أدواتُ الذكاءِ الاصطناعيّ النحويّةُ كوسيلةٍ داعمةٍ لإتقانِ القواعدِ لدى طلبةِ المرحلةِ الرابعةِ في قسمِ اللغةِ الإنجليزيةِ – كليةِ الإمامِ الكاظم (ع) / فرع ذي قار"

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"Artificial Intelligence Grammar Tools as a Supportive Medium for Grammar Mastery among Fourth-Year Students at the Department of English in Al-Imam Al-Kadhim College/ Dhi Qar"

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Abstract

In this study, fourth-year English students at Imam Al-Kadhim College's Dhi Qar Branch examine the function of artificial intelligence (AI) grammar tools as supplementary materials for grammar acquisition. The study focuses on how students utilize these tools—ChatGPT and Grammarly in particular—and how they believe they affect their grammatical proficiency.

This work tries to answer the following question: "To what extent do AI grammar tools contribute to grammar mastery among fourth-year English students?"

It is hypothesized that fourth-year English Department students' knowledge of grammar is greatly aided by AI grammar tools.

Thirty-three students are given a structured questionnaire as part of a quantitative approach. According to the analysis, most people regularly use AI

grammar tools and believe they are useful for enhancing grammar proficiency. The study comes to the conclusion that AI tools support autonomous grammar learning and supplement conventional instruction.

Keywords: artificial intelligence, grammar mastery, ChatGPT, Grammarly, EFL learners.

المُستخلص:

تهدف هذه الدراسة إلى استكشاف دور أدوات الذكاء الاصطناعي الخاصة بالقواعد بوصفها وسائط داعمة لإتقان القواعد النحوية لدى طلبة المرحلة الرابعة في قسم اللغة الإنجليزية بكلية الإمام الكاظم —فرع ذي قار، مع التركيز على أدوات مثل ChatGPT و Grammarly، وكيفية استخدام الطلبة لها، وتصوراتهم بشأن أثرها في تحسين المهارات النحوية.

هذا العمل يحاول الاجابة على السؤال الآتي:

ما مدى إسهام أدوات الذكاء الاصطناعي في دعم إتقان القواعد النحوية لدى طلبة المرحلة الرابعة في قسم اللغة الإنجليزية؟

من المُفترض ان ُتسهم أدوات الذكاء الاصطناعي في دعم إتقان القواعد النحوية بشكل ملحوظ لدى طلبة المرحلة الرابعة.

أعتمد المنهج الكمي من خلال توزيع استبانة منظمة على عينة مكونة من 33طالبًا .أظهرت النتائج أن الغالبية يستخدمون هذه الأدوات بانتظام ويعتبرونها فعالة في تحسين الأداء النحوي .خلصت الدراسة إلى أن أدوات الذكاء الاصطناعي تُعدّ مكملة للتعليم التقليدي، وتعزز التعلم الذاتي في مجال القواعد.

الكلمات المفتاحية :الذكاء الاصطناعي، إتقان القواعد، تشات جي بي تي، كَرامرلي، متعلمو اللغة الإنجليزية.

1. Preliminary

Artificial Intelligence (AI) tools have increasingly become integrated into educational practices, especially in language learning. Among these, AI grammar tools such as Grammarly and ChatGPT offer grammar correction, feedback, and suggestions to learners of English as a foreign language (EFL). For Iraqi students, particularly those at Imam Al-Kadhim College - department of English – Dhi Qar Branch, these tools are not only new but also underutilized resources that hold great potential for language acquisition and autonomous

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learning. This study explores the extent to which fourth-year English department students benefit from such tools to master grammar, with the aim of providing pedagogical insights for grammar instruction in higher education.

2. Literature Review
2.1. Artificial Intelligence

According to Aitchison (2017) and Russell & Norvig (2020), artificial intelligence (AI) is the ability of a computer or software application to mimic human intelligence, which includes abilities like learning, reasoning, problem-solving, perception, and language usage. Chiu & Chung (2018) state that AI has been used in teaching and learning languages since the 1960s. It was first used in the creation of computer-assisted language learning (CALL) programs to help language learners acquire grammar and vocabulary. Despite the fact that these first programs were limited, they prepared the way for later developments in AI-powered language learning software that customized the learning experience .

2.2. Language Learning and Artificial Intelligence

According to Stephen Krashen's (1985) view, language is learned via exposure to intelligible input. By supplying real language input, introducing diverse grammatical usage, and providing non-threatening, self-paced feedback, artificial intelligence (AI) tools help to decrease the affective filter. That was known as " Krashen's Input Hypothesis and Affective Filter Hypothesis".
Like that of Krashen, Noticing Hypothesis is existed by Schmidt (1990). According to Schmidt's theory, learners need to be aware of grammatical forms in input in order to acquire them. Artificial intelligence (AI) tools improve this

process by pointing out mistakes, offering guidelines, and encouraging critical thinking.

Before Schmidt and Krashen , Vygotsky (1978) claims that learning happens most efficiently in a learner's Zone of Proximal Development , which is the area between what they can accomplish on their own and with help. Through contextual suggestions and feedback, AI grammar tools serve as intelligent mediators that offer just-in-time scaffolding, assisting learners in achieving grammatical precision.

2.3. The Supportive Role of IA Grammar Tools

There are research studies in support of AI Grammar tools as pedagogical support tools for formative and corrective feedback process. The effects also extend beyond error correction; they contribute to the development of UG, sense of self, and permanent growth of grammatical competence.

There are potential limitations also need to be considered. If students simply accept corrections without reflecting on the reasoning behind them, overuse of AI tools might also lead to lower grammatical consciousness. Ranalli (2018) points out that for a deeper grammatical competence to be fostered, an ongoing explicit support is needed in conjunction with AI.

Al-Maamari (2021) finds evidence to support this by exploring the fact that grammar-sensitive AI devices contributed significantly to the long-term retention of Middle Eastern EFL students as it helped Arabic speakers in spotting patterns of frequent errors. Furthermore, these instruments support personalized learning that, in large university classes, is essential as it allows students to progress at their own pace.

It was also found that Grammarly's easy to use interface and simply recommendations made students less anxious in writing (Amin and Sundari,

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2020) and improve their editing skills (Bhatia, 2022). This is consistent with the metacognitive model of written composition development which focuses minds of students on grammar.

The efficacy of AI grammar aids in academic writing has been tested in several empirical studies. Roscoe et al. (2021), students in AI-supported platforms improved both their grammatical accuracy and interest level. Similarly, Lu and Ai (2022)demonstrate that AI writing tools enhanced syntactic knowledge by providing educational explanations as well as error corrections. According to Chien et al. (2023), ChatGPT generates several different sentence forms, which helps students learn how to manipulate contextual grammar.

3. Methodology
3.1. The Design of the Research

This study uses a quantitative descriptive design and gathers data from fourth-year English students at Imam Al-Kadhim College's Dhi Qar Branch using a structured questionnaire. Examining how students use and perceive AI grammar tools is the goal.

3.2. Participants and Ethical Considerations

The study involves 33 fourth-year students in total. Male and female students, ages 20 to 45, who are all enrolled in the English language program for the 2024–2025 academic year, make up the sample. Students are aware of the goal of the study and are free to choose not to participate. Confidentiality and anonymity are guaranteed.

3.3. The Instrument Used

Participants are given a physical copy of a self-administered questionnaire. There are three primary sections of the questionnaire:

- *The Demographic ,information* (age, gender, academic stage)

- The Usage of AI grammar tools (frequency, preferred tool)

- The Perceptions of effectiveness (Likert scale: Strongly Agree – Strongly Disagree)

3.4. Collection of Data and Analysis

Frequency tables are created after a manual analysis of the responses. Percentages and charts are made as descriptive statistics. Additionally, an interpretation is carried out to illustrate student perspectives and usage trends after each table. The results are shown in the section that follows.

3.5. Results

The students' responses to the questionnaire are used to present the results.

3.51. Frequency of Use

Table (1) Frequency of use of the IA grammar tools and percentage

Usage Frequency	Students' Number	Percentage
always	12	36%
often	10	30%
sometimes	10	30%
rarely	1	4%

AI grammar tools are used frequently (always or often) by over 65% of students, indicating a high level of integration into their academic habits.

3.5.2. Preferred AI Tool

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Table (2) Preferred AI grammar tools among students and percentage

Usage Frequency	Students' Number	Percentage
ChatGPT	18	55%
Grammarly	13	39%
QuillBot	1	3%
Other/Blank	1	3%

Grammarly is the next most popular tool, after ChatGPT. This choice might result from ChatGPT's adaptability in terms of text generation, explanation, and correction.

3.5.3. Perceived Effectiveness

Table (3) The effectiveness of AI grammar tools among students and percentage

Usage Frequency	Students' Number	Percentage
Strongly Agree	5	15%
agree	17	52%
neutral	5	15%
disagree	2	6%
Strongly Disagree	1	3%
blank	3	9%

67% of students feel that using AI tools improve their grammar knowledge. The degree of disagreement is low, indicating generally positive sentiments.

3.6. Discussions

The results of this research show that 4th stage students not only favour AI grammar tools but also think they are very useful. ChatGPT's choice demonstrates that students desire dynamic, interactive technologies that can provide more than simply error detection; they also want flexibility, explanation, and conversational counseling. Moreover, Grammarly continues to be a reliable and easy-to-use tool.

The fact that over 65% of students utilize these tools "always" or "often" indicates a change in learning patterns, with students now depending on digital help for their everyday education. Furthermore, the pedagogical value of these tools in actual academic settings is demonstrated by the fact that more than two-thirds of participants agreed that AI improved their grammar.

It is shown how beneficial AI grammar tools are in the pursuit of accuracy and learner independence. Also of importance is that some students had ambivalent or negative views, suggesting that not all students perceive these interventions as worthwhile, perhaps due to a lack of digital literacy or the misuse of these resources without engaging with them critically.

5. Conclusions

It is demonstrated beyond doubt that AI grammar tools have become an indispensable aspect of students' academic practices. The percentage of the respondents indicating that they always and often used these AI technologies (together this represents more than 65% of the participants) attests to the commonness with which AI has insinuated itself into educational activity. There was also clear preference for ChatGPT as the majority (55%) find it useful such websites that have interactive explanation and context advice along with grammar correction. This preference highlights the need for grammar support

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which engages the learner in reflexive activity rather than simply correcting their work.

Effectiveness was also commonly viewed positively. A minority of students expressed neutral or negative opinions, though two-thirds agreed or strongly agreed that using AI grammar tools supported their grammar learning. This is consistent with the educational value of AI applications for promoting accuracy, self-reliance, and student confidence.

In conclusion, AI-based grammar tools may be a valuable aid to help teachers in enhancing grammar instruction in EFL classrooms. They are effective since they promote independent learning and knowledge of grammatical structures and give immediate feedback. The findings illustrate the importance of integrating AI in formal education, and of teaching students how to use and reflect on these tools in a responsible way. The study also offers researchers opportunities to explore AI's utility in language teaching across different linguistic and cultural backgrounds. Finally, the use of AI tools to support grammar teaching is not and should not be regarded as a replacement for traditional teaching methods, but simply as another tool to complement the learning process of learners.

6. Recommendations

1- Future studies need to investigate the impact of AI tools on linguistics memorization and error habits in a long-term manner.

2- Teach students how to optimally use tools: Workshops can help students learn to use tools critically, rather than over-using them.

3- Upcoming research should employ longitudinal study designs, larger and more diverse sample sizes, and qualitative methodologies, such as classroom observations and interviews

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