participants commented on the additional opportunity for independent vocabulary review and practice that the AI offered. Some of the students commented on feeling more confident using the AI for independent study at any time. This finding supports the potential of AI-assisted vocabulary learning to promote learner autonomy, particularly in aspects of self-study, self-monitoring, and taking responsibility for learning. “Before, I waited for the teacher to explain difficult words, but now I can check by myself”.

(Participant 5)

“It makes me feel more independent because I can study vocabulary at home without asking someone every time.” *(Participant 9)*

4.8.3 Challenges in Using AI Tools

Although generally positive, our interviews also highlighted certain challenges. In addition to questions around fairness, there were concerns about the accuracy of answers generated by AI. Participants commented that they sometimes did not know if they could trust an explanation or example generated by the model, especially if the answer seemed vague or unclear.

A few participants commented that the explanations provided by the AI could at times be too in-depth or even unsuitable for their proficiency level. As such, they sometimes needed the teacher’s assistance to validate or make the explanations more accessible. This mirrors the findings from the online questionnaire where some students had expressed apprehensions regarding the accuracy of the feedback as well as a need for teacher support.

“Sometimes the answer is useful, but I am not sure if it is always correct.” *(Participant 2)*

“Sometimes ChatGPT explains too much, and I still need my teacher to make it simpler.” *(Participant 6)*

4.8.4 AI as a Supportive Tool, not a Replacement for the Teacher

The final theme observed within the data was that students saw AI as a supportive tool and not an adequate substitute for teachers. They appreciated the time saving, accessibility and utility of many of the AI programs but felt that teachers are needed to guide them in their learning,





check their work and to provide them with explanations that are individualized and relevant.

Students viewed artificial intelligence as a useful complement to classroom instruction rather than a substitute for it. They perceived AI as versatile and always available to support learning objectives, while their teachers remained essential for fostering academic understanding and providing explanations.

“AI is helpful, but I do not think it can replace the teacher because the teacher understands our level better.” (*Participant 1*)

“I use AI for support, but I still need my teacher when I want to be sure.” (*Participant 8*)

5. Discussion

The current research aims to explore the extent to which AI-assisted vocabulary learning is effective in developing learners' autonomy, and it serves as a medium for data collection about the perception of Kurdish EFL university students and issues regarding AI use in their working context. While discussing AI-Assisted vocabulary learning and learner autonomy, the findings reported in this special issue indicate that the role of AI-assisted tools in enhancing learner autonomy cannot be ignored. Many of the students reported how they could learn vocabulary independently, looked up words instantly, and were able to learn at their own pace using various AI tools. This finding aligns with Benson [30] and Reinders and White [31], who reported in their research studies on learner autonomy, technology-enhanced learning environments such as AI-assisted tools for vocabulary learning facilitate self-directed learning. Features such as instant feedback, opportunities for learning that are structured to the individual learner's needs, and greater flexibility in how and when learners access these tools, support autonomous learning.

The findings also support the claim made by Godwin-Jones [32] that digital tools can make learning more learner-centered; making learning easier and supporting learners within and outside the classroom. The results of the present study indicate that Kurdish EFL learners' tendencies have changes in regard to the use of electronic devices for learning English. Furthermore, the findings also align with Rahman and Brime [33], who state that AI tools positively impact learner engagement and autonomy. The findings generally suggest positive shifts in the way the Kurdish EFL students learn English.

The study also explored students' perceptions of AI tools. Participants perceived AI tools as useful, accessible, and effective for vocabulary development. In general, the participants' perceptions of AI tools were positive. Similar findings have been reported in studies conducted by Chen et al. [34], which found that generally learners have favorable attitudes toward AI-assisted language learning due to the convenience and interactivity of AI tools.

All of the participants found it very fast and easy to find meanings, examples and translations. This stems naturally from the AI technology, and given the environment of EFL learners who rarely encounter real life language situations, the tool was useful. Participants seemed to possess sufficient digital literacy and readiness to utilize technology within the language learning environment.

Feedback was largely positive; however, it did highlight certain issues. Students used the system interactively and with thought. As a result, they were able to make discerning comments that highlighted particular strengths and weaknesses.

Despite overall positive findings related to the use of AI for language learning, students encounter a number of challenges, which were also discussed in the study. The highest ranked concern, with a mean score of 2.69, was teacher support/guidance. It appears that students view AI as a supplementary learning tool, and not as a substitute for teachers. In light of this finding, it is heartening to recall the words of Luckin et al. [35], who asserted that AI must augment, rather than replace, the role of teachers and other educators. The other concerns students expressed stemmed from confusion related to the explanations generated by the AI tools, concerns regarding accuracy, and technical issues experienced during the task. These challenges and limitations are not novel and have been documented in previous research on technology-based language learning [36].

In addition to concerns around usability, students also voiced frustrations and apprehensions around the accuracy of AI-powered tools. Educators have a responsibility to educate students or provide them with the skills necessary to assess information. As the world becomes more digital, this is essential and will not just be a part of the definition of digital literacy. At the most basic level, students are challenged to tell whether a source is credible while even questioning the information against fact [37]. However, in terms of magnitude, students perceived these challenges as moderate as evidenced by their mean scores. Hence, when properly harnessed and implemented within a pedagogical framework, these challenges are not insurmountable.



The findings of this study have important pedagogical implications for teaching and learning. It suggests that AI tools should be incorporated into language teaching in an intentional, guided manner and teachers should teach students how to use them appropriately. Teacher presence is still valued and suggests that even in situations where learners are engaging in autonomous learning with AI, pedagogical, social-emotional, and contextual support and scaffolding are still needed. An additive approach that incorporates these technologies within existing, pedagogically-sound practices is recommended.

Autonomy is a crucial dimension in language learning. Most notably, promoting learner autonomy means students must have not only technology but also the cognitive skills (e.g. critical thinking and self-regulation) and information technology skills or digital literacy. The present study was conducted to examine if implementation of AI-assisted vocabulary learning activities could promote learner autonomy and develop Kurdish EFL learners' vocabulary. These findings indicate that learners view technology positively for its advantages and the uses of technology in language learning. Moreover, the results indicated that applying technology in vocabulary learning is not only possible to foster learner autonomy by Kurdish EFL learners and but also provides the necessary support for EFL learners concerning vocabulary knowledge. Results also identify a few strengths and weaknesses of using AI from the learners with some evidence that these are sometimes incorrectly used, and teachers are needed for support. Hence, this technology should be introduced and used as supplementary materials within an effective learning environment supported by teachers and teaching approaches.

6. Conclusion

The findings showed that vocabulary learning with support from AI helped promote learner autonomy in terms of facilitating student-directed independent studying, timely access to vocabulary assistance as required and greater learner ownership over the learning process. Nonetheless, AI has to be used under the guidance of teachers, who need the critical ability to assess and provide pedagogical support so that the learning benefits of AI can be achieved.

The findings also indicated that Kurdish EFL university students perceived AI-assisted tools for vocabulary learning and learner autonomy positively. The students found these tools to be engaging, easily accessible and effective in providing fast explanations of working vocabulary, contextualized vocabulary support and opportunities to learn independently. They also thought that AI improved their motivation,

vocabulary development and ability to learn outside the classroom leading them towards increased confidence and self-directed learning.

Despite the students' generally favorable views of AI-assisted vocabulary learning, they also reported various challenges namely, requiring teacher guidance and confusion due to AI-produced explanations, doubts about information accuracy, and technical problems. However, these challenges were seen as minor rather than major hurdles, suggesting that AI works best as a supplementary support to teachers.

This study on using AI-assisted vocabulary learning tools highlights their potential in improving vocabulary knowledge and promoting learners' autonomy. There is also a need to ensure the effective, critical and balanced use of technology within pedagogically-guided settings for Kurdish EFL learners at university level. Future studies should also investigate the long-term vocabulary retention and how AI-based tools are effective for learners of different English proficiency levels.

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