

Study of English Grammar Teaching in Chinese Junior High Schools with the Aid of GPT

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Abstract: This study aims to explore the effects and advantages of GPT-assisted English grammar teaching in Chinese junior high schools, and to analyze the potential of its application in English grammar teaching. First, Chinese students often face various problems in English grammar learning due to the significant differences between English and Chinese in terms of grammatical structure, word order and tense. Traditional teaching methods often fail to provide sufficient personalized support, resulting in slow progress in students' grammar learning. Second, this paper proposes to use GPT, an artificial intelligence tool, to enhance students' learning through personalized grammar exercises and instant feedback. GPT can provide tailored learning tasks and adaptive exercises based on students' learning and error patterns. Finally, despite the advantages of GPT in grammar teaching such as personalized learning, instant feedback and enhanced engagement, there are still limitations such as dependence on technology and contextual understanding limitations. Therefore, this paper suggests combining GPT with traditional teaching methods to maximize its potential in teaching English grammar.

Keywords: GPT, English Grammar Teaching, Personalized Learning, Real-Time Feedback.

1. Introduction

English language education plays a vital role in China's academic system, especially for secondary school students, as it lays the foundation for future academic and professional opportunities[1]. Despite the curriculum's emphasis on English, students often encounter difficulties in using the language, especially in terms of grammar. One of the main difficulties is the use of verb tenses; unlike Chinese, which does not rely on tense distinctions in the same way, English requires students to understand and correctly apply a range of tenses to express time and aspect. In addition, these challenges are exacerbated by the limited opportunities for individualized instruction and immediate feedback in traditional teaching methods.

The purpose of this paper is to explore how the Generative Pretraining Transformer (GPT), a form of advanced artificial intelligence, can support the teaching of English grammar in Chinese secondary schools. GPT technology provides a personalized, adaptive learning experience that can help students overcome common grammar difficulties. By incorporating GPT into the curriculum, teachers can provide tailored exercises, instant feedback, and interactive learning opportunities[2]. Through an analysis of existing research and real-world applications, this study demonstrates how GPT can provide a more personalized, interactive, and effective learning experience that ultimately helps students increase their proficiency in English grammar.

2. The Challenges of English Grammar Learning for Chinese Secondary School Students

2.1. Language Differences

Chinese secondary school students face major challenges in learning English grammar due to the fundamental differences between the languages. English and Chinese are

very different in terms of syntax, word order and grammatical structure. English follows a fixed subject-verb-object (SVO) order, whereas Chinese offers more flexibility, often depending on the context. This difference can lead to difficulties when students try to form grammatically correct English sentences. In addition, English uses tenses to indicate time and aspect, a feature not found in Chinese. This makes it particularly challenging for students to grasp concepts such as the present perfect and past progressive tenses. As a result, students often use direct translations from Chinese, leading to incorrect tense usage and sentence structure.

2.2. Traditional Teaching Methods

Traditional grammar teaching methods in China often focus on rote memorization and repetitive exercises, which do not help students fully understand or apply grammar rules[3]. Grammar is usually taught in isolation without sufficient context or practical use, which makes it difficult for students to see the real-world relevance of what they are learning. As a result, it is difficult for students to transfer their grammar knowledge to real-world situations, such as conversations or writing tasks. Research has shown that learning grammar in context is crucial for long-term memorization and application. Without this contextual practice, students often fail to develop a deeper understanding of grammar, thus limiting their ability to use it effectively.

2.3. Lack of Engagement

Many students find traditional grammar lessons unengaging, leading to low motivation and poor memorization. Grammar is often viewed as a set of abstract rules that need to be memorized, and without interactive or stimulating activities, students are unlikely to remember the material. Research has shown that engagement is a key factor in students' ability to internalize and apply grammar rules. When students perceive grammar as repetitive or boring, they become less enthusiastic about learning, which directly affects their academic performance and their ability to use

grammar correctly in real-life situations.

2.4. Teacher Limitations

Teachers also face significant challenges in meeting the needs of individual students due to large class sizes and limited teaching time. In many Chinese secondary schools, English teachers must manage classrooms with 40 or more students, making it difficult to provide individualized attention[4]. Limited classroom time further restricts teachers' ability to explore topics in depth or to provide tailored support for students who struggle with grammar. As a result, students who need extra help may not receive the targeted instruction they need, leading to gaps in understanding and continued difficulty with English grammar.

3. GPT Overview and Applications

3.1. GPT in a Nutshell

Generative Pretrained Transformer (GPT) is an advanced language processing model developed by OpenAI that uses deep learning techniques to understand and interact with human language. It uses deep learning techniques to understand, generate, and interact with human language. GPT is trained on large amounts of textual data to generate coherent and contextually appropriate responses across a wide range of linguistic tasks, such as translation, summarization, and dialog. Its main strength lies in its ability to recognize linguistic patterns and generate text that is consistent with user input, making it highly adaptable to a range of applications, including language education. GPT works by processing text through a transformer architecture, which allows it to understand the linguistic context and generate text accordingly. By predicting the next word in a sequence based on patterns learned during training, GPT can generate fluent, contextually accurate language. This enables it to perform a variety of language-related tasks such as correcting grammar, answering questions and generating new content. In the context of grammar teaching, GPT can detect errors in student writing and provide real-time feedback, which helps to reinforce correct language use.

3.2. The Role of GPT in English Language Teaching

3.2.1. Personalized Learning

One of the most valuable features of GPT in English language teaching is its ability to provide a personalized learning experience. By analyzing students' proficiency levels, GPT can create customized exercises that meet their specific grammatical needs. For example, it can generate exercises that target areas where students are struggling, such as verb tenses or subject-verb agreement, ensuring that the content is relevant and the difficulty level is appropriate. This personalized approach allows students to progress at their own pace and receive the support they need to effectively improve their grammar skills.

3.2.2. Real-Time Feedback and Grammar Correction

GPT provides students with immediate feedback when they make grammatical errors, as well as corrections and explanations as they practice. This immediate feedback helps students quickly recognize and understand their errors and prevents incorrect use from being reinforced. For example, if a student misuses a tense or constructs an incorrect sentence, GPT can highlight the error and explain why it is wrong and provide a corrected version. This real-time correction

promotes a deeper understanding of grammar and accelerates learning.

3.2.3. Interactive Grammar Practice

GPT enhances traditional grammar learning by providing interactive exercises. Students can not only complete textbook exercises, but also engage in simulated conversations with GPT. These interactions allow students to apply grammar in real-life situations, making the learning process more dynamic and engaging. This real-life application helps students to better memorize grammar rules and use them in their daily communication. The interactive nature of GPT's dialogue-based exercises also makes grammar practice less monotonous and more interesting, thus increasing student motivation and engagement[5].

3.2.4. Grammar Explanation

GPT can break down complex grammar rules into easy-to-understand steps. It can explain topics such as tenses, passive voice and sentence structure, using clear examples to demonstrate correct usage. For example, when explaining the use of the present perfect tense, GPT can provide context-specific examples that help students not only understand the rule, but also when and how to apply it. This structured approach makes it easier for students to grasp abstract grammatical concepts and practice them in manageable increments.

3.2.5. Error Detection and Adaptive Learning

GPT specializes in error detection and adaptive learning. It recognizes patterns of errors made by students over time and adjusts its responses to meet ongoing challenges. If a student makes frequent errors in a particular area, such as misusing tenses, GPT can provide additional practice that is specific to that area. This personalized, adaptive approach ensures that students receive the support they need to overcome difficulties and continue to improve their grammar skills.

4. Strengths and Limitations of GPT in Teaching Grammar

4.1. Advantages

GPT offers several advantages in teaching grammar. It allows students to practice grammar in context, thus improving their overall language skills.

4.1.1. Personalized Learning

One of the main advantages of GPT for grammar instruction is its ability to provide a personalized learning experience. The tool adapts to each student's individual needs and progress, providing customized exercises for specific grammatical challenges. For example, GPT can provide more advanced exercises for stronger students, while providing additional support for those who need it. This level of personalization helps students progress more effectively and ensures that their unique learning needs are met.

4.1.2. Scalability

Another significant advantage of GPT is its scalability. Unlike traditional teaching methods that require one-on-one attention, GPT can help a large number of students at once, providing individualized feedback to each student. This is especially valuable in large classrooms or schools with limited instructional resources, allowing all students to benefit from personalized support at scale.

4.1.3. Instant Feedback

GPT's ability to provide immediate feedback is another

important strength. When students make mistakes, GPT can immediately recognize and correct them, clearly explaining why a particular structure is incorrect. This real-time feedback helps students learn quickly from their mistakes and reinforces their understanding of correct grammatical usage. Instant corrections also prevent students from internalizing errors, promoting better recall and faster progress.

4.1.4. Supporting Functions

GPT is available 24/7, providing students with the flexibility to practice grammar outside of regular classroom hours. This constant accessibility encourages independent learning and allows students to strengthen their grammar skills at their own pace. It is especially useful for students who need additional practice or prefer to learn outside of the classroom environment.

4.1.5. Engagement

GPT also promotes student engagement through interactive, dynamic exercises. While traditional grammar courses are often repetitive and disengaging, GPT provides a more engaging experience through conversation-based exercises and gamified activities. By simulating real-life communication scenarios, GPT helps students apply grammar rules in a meaningful context, which increases motivation and makes learning more enjoyable.

4.2. Limitations

4.2.1. Contextual Understanding

While GPT is effective in many domains, it does have limitations in understanding complex grammatical contexts or cultural nuances. The model may have difficulty interpreting idioms or language specific to certain cultures, which may lead to errors or confusion. This highlights the need for teachers to monitor and guide the use of GPT to ensure that its content remains accurate and appropriate to the learning environment.

4.2.2. Over- Reliance on Technology

A potential disadvantage of using the GPT in grammar instruction is that students may become overly reliant on the tool. While GPT provides immediate correction, this may prevent students from developing their own self-correction skills. If students rely too heavily on AI, they may have difficulty applying grammar rules without the help of technology, limiting their growth as independent learners. Teachers must strike a balance by using GPT as a tool while encouraging students to think critically and self-correct.

4.2.3. Accuracy Issues

Despite its advanced features, the GPT is not immune to occasional errors, especially in complex grammatical structures. For example, in some cases, the model may produce incorrect grammar or awkward wording, especially when dealing with non-standard sentence structures. These inaccuracies emphasize the importance of teacher monitoring when using GPT to ensure that the grammatical content provided is correct and reliable.

GPT offers many advantages for teaching English grammar, including personalized learning, scalability, instant feedback,

accessibility, and enhanced student engagement. These benefits make GPT an invaluable tool in the secondary classroom, especially in resource-limited settings. However, its limitations (e.g., challenges of contextual understanding, risk of over-reliance on technology, and occasional accuracy issues) suggest that GPT should be used in conjunction with traditional teaching methods. By combining the benefits of GPT with the expertise of human teachers, educators can optimize grammar instruction and improve student achievement.

5. Conclusion

This paper examines the use of GPT in teaching English grammar to secondary school students in China, highlighting its strengths and limitations. GPT offers several advantages, including personalized learning, scalability, instant feedback, accessibility, and increased engagement. Its ability to customize content to individual learning needs enhances grammar instruction and helps students at different proficiency levels. In addition, GPT offers real-time error correction, which promotes better retention and a deeper understanding of grammar. However, there are limitations that must be considered; GPT may encounter complex grammatical contexts and cultural nuances, which may lead to occasional misunderstandings or errors. An over-reliance on AI may also hinder students' ability to self-correct and think critically about grammar. In summary, GPT offers a promising tool for enhancing grammar instruction in secondary ESL classrooms. Its ability to provide a personalized, scalable, and engaging learning experience makes it a valuable asset for teaching English.

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