

INTEGRATING ARTIFICIAL INTELLIGENCE INTO FOREIGN LANGUAGE PEDAGOGY

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ABSTRACT

This paper delves into the role of artificial intelligence, focusing on Chat GPT (Artificial Intelligence Generative Pre-trained Transformer), in foreign language education. It examines the potential applications, advantages, and challenges of AI in language learning, highlighting how it offers tailored, engaging, and effective educational experiences. The paper presents various strategies and tips for utilizing Chat GPT in enhancing the process of learning to write and in transforming ideas, as well as converting informal texts into formal formats. It underscores the benefits of AI as an educational tool in foreign language teaching, promoting critical thinking, collaboration, and advanced communication skills. Moreover, the study stresses the importance of combining human judgment with AI assistance in language learning.

Keywords: Artificial Intelligence, GPT-3, language model, natural language understanding, content generation, AI-powered language learning apps, chatbots, idea generation, brainstorming, different writing styles, formal and informal letters, scaffolding.

INTRODUCTION

A language model created by Open AI is called AI GPT, or Artificial Intelligence Generative Pre-trained Transformer. Based on the input it gets, it creates text that resembles that of a human using deep learning techniques. Large volumes of text data were used to train GPT models, which can produce responses that are both coherent and pertinent to the context. The most recent version, GPT-4, is one of the biggest language models ever made with 1.76 trillion parameters. The functions and applications of GPT-4 are quite diverse. Some of its key uses include: natural language understanding, chatbots and virtual assistants, content generation, language translation and support for creative writing. GPT-4 can understand and interpret human language, allowing it to comprehend and reply to a variety of questions and cues. Using GPT-4, chatbots and virtual assistants may have a conversation with users in natural language and offer them information or support. It can produce text that seems like it was written by a human being for a variety of tasks, including generating code snippets or entire articles or essays.

The GPT-4 program can be used to translate texts from one language to another while preserving context and meaning. Moreover, it can be used by writers to help them come up with ideas, improve their storytelling, or get past writer's block. Artificial intelligence (AI) can be incorporated into the teaching of foreign languages to improve the educational process and assist students in improving their language abilities [1], [2]. AI-powered language learning apps like Duolingo and Babbel use algorithms and machine learning to personalize the learning experience for each user. To assist students to practice vocabulary, grammar, and pronunciation, these applications offer interactive exercises, quizzes, and feedback. With the use of AI technology, teachers may assess their students' spoken language and provide them

feedback on their pronunciation, intonation, and fluency. AI algorithms are used in tools like SpeechAce and Rosetta Stone to evaluate learners' speech and provide recommendations for improvement.

Chatbots that can imitate real discussions in the target language are AI-powered chatbots. They can converse with pupils, giving them the chance to hone their speaking and writing abilities. Depending on the level and advancement of the learner, these chatbots can also modify their responses. AI can evaluate written texts and offer comments on grammar, vocabulary use, and writing style. AI algorithms are used by programs like Grammarly and Hemingway Editor to help students become better writers. AI-powered adaptive learning platforms can monitor students' development, pinpoint their weak points, and offer individualized learning advice [3], [4]. The learning content and pace are adjusted on these platforms using machine learning algorithms to meet the needs of each student.

Overall, using AI in the teaching of foreign languages can offer students individualized and interactive learning experiences, enabling them to practice their language abilities more enjoyably and efficiently.

Here is a table of some popular AI-powered language learning apps and their functions:

Language Learning App	Functions	Cost	Year of First Release
Duolingo	Gamified lessons, personalized learning path, vocabulary and grammar exercises	Free with optional in-app purchases	2011
Babbel	Interactive lessons, real-life dialogues, speech recognition technology	Subscription-based pricing starting at \$12.95/month	2007
Rosetta Stone	Immersive language learning experience, speech recognition technology, live tutoring sessions	Subscription-based pricing starting at \$11.99/month	1992
Memrise	Vocabulary-focused lessons, spaced repetition technique, user-generated content	Free with optional in-app purchases	2010
HelloTalk	Language exchange with native speakers, text and voice messaging, language correction	Free with optional in-app purchases	2012
FluentU	Authentic video content, interactive subtitles, personalized quizzes.	Subscription-based pricing starting at \$20/month	2011
*The price listed here is approximate and could vary depending on the various subscription plans or pricing models made available by the relevant apps.			

Despite the numerous opportunities and services offered by AI-powered language learning apps, they are not without their limitations and drawbacks. Certain apps suffer from a lack of emphasis on speaking and listening practice, inadequate contextualization, and incomplete coverage of grammar. Additionally, these apps often fail to provide a fully immersive cultural experience and personalized feedback. Furthermore, some apps come with expensive subscription plans, making them less accessible to certain users. Moreover, the absence of interactive features can also be a concern for users.

Although the implementation of AI in the education of foreign languages is a relatively new area, it has been studied by numerous scholars. According to Fitria (2023) [5] Artificial

intelligence (AI) is one of the technological advancements that can be applied to any application. Artificial intelligence (AI) is a technology that is advancing quickly. It is a branch of computer science that seeks to address issues with learning, problem-solving, and pattern recognition that are often related to human intellect [6]. AI technology is used to enhance our daily lives as well as for serious and entertaining causes.

AI may not only have positive consequences but also negative ones, especially for human work. Artificial intelligence is a computer-based simulation of human intelligence designed to do human tasks [7]. Some respond to queries asked by people with an automatic response, while others employ human responses [8]. Natural language processing (NLP) and deep learning techniques are used by the piece of software to carry out text-based internet discussions [9].

The real-time data analysis capabilities of these applications, along with cutting-edge AI techniques, are putting a special emphasis on the optimization of teaching and learning procedures. Since learning processes could theoretically become highly individualized through the use of educational data mining, big data combined with sophisticated analytical processes (learning analytics) offers hope for a new era of personalized learning, formative assessment, and activating, student-centered, and collaborative forms of learning [10].

According to the research conducted by Han, Jieun & Yoo and et.al. (2023) [11] almost all of the students expressed satisfaction with ChatGPT with the seven factors. Particularly, 85% of students who had access to ChatGPT utilized the application for school-related tasks, suggesting that there is room to grow and utilize the technology for educational objectives. Furthermore, fewer than half of the students used ChatGPT to enhance their English writing abilities, which suggests that there is room for improvement and that more research has to be done on incorporating ChatGPT into EFL instruction. The majority of these students' use of other widely accessible AI tools was for assistance with English writing (90.4%), followed by reading (61.6%), grammar (57.1%), speaking (27.8%), and listening (Teyilmagan). Other commonly used AI tools included Grammarly1, Turnitin 7, Google Translate 8, Papago 9, Wordtune 10, ExplainPaper 11, and Elicit 12.

METHODS

A descriptive qualitative approach is used in this study. The focus of qualitative approaches is largely on observing phenomena and analyzing their underlying meanings. The quality of the words and sentences used has a big impact on how well qualitative research is analyzed and understood. The absence of statistical methods in qualitative research is highlighted by the fact that it is often not guided by a hypothesis [12]. In this study, the implementation of Chat GPT to strengthen students' writing abilities was elucidated by providing scaffolding for this complex productive skill. Multiple functions of AI chat GPT such as brainstorming ideas, expanding vocabulary (to find more formal synonyms or provide topic-specific words), and practicing different styles and tones (in formal and informal letters).

Brainstorming ideas

Finding strong arguments that are relevant to the essay topic is one of the challenges of writing argumentative essays. Before developing their vocabulary or structuring their essays, many students find it difficult to express their views. Chat GPT might be a helpful tool to solve

this problem by inspiring students to come up with more solutions. For instance, in response to the essay question “In many societies, there is a growing emphasis on sustainable living and reducing environmental impact. What are the challenges of adopting a sustainable lifestyle?” Chat GPT provided a range of ideas.

Certainly, here are some challenges of adopting a sustainable lifestyle, explained in language suitable for B2 learners:

Changing Habits: It's not easy to change the things you do every day. To live sustainably, you need to adopt new habits, like using less water or recycling more, which can be hard at first.

Lack of Knowledge: Some people don't know much about what it means to live sustainably. Understanding how your actions affect the environment is a challenge.

Money Matters: Sometimes, making eco-friendly choices can be more expensive upfront. This can be a problem for people who are on a tight budget.

City Planning: In some places, the cities are designed in a way that makes it difficult to live sustainably. This can be a challenge for people who want to use public transportation or grow their food.

Resources Running Out: Some resources, like clean water and fertile land, are limited. As they become scarcer, it's harder to maintain a sustainable lifestyle.

Technology Struggles: Sustainable living often depends on new technologies, like solar panels or electric cars. These technologies can be hard to find or expensive.

Government Rules: Laws and regulations can either support or hinder sustainable living. Sometimes, it's challenging to get governments to pass effective rules for sustainability.

Emotional Attachment: Sometimes, people are emotionally attached to their old habits or belongings. Letting go of these attachments can be tough.

Food Choices: Choosing food that's good for the environment can be tricky. Sometimes, it's hard to find affordable, sustainable options (<https://chat.openai.com/>)

This not only facilitates the essay-writing process but also enriches learners' answers with formal and subject-specific vocabulary. From the generated ideas learners can pick up topic-specific and academic words and collocations. In these cases, we can highlight the following vocabulary: adopt new habits, affect the environment, making eco-friendly choices, fertile land, maintain a sustainable lifestyle, solar panels, support or hinder sustainable living, emotionally attached, sustainable options

Chat GPT is an effective tool for idea generation and brainstorming. It is essential to state the goal, ask open-ended questions, accept the chance, rephrase your inquiries, make use of prompts, and assess your ideas. These pointers can help students improve their brainstorming skills and produce creative solutions that will enable them to accomplish writing objectives.

Using different styles

Chat GPT can be utilized to teach students the difference between informal and formal letters and to choose an appropriate tone for the letter. The following activities can be implemented to make informal letters to formal ones.

Effective communication requires the capacity to modify one's writing style according to the situation. Writing official letters is an essential skill in both the professional and academic

worlds. The following instructional technique teaches students how to transform informal letters into formal ones using Chat GPT, a cutting-edge AI language model.

The process that has been discussed entails a meticulously planned task intended to promote proactive interaction with Chat GPT. The purpose of this project is to use the AI tool as a scaffold to lead students through the transformation process. The following are the activity's main steps:

Introduction (15 minutes): A brief explanation of the activity's goal to the students, with a focus on the importance of turning casual writing into formal forms. It explains the importance of professional letters' tone, language, structure, and layout.

Sample Analysis (15 minutes): To visually represent the differences, samples of formal and casual letters are displayed. Special attention is paid to the salutations, addresses, greetings, and closings used in formal writing

ChatGPT Demonstration (10 minutes): A quick guide on how to use Chat GPT to make writing more formal. Students receive advice on how to submit material in a more formal tone as well as guidance on how to do so.

Group Task (30 minutes): Using Chat GPT as a helpful tool, students are split into small groups and given the task of turning informal letters into formal ones. They pinpoint places that need to change, consider comments from the AI, consider modifications, and make the necessary revisions.

Peer Review and Feedback (20 minutes): Groups share their revised letters to receive constructive criticism and recommendations for further development.

Individual Practice (20 minutes): Following peer evaluation, students are given informal letters to independently turn into formal ones using the information and criticism from the group exercise.

Sharing and Discussion (15 minutes): A few students present their altered letters to the class, which encourages discussion of the various strategies used and the difficulties found while utilizing Chat GPT.

Wrap-up and reflection (10 minutes): a synopsis of the main lessons learned, highlighting the value of combining critical thinking with AI technologies and the practical application of professional letter-writing techniques.

Results and Discussions

Before starting to brainstorm using Chat GPT, issues of the topic should be clear. The more clear objective the more productive brainstorming sessions will be. The next thing is to use open-ended questions. Questions that cannot be answered with a simple "yes" or "no" are known as open-ended questions. These kinds of queries inspire Chat GPT to produce more imaginative and perceptive answers. For instance, you may inquire, "What are the benefits of eating a healthy diet?" as opposed to, "Should we eat a healthy diet?"

One of the advantages sides of Chat GPT is that it can generate ideas that students may never have considered before. Students can come across unexpected ideas. Elaborating and extending the answers can help them increase their critical thinking skills and also encourage them to find the most innovative solutions. Finally, it's essential to evaluate the ideas that Chat GPT generates. Teachers should explain that not every idea will be a winner, but it's

important to give each idea a fair chance. Students should be aware to consider each idea and evaluate its potential value.

Active student participation in the learning process is facilitated by the use of Chat GPT to convert informal letters into formal styles. It develops critical thinking, teamwork, and effective communication in addition to writing abilities. Through this project, students get the ability to use AI tools as a helpful framework for improving their formal writing skills [13].

An inventive and useful method for improving writing abilities is to use Chat GPT as a teaching tool to convert informal letters into formal ones. Through this exercise, students learn how to modify their writing for various audiences and gain valuable experience using artificial intelligence (AI) as a tool to help with language learning and skill development. The outcome of this exercise demonstrates how technology and pedagogy can be combined to the advantage of students in a variety of learning environments.

Technologies for learning foreign languages that are flexible and responsive to the unique qualities and abilities of each learner are becoming more and more possible because of developments in artificial intelligence and computer technology. An astute adaptive education In theory, the method would keep students in their Zone of Proximal Development and a constant state of flux (Csíkszentmihályi 1990) [14], ensuring an ideal equilibrium where a balance between challenge and competence is reached. To achieve this objective, it is necessary to Identify, quantify, and evaluate difficulty levels. If a system is able to forecast how challenging an activity is (level of difficulty, characteristics that influence difficulty), it can control key elements and provide the student with workout materials that precisely match his or her abilities, thus promoting the advancement of learning by dynamically adjusting to the individual's changing linguistic aptitude.

CONCLUSION

In conclusion, the implications of incorporating AI, such as Chat GPT, in foreign language teaching are vast and promising. While challenges exist, the benefits of personalized learning, improved language skills, and innovative teaching methods offer a compelling case for the continued exploration and integration of AI in language education. Further research and collaboration across disciplines will contribute to the development of effective, accessible, and transformative language learning solutions.

The integration of AI-powered language learning tools opens up opportunities for personalized learning experiences. By tailoring content, pace, and exercises to individual students' needs, teachers can provide more effective language instruction, considering the varying abilities and learning styles of their students. AI tools can help students develop better language skills by offering instant feedback on pronunciation, grammar, vocabulary, and writing style. This leads to more accurate and efficient language learning, as learners can actively address their weaknesses.

The practical suggestions in this article demonstrate how AI, specifically Chat GPT, can scaffold the process of transforming informal letters into formal ones. This approach can be extended to various types of writing tasks, enhancing students' ability to adapt their writing styles to different contexts and purposes.

According to Fitria (2021) [15] stated that while there are challenges and costs associated with AI-powered language learning tools, it is essential to explore ways to make them more accessible to a broader range of learners. Ensuring affordability and addressing the limitations of current applications can enhance inclusivity in language education. The implementation of AI in language education encourages collaboration between educators, linguists, and computer scientists. This interdisciplinary approach can lead to the development of more effective AI-driven language-learning solutions.

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