

Using ChatGPT to Improve English Grammar Skills for EFL Learners

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Abstract

This article explores the transformative potential of ChatGPT in enhancing English grammar skills for EFL learners. The study showcases ChatGPT's proficiency in Natural Language Processing (NLP) and its versatile applications in grammatical error correction and educational support. By detailing its role in personalized learning experiences, including real-time feedback, dialogue creation, and contextual understanding, the article presents research findings highlighting the significant reduction in grammar errors among EFL majors through personalized assignments with ChatGPT. The tool's adaptability as a function complement to human language teachers, along with its anytime accessibility, is a valuable resource in language education. This research underscores ChatGPT's potential as a dynamic, AI-driven solution for improving English grammar skills, offering learners a platform for prompt-based learning, instant feedback, and personalized exercises, thereby contributing to measurable enhancements in grammar proficiency.

Keywords: ChatGPT, Language learning, English grammar skills, EFL learners

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Introduction

Language learning is a complex process that involves developing skills in listening, speaking, reading, and writing, as well as gaining an appreciation for cultural differences. It is associated with developing any new skill, involving practices, memorization, and feedback for improvement. Learners can engage in formal education, self-study, experiential learning, or immersive experiences in a language-speaking environment to grasp both language and culture (VanPatten & Williams, 2015, p. 19). The importance of English Grammar Skills, including effective communication in the English language depends on a strong foundation in grammar skills. Grammar governs the form and meaning of words, phrases, and sentences, facilitating clear and accurate communication (Huddleston & Pullum, 2002, p. 3). Proficient grammar skills are crucial in both spoken and written language, contributing to logical thinking and precision in expression. Proper grammar usage is essential for avoiding confusion and ensuring clarity in written communication.

For technology in Education and ChatGPT's Potential, the advantages of Natural Language Processing (NLP) have led to the development of advanced conversational models like ChatGPT. It has demonstrated proficiency in diverse tasks, including grammatical error correction and educational support. Beyond language learning, ChatGPT's capabilities extend to answering questions, solving mathematical and programming problems, and explaining complex topics (Rahman & Watanobe, 2023, p. 18). Its potential in addressing technical and non-technical issues makes it a valuable asset for learners, educators, and researchers alike. ChatGPT emerges as a potential transformation in language learning, offering a valuable tool to support learners. Its capabilities extend to creating dialogues, engaging learners in conversations, improving essays, and providing real-time feedback. Notably, ChatGPT is excellent in explaining grammatical errors, offering detailed insights for immediate comprehension. The tool's utilities function as a complement to human language teachers, opening opportunities for personalized learning and skill acquisition (Ahmed, 2023, p. 2731). Accessible at any time, ChatGPT enhances language education by promoting adaptive and engaging learning experiences (Monika & Suganthan, 2024, p. 82).

This article is to demonstrate that research findings consistently highlight ChatGPT's promise in enhancing English grammar skills for English as a Foreign Language (EFL) learners. In particular, its effectiveness is evident in supporting grammar use among EFL Majors. Personalized learning assignments through ChatGPT resulted in a significant reduction in grammar errors, showcasing its value in connecting theoretical concepts with practical language learning. The tool's ability to contribute to improved grammar use, positions it as an effective resource for language development.

Language Learning

Language learning is the process of acquiring the ability to communicate in a new language. It involves developing skills in listening, speaking, reading, and writing. Additionally, understanding the culture and customs of the people who speak the language is essential to acquiring the new language. According to VanPatten and Williams (2015, p. 19), the process of language learning is viewed as the development of a new skill. This process is similar to other types of learning, such as memorizing multiplication tables, practicing a new skill, and receiving feedback to improve. To learn a new language, learners can study in school, self-study, learn from experience, or travel to a country where the language is spoken to immerse themselves in the language and culture. Moreover, language learning also needs three important components which are vocabulary, grammar, and pronunciation (Daar, 2020, p. 20). Especially, grammar is one of the important bases for using language appropriately. Also, it has many benefits in language teaching and learning. (Debata, 2013, p.48)

English Grammar Skills

Effective communication in the English language requires a strong foundation in English grammar skills. According to Huddleston and Pullum (2002, p. 3), "A language's grammar describes the principles or rules governing the form and meaning of words, phrases, clauses, and sentences." To deliver the understanding of the sender and receiver, it is important to consider the structures of sentences, which are grammatical functions. English grammar skills are important for professionals and are particularly crucial in both spoken and written language. Besides, Qizi (2023, p. 120) claims that

grammar is the foundation of communication in the English language. It helps learners develop logical and clear-thinking habits and become more accurate when using a language. It is essential to deliver clear communication with good grammar whether spoken or written. Furthermore, to make sure that readers can understand messages without confusion or ambiguity, it is important to use proper grammar, vocabulary, and spelling in written communication (Rossiter, 2021, p. 3).

The Use of Technology in English Language Learning

According to Ahmadi (2018, p. 116), technology has been shown to improve both education and English language learning. Educators use it to create interactive activities and utilize multimedia resources, which help create immersive environments that extend learners' knowledge acquisition. With proper technology, it can provide various benefits to both teachers and learners. It is a valuable resource that learners can use to solve their learning problems and apply what they have learned in effective and meaningful ways (Solikhah, 2023, p. 84). The use of technology plays a crucial role in language learning, as it allows learners to learn at their own pace, promotes self-understanding, and does not hinder interaction with the teacher. Furthermore, it can create high motivation among learners, leading to effective learning of language skills. (Ahmadi, 2018, p. 122). Moreover, the use of technology has been instrumental in transforming the way English is taught and learned. A study conducted by Kamola (2023, p. 435) found that technology has played a pivotal role in transforming the teaching and learning of English. Its integration into language instruction has provided educators with innovative tools and resources to engage learners, personalize learning experiences, and foster language proficiency. However, it will be more practical to incorporate technology for the learners when suggested by the instructor. Therefore, language learning can be enhanced by many technologies, and one of them is ChatGPT, an AI chatbot that was just launched in 2022 (Rudnicka, 2023, p. 3).

ChatGPT

ChatGPT is an advanced conversational language model developed by OpenAI. It has been trained on vast amounts of data and is capable of generating human-like

responses to a wide range of prompts. The research preview version of ChatGPT (GPT-3.5) is free to use and has shown strong performance in many fields, including education. In recent years, according to the 34th Conference on Neural Information Processing Systems, there has been significant progress in the field of Natural Language Processing (NLP). OpenAI's GPT models, including GPT-3, have impressive performance similar to that of professionals across various tasks (Brown, 2020, p. 5).

How to Use ChatGPT

Chat GPT-3.5 is a platform that allows users to have natural language conversations with artificial intelligence. To use ChatGPT-3.5, visit website at chat.openai.com and sign up with a personal email. There is a text area at the bottom where users can enter prompts which are simply text inputs that users write to communicate with Chat GPT. These prompts will direct or command ChatGPT on what to do.

ChatGPT as a Role in Education

ChatGPT has the potential to be a valuable tool for education. With its ability to answer questions, solve mathematical tasks, practice language, learn programming, solve programming problems, and explain difficult topics, it can help learners learn more effectively and efficiently. According to Rahman and Watanobe (2023, p. 18), the ChatGPT model is capable of addressing technical issues such as engineering and computer programming as well as non-technical issues which include language and literature issues. Additionally, ChatGPT can assist researchers in their work by providing quick searches and answers to complex questions. To use ChatGPT wisely there will be benefits for learners.

ChatGPT's Role in Language Learning

ChatGPT has the potential to be a valuable tool for language learning. As a function of it, its competence can support learners in the field of language learning by creating a dialogue and engaging learners in conversation. ChatGPT is also competent in helping learners improve and develop their essays, and it can provide

feedback to learners in a short amount of time. Moreover, it is capable of providing feedback and adjusting sentences and dialogue to align with the cultural context of the prompt. This would be helpful because it provides real-time feedback and engages learners to understand the grammatical use immediately. According to Barrot (2023, p. 2), giving real-time feedback can get rid of the requirement for learners to wait for correction. Baskara and Mukarto (2023, p. 354), mentioned that, there is a high potential for ChatGPT to be used in education and benefit learners, as research suggests. Leveraging its advantages is essential to push out the benefits to learners. ChatGPT can support language learning by substituting human language teachers. This creates more opportunities for improvement to help learners acquire language skills with the full potential of ChatGPT's functions. Furthermore, ChatGPT is a tool that can be utilized to engage learners in language learning experiences. It has significant value and potential to enhance the quality of language education by promoting adaptive and engaging learning experiences. It is recommended as an essential tool to transform education into a better practice (Kohnke & Zou, 2023, p. 11). In particular, ChatGPT is competent in providing explanations of grammatical errors, and it can give detailed explanations if learners ask for more information (Shaikh, Yayilgan, Klimova & Pikhart, 2023, p. 1943). Additionally, ChatGPT also has features that help improve vocabulary and correct grammar and this can promote writing skills (Barrot, 2023, p. 2). Hence, ChatGPT is a tool that learners can access at any time, making it convenient for learners to learn, find answers, and improve their skills at their own pace (Monika & Suganthan, 2024, p. 82).

Enhancing Grammar Learning through ChatGPT

ChatGPT is the latest technology for transforming grammar learning for students. It offers a complex approach that extends beyond traditional classroom methods (Rudolph, Tan & Tan, 2023, p. 354). This conversational language model, developed by OpenAI, supports learners in their quest for grammatical proficiency. ChatGPT provides a dynamic platform for prompt-based learning, delivering instant feedback, offering a variety of exercises, facilitating contextual understanding, and enabling personalized learning experiences (Kim, 2022). Additionally, ChatGPT serves as a solution

for language expansion, allowing students to enhance their vocabulary and overall language proficiency (Koraishi, 2023, p. 64). The following sections will uncover how ChatGPT transforms grammar education by adapting to individual needs, providing valuable feedback, and becoming a beneficial supplement to classroom learning. According to Božić and Poola (2023, p.7), ChatGPT has positive effects on learners at school. It can give real-time feedback to improve learners' grammar. Moreover, it is useful to use ChatGPT to support learners in class.

ChatGPT's Functions Improving English Grammar Skills

Some of ChatGPT's functions can help improve grammar skills. The following features can enhance proficiency in English grammar.

1. Effective of Prompt-based Learning in Improving Grammar Skills

According to Coyne, Sakaguchi, Galvan-Sosa, Zock, and Inui (2023, p. 4), GPT models are autoregressive decoder-only language models that use natural language text prompts as input. The level of language is defined by the suitability of the prompt. Learners can input prompts related to writing style or sentence sound preference. Then, learners can input any sentences to ChatGPT, which will determine whether the sentence is grammatically correct or incorrect and provide adjustments for learners. Learners can generate prompts related to English grammar rules, sentence structure, or specific grammar concepts. With the assistance of language models, learners can create prompts that require detailed explanations of specific grammar content or grammatical errors (Schmidt-Fajlik, 2023, p. 111). This is an excellent method for improving writing skills and gaining a better understanding of the English language. Coyne, Sakaguchi, Galvan-Sosa, Zock, and Inui (2023, p. 4) also provide a precise explanation that, despite the free version of ChatGPT, GPT-3.5 models have still shown impressive performance in correcting grammatical errors in a sentence revision task, when compared to GPT-4.

Table 1 Performance of different prompts and temperature parameter combinations in a zero-shot GEC setting using GPT-3.5 and GPT-4. All scores are GLEU scores on the JFLEG development set {x} represents a source sentence. \n represents a line break. Bold numbers indicate the best-performing combinations

No.	Prompt	GPT-3.5			GPT-4		
		$\tau=0.1$	$\tau=0.5$	$\tau=0.9$	$\tau=0.1$	$\tau=0.5$	$\tau=0.9$
1	Make this sound more fluent:\n\n{x}	0.314	0.301	0.266	0.245	0.240	0.230
2	Update to fix all grammatical and spelling errors: \n\n{x}	0.368	0.355	0.330	0.484	0.481	0.474
3	Improve the grammar of this text:\n\n{x}	0.494	0.486	0.459	0.427	0.421	0.414
4	Correct this to standard English:\n\n{x}	0.503	0.500	0.486	0.429	0.424	0.412
5	Act as an editor and fix the issues with this text: \n\n{x}	0.516	0.505	0.494	0.444	0.444	0.435
6	Original sentence: {x}\n Corrected sentences:	0.552	0.547	0.533	0.523	0.521	0.520
7	Correct this to standard English: \n\n{x}	0.559	0.554	0.542	0.452	0.453	0.444
8	Correct the following to standard English: \n\n Sentence: {x} \n Correction:	0.569	0.564	0.551	0.495	0.488	0.480
9	Fix the errors in this sentence: \n\n{x}	0.569	0.566	0.554	0.541	0.542	0.534
10	Reply with a corrected version of the input sentence with all grammatical and spelling errors fixed. If there are no errors, reply with a copy of the original sentence, \n\n Input sentence: {x} \n Corrected sentence:	0.582	0.581	0.577	0.601	0.599	0.597

The investigation from Table 1 shows that ChatGPT performs well in this grammar correction task as follow by the prompt. As a result, appropriate prompts have a significant impact on the quality of ChatGPT's output (Meyer et al., 2023, p. 3). With well-constructed prompts, learners can significantly improve grammar and spelling. Using ChatGPT regularly and following clear instructions improve your language proficiency over time.

2. Instant Feedback in Grammar Assessment

ChatGPT can assist in the assessment of grammar. As ChatGPT performs well in terms of time consumption, it can provide immediate feedback to learners, helping them understand the usage of grammar and enhancing the learning process (Kostka & Toncelli, 2023, p. 3). Figure 1 (Koraishi, 2023, p. 66) demonstrated that learners can promptly identify issues and fixes and learn from ChatGPT's response without having to start the procedure from the beginning.

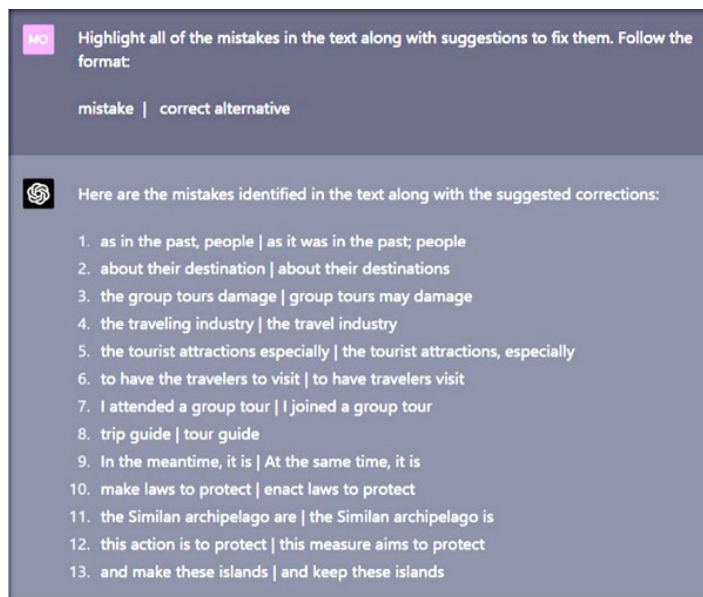


Figure 1 Error Recognition Feedback

As illustrated in Figure 1, ChatGPT is capable of identifying grammatical errors and providing suggestions for correcting them. Additionally, it can make adjustments to cater to the needs of learners. Learners can request further details such as explanations of grammatical topics, more example sentences, and variations in the usage of grammatical topics (Liang et al., 2023, p. 86). ChatGPT's performance ensures that learners receive detailed explanations based on the prompts they input. According to Cao and Zhong (2023, p. 2), research has demonstrated that ChatGPT, with its ability to provide instant feedback, holds a distinct advantage over human teachers. While teachers may face challenges due to time constraints and limitations in handling a large number of learners, ChatGPT remains available 24/7. Learners benefit from unlimited opportunities to receive feedback, practice their language skills, and check grammar.

3. Contextual Learning and Personalized Learning for Grammar Improvement

Contextual learning is a teaching approach that emphasizes the importance of understanding the context in which a particular concept or skill is used. According to Johnson (2002, p. 24), Contextual Learning is an educational approach that has the purpose of helping learners integrate or connect academic material subjects to their daily personal lives. In the case of ChatGPT, its ability to understand context enables it to provide explanations tailored to specific sentences or paragraphs. This approach to learning is particularly useful for learners who are looking to improve their grammar skills, as it allows them to not only learn the correct grammar but also understand the nuances of how grammar rules apply in different situations. By providing context-specific explanations, ChatGPT can help learners develop a deeper understanding of the language and improve their overall communication skills. Similarly, personalized learning is an educational approach that tailors the learning experience to meet the unique needs of each learner. In recent years, the integration of advanced technologies like ChatGPT, is an AI language model. ChatGPT can personalize and improve learning experiences by analyzing learner data, including learning preferences, performance, and feedback, to provide customized learning materials and experiences. Learners can receive personalized support, allowing them to learn at their own pace and in a way that suits their learning style. In the section on educational technology research, personalized learning has emerged as a critical area of focus. A study conducted by Shemshack and Spector (2020, p. 16) has demonstrated that incorporating personality traits and identification techniques can have a significant positive impact on the learning environment, resulting in an engaging and effective experience for learners. According to Koraishi (2023, p. 61), Figure 2 demonstrates that ChatGPT provides a flexible learning experience that can be tailored to individual needs by putting learners' information, making it suitable for learners from diverse backgrounds. Learners can design customized questionnaires, promoting self-motivation and enabling them to engage with the content.

Comparing Grammar Correction Effectiveness of ChatGPT, Grammarly, and Bard

Compared to another competitive conversational language model, Google Bard, ChatGPT outperforms Google Bard in language processing with higher efficiency and accuracy (Singh, Kumar, & Mehra, 2023, p.6). The significant contrast in size and vocabulary, with its extensive 175 billion elements and broad vocabulary (Brown

et al., 2020, pp. 5). ChatGPT can generate a variety of language ideas. Its standout feature creates a diverse range of text, making it particularly effective for English grammar correction, sentence adjustment and creation. This function provides learners with the opportunity to explore various vocabulary options within similar contexts, enriching the language learning experience.

Moreover, according to (Ray, 2023, p. 137), ChatGPT does not only correct grammar errors but also offers appropriate suggestions for sentence adjustment. It also provides explanations for grammar mistakes. Compared to Grammarly, an AI writing assistant that corrects grammar, spelling, punctuation, and style errors in text, helping users improve their writing, the free version of Grammarly provides only basic grammar, spelling checks and limited writing suggestions. Boyd (2024) mentioned that if the learners would like to examine the sentence structure, sentence clarity, word choice, and effectiveness of writing engagement, the premium version would provide these followings. On the other hand, ChatGPT is available for free (Shaikh, 2024).

Use the following list of vocabulary to generate a worksheet for an EFL learner at the level of A2 in English. The student is Turkish, so include some questions that use Turkish as well. Make sure that the types of questions are varied and provide an answer key at the end.

website - before - once every two weeks - in the past - scared - spin - determined - optimistic - pessimistic - gossip - opposite - from - read - what is the meaning of - learned - worksheet - documentary - boutique hotel - floor - wall - ceiling - lift - elevator - do the washing up - wash - seabass - baking - These kinds of things - surprise - shocked - series - tv series - mythology - towels - suitcase - pillow - cupboard - gift shops - Search Engine - Optimization - guess

Title: A2 English Vocabulary Worksheet

I. Fill in the blanks with the correct vocabulary word from the list provided.

- In the _____, people didn't have smartphones or the internet.
- The _____ of the store is on the other side of the road.
- I am _____ to finish this project on time, no matter what.
- The woman _____ when she heard the news.
- The _____ in the room was very low, so I couldn't see very well.

II. Match the English words with their Turkish translations.

- scared a. belgesel
- floor b. yastık
- documentary c. korkmuş
- pillow d. zemin

III. Choose the correct word to complete the sentences.

- After watching the (documentary / series), I became more interested in Greek mythology.
- I was (shocked / optimistic) when I learned that my favorite team had lost the game.
- I need to (do the washing up / wash) before I go to bed.

IV. Translate the following sentences to Turkish.

- I need to buy a gift for my friend at the gift shop.
- I stayed at a boutique hotel during my vacation.
- The elevator wasn't working, so we had to use the stairs.

V. Answer the questions using the vocabulary provided.

- What is the meaning of "pessimistic" in Turkish?
- What do you call the thing that helps you to move between floors in a building in English?
- How often do you watch your favorite TV series?

Answer Key:

I. Fill in the blanks:

- past
- opposite
- determined
- frowned
- ceiling

II. Match the English words with their Turkish translations:

- c
- d
- a
- b

III. Choose the correct word to complete the sentences:

- series
- shocked
- do the washing up

IV. Translate the following sentences to Turkish:

- Arladığıma hediye almak için hediyelik eşya dükkanına gitmem gerekiyor.
- Tatilde butik bir otelde kaldım.
- Aasandır galgımyordu, bu yüzden merdivenleri kullanmak zorunda kaldık.

V. Answer the questions using the vocabulary provided:

- "Pessimistic" kelimesinin Türkçe anlamı "karamsar"dır.
- In English, the thing that helps you to move between floors in a building is called an "elevator" or "lift."
- Answers may vary.

Figure 2. Using learners' information in creating materials

Benefits of ChatGPT on Grammar Skills

ChatGPT has the potential to serve as an effective tool for engaging learners in English grammar improvement. By creating prompts or scenarios that require grammatical practice, learners are afforded the opportunity to question the contextual use of the English language. As a result, learners can extend their knowledge of grammar rules in different contexts. This approach allows learners to conduct their grammar exercises and further their understanding of the subject matter. According to Hatmanto and Sari (2023, p. 4), ChatGPT provides personalized support, tailoring its assistance to the unique English grammar learning needs of each individual. Through the utilization of ChatGPT's advanced features, this approach becomes even more effective, offering students personalized feedback, explanations, and exercises precisely tailored to their specific linguistic requirements.

Based on the data conducted by Fitria (2023, p. 55), it is evident that ChatGPT holds substantial promise for enhancing English grammar skills. The renowned GPT Chat, developed by OpenAI, utilizes advanced AI technology to comprehend questions and deliver accurate responses. According to Haggag (2023, p. 25), this chatbot not only aids in information retrieval and question answering but also proves valuable in supporting descriptive paragraph writing and English grammar use for EFL Majors.

The study conducted on ChatGPT's impact on writing and grammar among EFL Majors yielded positive results, affirming its effectiveness as a technological tool. According to Ali (2023, p. 41), the intervention group, exposed to personalized learning assignments provided by ChatGPT, demonstrated a significantly lower error rate compared to the control group. This suggests that ChatGPT effectively addresses specific weaknesses in students, leading to noticeable improvements in their grammar skills. (Ali, 2023, p. 43)

Furthermore, according to Baskara (2023, p. 46), the study served as a proof of concept for ChatGPT-based personalized learning assignments, showcasing a tangible reduction in grammar errors in student writing. Besides providing opportunities for students to practice writing skills and receive tailored feedback, ChatGPT is also a multipurpose tool that can collaborate between theoretical concepts and successful language teaching methods (Hatmanto & Sari, 2023, p. 16).

Conclusion

In conclusion, the presented data underscores the considerable potential of ChatGPT in enhancing English grammar skills. Developed by OpenAI, the GPT Chat, leveraging advanced AI technology, stands out as a valuable tool for personalized learning. Its capacity to provide immediate feedback, generate a variety of exercises tailored to learners' context, and facilitate a personalized learning experience positions it as a promising asset for improving English grammar skills. The study outcomes affirm the effectiveness of ChatGPT in addressing individual weaknesses, leading to measurable enhancements in grammar proficiency. In summary, ChatGPT's capabilities in personalized learning, coupled with its ability to offer timely feedback and generate context-specific exercises, establish it as a beneficial resource for fostering English grammar skill development.

Limitation of ChatGPT in Grammar Learning

ChatGPT is a useful tool for learning English grammar, but it has some limitations for learners. ChatGPT can produce sentences with correct grammar, but its information is outdated in 2021 (Singh, Kumar, & Mehra, 2023, p. 5). Some recent contexts will not be generated by the ChatGPT-3.5 model. ChatGPT also has the feature of quickly responding to user questions and modifying or creating new sentences. This might affect the problem-solving or creative ability of English learners. Besides, the purpose of ChatGPT is not to be designed for checking grammar, so it might miss identifying some mistakes (Solis, 2023). However, ChatGPT is still a valuable tool, as long as it is complemented by human interaction. Working with a human teacher allows learners to practice grammar skills in realistic communication situations. The combination of ChatGPT assistance and human guidance leads to the best outcomes.

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