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Contemporary Language Teaching and Learning with ChatGPT

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Abstract

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This comprehensive review explores the potential and challenges of ChatGPT, an AI conversational model, in the context of language learning. The paper delineates the various affordances of ChatGPT, demonstrating its capacity to support language acquisition, generate diverse text genres, and offer interactive dialogue simulations. It also provides practical strategies for learners and educators to leverage ChatGPT's capabilities, as presented in the appendices. However, the review also critically examines the limitations and ethical considerations associated with the use of AI tools like ChatGPT, including issues of academic integrity, accuracy of responses, cultural bias, lack of genuine interactivity, and potential for over-reliance. It emphasizes the need for critical digital competence among teachers and learners in navigating the hybrid digital landscape, and underscores the importance of a principled approach to the integration of such technologies in pedagogical practices. The paper concludes with a call for ongoing exploration and critical examination as we navigate the promising but complex terrain of AI in language learning.

Keywords: ChatGPT, Language Learning, Digital Competence, Text Generation, Educational Technology

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Introduction

In the ever-evolving landscape of education, the progressive integration of technology has captivated the attention of language educators and learners alike. Recent advancements have paved the way for innovative tools to enhance the language learning experience, among which AI-powered chatbots have emerged as particularly promising (Aljawarneh, 2020; Sun & Gao, 2020). ChatGPT, a generative pre-trained transformer developed by OpenAI, stands out as a noteworthy exemplar of such tools, combining the potential to revolutionize language learning with the capacity to generate human-like text (Khalil & Er, 2023; Schwitzgebel et al., 2023). Unlike traditional rule-based chatbots, ChatGPT employs advanced artificial intelligence techniques, including natural language processing, machine learning, and deep learning. These techniques empower the chatbot to learn from large human language datasets and respond intelligently to user inquiries (Jiang et al., 2022). This continuous learning capacity situates ChatGPT as an efficient, tireless language-learning assistant, capable of transforming how learners engage with their target language.

Chatbots powered by artificial intelligence can deliver rich linguistic input, stimulate learners' interest, and contribute to the overall growth of language learners (Kim, 2019; Kohnke, 2022). Its 24/7 availability affords learners the flexibility to practice language skills anytime, anywhere (Haristiani, 2019). This continuous, real-time assistance fosters an environment conducive to successful language acquisition by providing opportunities for interaction and the modification of output in communication (Mackey, 2012). Furthermore, Chatbots offer the potential to personalize the learning experience. By adjusting the proficiency level, providing tailored learning materials, and suggesting customized learning paths, it enhances the language learning experience, offering a level of individual attention that human language partners might not consistently provide (Kuhail et al., 2023). Additionally, it can facilitate formative assessments and give immediate feedback, thereby expanding the language capabilities of learners and sustaining their motivation (Smutny & Schreiberova, 2020).

In spite of these technological advancements, comprehensive research into the potential of ChatGPT for language learning remains somewhat elusive. Existing studies have explored the use of technology and chatbots in language learning (Haristiani, 2019; Kim, 2019; Kohnke, 2022; Kuhail et al., 2023; Smutny & Schreiberova, 2020). Yet, the specific impact of large language models like ChatGPT in higher education language learning requires more extensive investigation. This review aims to contribute to filling this research gap. It will explore the potential benefits and challenges of incorporating ChatGPT into higher education language courses and programs. By examining its potential applications and limitations, we hope to shed light on its role in language learning and foster further discourse on the subject. In doing so, this review will provide a comprehensive analysis of ChatGPT's implications for language learning, grounded in the existing literature.

To achieve this objective, this review will first provide a detailed overview of ChatGPT and its capabilities, followed by an exploration of the potential benefits and challenges of integrating such models into higher education language courses and programs. This analysis will encompass various aspects, such as the effectiveness of ChatGPT in promoting language acquisition, the impact on learner motivation, and the ethical and social implications of its use. Additionally, the review will discuss potential applications, including language learning games, writing feedback, and translation assistance.

This review also seeks to identify areas for further research in the realm of ChatGPT and language learning. As we strive to understand the full potential and limitations of ChatGPT, it is crucial to examine the challenges, ethical concerns, and opportunities for improvement. By doing so, we can unlock its full potential in language learning and advance our understanding of its role in language education. By scrutinizing the potential advantages and drawbacks of incorporating ChatGPT into language learning, this review aims to inspire further research, providing deeper insights into the relationship between technology and language learning. Ultimately, a comprehensive understanding of ChatGPT's potential in higher education is essential to harness the benefits and address the challenges presented by this cutting-edge technology.

Affordances of ChatGPT

ChatGPT, an advanced language model developed by OpenAI, offers an array of affordances for language learning that transcends traditional pedagogical boundaries (Baskara & Mukarto, 2023; Kohnke et al., 2023). It can simulate authentic interactions, elucidate the semantic nuances of words, rectify language errors, generate texts across different genres, and even develop interactive quizzes. By offering such a versatile array of language-based tasks, it paves the way for a more dynamic, engaging, and personalized learning experience. One key affordance of ChatGPT is its ability to facilitate in-depth vocabulary exploration. The model can not only provide dictionary-like definitions but also contextualize words, offering learners a more holistic understanding of language usage. To illustrate, a learner unsure about the meaning of a word in a text assigned by a teacher can engage with ChatGPT for an explanation, even in their native language. Moreover, learners can benefit from example sentences and additional meanings provided by ChatGPT, helping them grasp the richness and complexity of the English language.

In addition, ChatGPT's prowess in generating diverse genres of text pertaining to a specific topic can be instrumental in enhancing learners' writing skills (Warschauer et al., 2023; Yan, 2023). For instance, in exploring a theme like 'energy conservation,' learners can use ChatGPT to draft an advertisement for an electric company, compose an email about saving electricity, or even construct a dialogue discussing rising electricity prices. This versatility in genre production can foster learners' creativity and improve their genre-specific writing skills. ChatGPT also affords the ability to tailor the complexity of the dialogue, making it suitable for learners at varying proficiency levels. This can assist teachers in differentiating materials for their students based on their language skills. Furthermore, ChatGPT can provide translations of dialogues, which can be beneficial for learners aiming to translate texts from their native language to English and vice versa.

The advance language model's capability to generate vocabulary notes in the target and native language can also support learners' vocabulary acquisition. It can provide explanations of words and phrases, assisting learners in comprehending a text, such as a short story. Moreover, its ability to generate comprehension and expansion questions can enhance learners' reading skills and promote critical thinking. The affordances of ChatGPT are not confined to these areas. As detailed in the three appendices provided in this study, the possibilities for using ChatGPT in language learning are vast, ranging from improving pronunciation and preparing for language proficiency tests to practicing job interviews and crafting study plans. However, it is essential to note that the quality of the responses generated by ChatGPT is contingent upon the quality of the prompts. Therefore, learners or

teachers may need to refine their prompts to elicit more accurate and meaningful responses from the model. Despite the potential of ChatGPT, its application in education has spurred debates surrounding ethical considerations, accuracy of responses, and cultural bias inherent in the model's database. These concerns highlight the need for learners and educators to approach the use of AI-driven tools like ChatGPT with a critical mindset, understanding its limitations alongside its advantages.

Ultimately, the successful integration of ChatGPT in language education hinges on the development of specific digital competencies among teachers and learners. This includes learning to interact with ChatGPT, facilitating pedagogically beneficial tasks, and critically evaluating the model's outputs. In a world where AI-driven digital tools are becoming the norm, developing such competencies is no longer a luxury but a necessity. As the field continues to evolve, it is crucial for educational institutions to provide guidelines for using such tools, adapt their teaching and assessment practices, and prepare learners for a digitally advanced future.

The Flip Side: Exploring the Limitations and Challenges

While the affordances of ChatGPT for language learning are noteworthy, it is crucial to balance the discussion by considering its drawbacks and limitations. This examination is essential for developing a comprehensive understanding of this AI-driven tool and its potential implications on pedagogical practice. One of the primary concerns related to the use of ChatGPT in education revolves around the issue of academic integrity. The risk of using AI-generated text to circumvent academic responsibilities is real and has already drawn criticism from various quarters. Critics argue that learners may use ChatGPT to complete assignments, thereby bypassing genuine learning experiences and undermining the educational process. The tool's inability to attribute sources further complicates this issue, raising questions about plagiarism and the originality of its responses.

ChatGPT's accuracy, or lack thereof, is another significant concern. While the model can generate linguistically coherent and contextually appropriate responses, these responses are not always accurate. As Bowman (2022) observes, the tool's impressive-sounding answers can sometimes be "dead wrong." This can be especially problematic in language learning, where incorrect explanations or examples may lead to the internalization of wrong language patterns or concepts. Furthermore, the model's definitive tone can give an impression of authority, which may discourage users from questioning its responses.

The cultural bias inherent in ChatGPT's source database and algorithms also poses a challenge. Since most of its data is derived from an English corpus, the model's responses may reflect a predominantly Western cultural perspective. This could limit its applicability in diverse cultural contexts and inadvertently promote a monolithic view of language and culture. It's important to remember that AI tools like ChatGPT are not culturally neutral and should be used with a critical understanding of their underlying biases. Another limitation of ChatGPT is its inability to engage in truly interactive and dynamic conversations. Despite being able to simulate authentic interactions, the model lacks the capacity to maintain a consistent thread of conversation over an extended period or respond to non-verbal cues, which are integral aspects of human communication.

Furthermore, ChatGPT does not possess an understanding of the world in the way humans do. It does not have beliefs, opinions, emotions, or consciousness, even though its responses might sometimes give that impression. This lack of true understanding could potentially limit the depth and quality of learning experiences. Finally, there is a risk of over-reliance on AI-driven tools like ChatGPT. While such tools can be beneficial in supporting language learning, they should not replace human interaction and instruction. Language learning is a deeply social process, and the nuances of human interaction cannot be fully replicated by an AI model. While ChatGPT offers a range of promising affordances for language learning, these benefits need to be weighed against its limitations and challenges. It is important to approach the use of ChatGPT with a critical lens, being cognizant of its potential drawbacks and fostering digital competencies that enable its ethical and effective use. As we continue to explore the role of AI in education, it is crucial to maintain a balanced perspective that acknowledges both the possibilities and the pitfalls of this rapidly evolving field.

Conclusion

This review has traversed the landscape of ChatGPT's capabilities and applications in language learning, examining its affordances alongside its limitations. This exploration offers a comprehensive understanding of this AI tool, its potential and its challenges in the educational context. The potentials of ChatGPT in aiding language acquisition, simulating interactive dialogues, and supporting a broad spectrum of learning activities are undeniably compelling. Its ability to adjust to varying levels of language proficiency, generate a range of text genres, and even translate dialogues represents a significant step forward in the realm of AI-aided language learning.

However, acknowledging these benefits does not negate the presence of drawbacks and concerns. The issues surrounding academic integrity, accuracy of responses, cultural bias, lack of genuine interactivity, and potential for over-reliance on AI are real and require considered attention. Addressing these concerns is not a task solely for educators, but also for AI developers, policymakers, and the wider educational community. The emergence of advanced AI tools such as ChatGPT has pushed the boundaries of what is possible in language learning and has undoubtedly accelerated the digital transformation in education. However, this acceleration also amplifies the need for critical digital competence among teachers and learners. As the line between human-generated and AI-generated content blurs, it is vital that we equip ourselves with the skills to navigate this hybrid digital landscape effectively and ethically.

The advent of AI in education underscores the need for a principled approach to the integration of these technologies in pedagogical practices. It is not enough to adopt AI tools because they are novel or efficient; their inclusion must be based on sound pedagogical reasoning, taking into account the specific learning contexts and needs. While we must be prepared to leverage the benefits of AI tools like ChatGPT, we must also remember that they are tools, not replacements for the human elements of teaching and learning. The nuanced, dynamic, and deeply social nature of language learning cannot be fully replicated by AI. Human teachers' roles remain crucial in guiding, inspiring, and providing the rich, authentic interaction that fosters deep learning.

In conclusion, the journey with AI in language learning is just beginning. As we continue to advance, we must navigate this terrain with a critical eye, openness to exploration, and a commitment to ethical and pedagogically sound practices. The future of AI in language learning

holds great promise, but it is our responsibility to ensure that this promise is realized in a way that genuinely enhances learning, respects academic integrity, and promotes inclusive and culturally sensitive practices.

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APPENDICES

Appendix A - Ten Ways to Hone Your English Proficiency Using ChatGPT

Utilizing ChatGPT for English conversation practice

Suggested prompts:

Could we converse about [topic] globalization? Could you suggest relevant phrases and idioms for this discussion?

Can we simulate a casual interaction between two strangers in [city name]?

Can we practice small talk, while you assist in rectifying any language errors I make?

Leveraging ChatGPT for monologue and dialogue creation

Suggested prompts:

Could you create a dialogue among three characters, reminiscent of a scene from the TV series [name of TV series]?

Could you craft a succinct presentation about the importance of data privacy?

Could you compose a speech on [topic] in a style akin to Martin Luther King Jr.?

Employing ChatGPT for grammar learning

Suggested prompts:

Could you pen a short story about [topic] using the present perfect tense, and clarify its usage in narratives?

Could you rectify my grammatical errors and elaborate on them in the following text [add text]?

Could you rewrite this [insert text] using reported speech?

Using ChatGPT for vocabulary enhancement

Suggested prompts:

Could you define this word [add word] and provide its synonyms?

Could you construct ten sentences using this phrase, [add phrase]?

Could you supply me with commonly used idiomatic expressions in journalism?

Adopting ChatGPT to improve pronunciation

Suggested prompts:

Could you enumerate commonly used words with the "Th" sound?

Could you compile words that frequently feature the "L" and "Z" sounds in the middle?

Could you explain the rules governing stress in compound words in English?

Employing ChatGPT to refine writing skills

Suggested prompts:

Could you paraphrase this text [add text] to sound more formal?

Could you rewrite the text using B1 level vocabulary?

Could you draft a letter requesting a leave of absence from work?

Using ChatGPT for GRE Verbal practice

Suggested prompts:

Could you construct sample verbal reasoning questions to prepare for the GRE?

Could you generate a word list for GRE Verbal?

Could you provide a sample argument analysis essay related to [insert topic]?

Employing ChatGPT for GMAT practice

Could you provide examples of complex sentence structures for GMAT AWA?

Could you list common logical fallacies to avoid in GMAT AWA?

Could you provide feedback on my AWA essay, along with suggestions for improvement?

Leveraging ChatGPT for job interview preparation Could you propose ten potential questions for a [add job name] interview? Could we simulate an interview for a data analyst position? Could you suggest how this response [insert response] can be made more impactful?

Utilizing ChatGPT for devising a study plan Suggested prompts:

Could you propose a reading plan to augment my scientific reading skills over the next 60 days? Could you design a vocabulary enhancement plan for me if I aim to improve my legal English? Could you devise a 3-month GRE/GMAT study plan for me? I can allocate 2 hours each day for study.

Appendix B - Ten Techniques to Maximize Your English Learning Using ChatGPT

Using ChatGPT for Active Listening Practice

Suggested prompts:

Could we converse about [topic] cultural diversity, and you pause for comprehension checks? Could we simulate a debate on climate change, and you assist in pointing out key arguments? Can we enact a podcast episode on [topic], and you provide a summary at the end?

Employing ChatGPT for Constructing Essays and Reports

Suggested prompts:

Could you model a discursive essay on the impact of social media on society?

Could you draft a report on the implications of AI in healthcare?

Could you create a critique of [artwork or movie name] in the style of an art critic?

Leveraging ChatGPT for Sentence Structure Learning

Suggested prompts:

Could you craft a paragraph about [topic] using complex sentences and explain their usage?

Could you correct my sentence structures and explain the corrections in the following text [add text]?

Could you convert these [insert text] direct sentences into indirect speech?

Utilizing ChatGPT for Idiom and Phrase Learning

Suggested prompts:

Could you illustrate the use of this idiom [add idiom] in different contexts?

Could you compose ten sentences using this phrasal verb, [add phrasal verb]?

Could you provide a list of idioms commonly used in political discourse?

Adopting ChatGPT to Improve Accent and Intonation

Suggested prompts:

Could you list common words with the "schwa" sound?

Could you explain the difference in intonation in English questions and statements?

Could you guide me on the accentuation of multisyllabic words?

Leveraging ChatGPT to Enhance Creative Writing

Suggested prompts:

Could you help rewrite this text [add text] to sound more descriptive?

Could you assist in developing a plot for a short story?

Could you guide me in writing a poem on [topic]?

Using ChatGPT for SAT Verbal Practice

Suggested prompts:

Could you provide sample reading comprehension passages for SAT practice?

Could you curate a vocabulary list for SAT Verbal?

Could you offer tips on approaching the SAT essay section?

Applying ChatGPT for PTE Academic Practice

Could you provide examples of summarizing written text for PTE Academic?

Could you list common errors to avoid in PTE Academic speaking tasks?

Could you give feedback on my speaking sample, including pronunciation and fluency tips?

Using ChatGPT for Business Communication Practice

Could you suggest common phrases used in business meetings?

Could we role-play a negotiation scenario in a corporate setting?

Could you offer tips on how to deliver a persuasive product pitch?

Adopting ChatGPT for Developing a Reading Plan Suggested prompts:

Could you suggest a reading plan to improve my reading speed and comprehension over the next 45 days? Could you create a plan for me to broaden my English vocabulary in the field of environmental science? Could you devise a 6-week plan for me to prepare for the PTE Academic? I can dedicate 1.5 hours each day.

Appendix C - Ten Approaches to Expand Your English Abilities Using ChatGPT

Using ChatGPT for Role-play Scenarios

Suggested prompts:

Could we role-play a discussion about [topic] sustainable development, and you provide feedback on my argumentation skills?

Could we simulate a customer service interaction at a hotel?

Can we practice a business negotiation scenario, and you help correct any inappropriate language usage?

Employing ChatGPT for Storytelling and Narrative Creation

Suggested prompts:

Could you create a mystery story featuring five characters?

Could you draft a personal essay about the challenges of online learning?

Could you design a TEDx talk script on [topic] that is engaging and persuasive?

Leveraging ChatGPT for English Punctuation Learning

Suggested prompts:

Could you write a text about [topic] using a variety of punctuation marks and explain their correct usage?

Could you correct my punctuation errors and explain them in the following text [add text]?

Could you rewrite these [insert text] run-on sentences into grammatically correct ones?

Utilizing ChatGPT for Learning Collocations

Suggested prompts:

Could you explain this collocation [add collocation] and give examples of its usage?

Could you create ten sentences using this collocation, [add collocation]?

Could you provide a list of collocations commonly used in academic writing?

Adopting ChatGPT to Understand English Phonetics

Suggested prompts:

Could you list common words with the "oI" diphthong?

Could you differentiate the pronunciation of minimal pairs like "sheet" and "seat"?

Could you explain the changes in vowel sounds in weak forms of common English words?

Utilizing ChatGPT to Master Letter Writing

Suggested prompts:

Could you help rewrite this text [add text] to sound more formal for a job application letter?

Could you guide me in writing a letter of complaint to a company?

Could you assist in drafting a recommendation letter for a colleague?

Using ChatGPT for CAE (Cambridge Advanced English) Practice

Suggested prompts:

Could you provide sample essay questions for the CAE exam?

Could you compile a list of formal and informal register for CAE writing tasks?

Could you offer feedback on my writing sample for the CAE exam, with suggestions for improvements?

Applying ChatGPT for OET (Occupational English Test) Practice

Could you provide examples of letter writing tasks in OET?

Could you list common language mistakes in the OET speaking tasks?

Could you give feedback on my writing sample for OET, including suggestions for improvement?

Using ChatGPT for Public Speaking Practice

Could you suggest ways to start a speech about [topic]?

Could we role-play a Q&A session after a public talk on [topic]? Could you provide tips on how to use pauses and intonation effectively in public speaking?

Adopting ChatGPT for Crafting a Language Learning Plan Suggested prompts:

Could you suggest a listening practice plan to improve my comprehension of British English accents over the next 60 days?

Could you create a plan for me to learn technical English relevant to the IT industry?

Could you devise a 90-day plan for me to prepare for the OET exam? I can dedicate 2 hours each day.