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Artificial Intelligence (AI) Presentation Assistants: Current Trends, Experiences, and Future Directions for Language Pedagogy

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Abstract

The field of Artificial Intelligence (AI) has undergone a profound transformation, significantly affecting a multitude of industries through enhanced productivity and efficiency. In the realm of language education, AI has offered substantial improvements through automatized tasks, real-time support, and individualized presentation assistance. However, AI in language education is still a fledgling research line, and it is crucial to understand user experiences and expectations to guide further advancements. Drawing upon insights from recent research on AI literacy and usability, in this paper, I present a comprehensive overview of the current state of AI-driven presentation assistant technologies in language pedagogy. To do so, an online qualitative questionnaire was designed and validated to capture practitioners' perspectives on the status quo of AI presentation assistants and possible challenges and suggestions. The findings revealed key areas where practitioners seek improvements, such as enhanced accessibility, real-time support, and advanced personalization features. The analysis showed a strong interest in making AI tools more intuitive and user-friendly, with suggestions for incorporating voice commands, assistive technologies, and adaptive learning systems. In addition, the findings indicate a demand for better performance, accuracy, and creativity in AI-generated content. This study calls for further AI development that is informed and fostered by user experiences to ensure high performance and cultural sensitivity.

Keywords: AI, Assistants, Language Pedagogy, Presentation

Introduction

In recent years, the field of Artificial Intelligence (AI) has gained increasing attention and turned into a crucial technological tool across a diverse array of sectors, including healthcare, education, and business. One important area that has lent itself easily to AI integration has been technology-supported presentations in educational domains. The integration of AI capabilities within presentation tools has provided users with significant advantages, such as automatized tasks, personalized assistance, and enhanced productivity and efficiency (Maghsudi et al., 2021). This growing landscape underscores the paramount importance of user experiences in order to

optimize the performance and capabilities of Artificial Intelligences to fulfill diverse needs and expectations across educational contexts.

The integration of Artificial Intelligence (AI) into language instruction has gained significant attention in recent years, as evidenced by the growing body of research in this field. Several studies have explored the impact of AI-based technologies on various aspects of language learning, including English learning achievement, L2 motivation, and self-regulated learning (Wei, 2023). One area of focus has been the use of AI-powered virtual conversation partners to support speaking practice and enhance speaking skills in foreign languages (Khasawneh, 2023). These AI-based systems provide learners with interactive and personalized feedback, allowing them to engage in meaningful language practice and improve their communicative abilities.

Furthermore, researchers have investigated the potential of AI-assisted language learning through social network-based interaction, where AI-powered platforms facilitate collaborative learning and language practice among learners (Zou et al., 2023). This approach aims to leverage the benefits of social interaction and AI-driven support to enhance the overall language learning experience. Alongside these specific applications, broader trends and research issues in the field of AI and language education have also been explored. Scholars have examined the various AI technologies and their applications for language learning and teaching, highlighting the potential for AI to create more personalized, adaptive, and engaging learning environments (Son et al., 2023; Huang et al., 2023). Overall, the integration of AI in language instruction has shown promising results, with researchers emphasizing the need for further exploration and development of AI-based technologies to support language learners and enhance language-teaching practices. Previous studies mainly examined how AI can help improve teaching practices, design tasks, and create lesson plans. However, there has been scarce attention to incorporating AIs as teaching assistants in real language classes. Indeed, the question remains as to whether AI can play a role in helping language practitioners teach in the class and provide simultaneous support.

Building on this background, the primary goal of this report is to capture user experiences and expectations from AI presentation assistants. This study seeks to identify current challenges, desired features, and areas for enhancement to drive future AI development. This focus on user feedback is essential for guiding future AI advancements in presentation technology. Critical future research directions include evaluating user satisfaction, particularly in educational settings, assessing the impact of AI assistants on learning outcomes, and establishing continuous improvement mechanisms through regular user feedback. These aspects are crucial for refining AI presentation assistants and ensuring they remain responsive to evolving user needs. By addressing these areas, future studies can create more adaptive, intelligent, and user-friendly AI tools to enhance productivity and efficiency in professional and educational settings significantly. Consequently, this study aims to gather user insights on the current effectiveness of AI in presentation assistants and explore opportunities for improvement. In this paper, I address the following questions:

1. How do language education practitioners perceive AI as presentation assistants?
2. What challenges and suggestions do they harbor for AI-directed presentation assistants?

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AI in Language Education: Empirical grounding

The integration of artificial intelligence (AI) technologies in language education has been a growing area of research and application in recent years. Several studies have explored the potential benefits and challenges of using AI-powered tools and systems to enhance language learning and teaching.

Huang et al. (2023) provide a comprehensive review of the trends, research issues, and applications of AI in language education, highlighting the use of AI-based virtual conversation partners, adaptive learning technologies, and language assessment tools. Similarly, Khasawneh (2023) investigates the integration of AI-based virtual conversation partners to improve speaking skills in foreign language learning.

Other researchers have focused on the specific applications of AI technologies in language instruction. Son et al. (2023) examine the various AI technologies and their applications for language learning and teaching, while Wei (2023) explores the impact of AI on English learning achievement, L2 motivation, and self-regulated learning. Zou et al. (2023) investigate the use of social network-based interaction in AI-assisted language learning to support speaking practice.

Previous researchers also touched on broader topics related to AI in education, such as the use of algorithmic government to automate public services and support civil servants in using data science technologies (Engin & Treleaven, 2019). Moreover, the importance of participatory design for learning (DiSalvo et al., 2017) and the need to broaden the disciplinary landscape have been explored in terms of the Internet in learning and education (Davies & Eynon, 2018).

In addition, Black and van Esch (2020) explore the use of AI-enabled recruiting, which could have implications for the integration of AI in language education and the support of language instructors. The authors discuss the potential benefits and challenges of using AI in the recruitment process, which may be relevant to the broader application of AI technologies in educational settings.

Furthermore, Canbek and Mutlu (2016) examine the use of intelligent personal assistants (IPAs) in learning, highlighting their potential to enhance the learning experience and support students in their educational endeavors. This study provides additional insights into the integration of AI-powered tools in various educational contexts, including language learning. Overall, these studies show a growing interest and research focus on the integration of AI technologies in language education, with a particular emphasis on enhancing language learning outcomes, improving student engagement, and supporting language instructors.

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Method

Design of the Study

This study is a qualitative survey on English as a Foreign Language (EFL) practitioners' perceptions of AI-enabled presentation assistants. The target sample for this qualitative survey included English as a Foreign Language (EFL) teachers and students who were involved in language-related presentations in the classroom. The researchers aimed to capture the perceptions and experiences of EFL practitioners regarding the use of AI-enabled presentation assistants. By including both teachers and students, the study sought to gain a comprehensive understanding of the practical implications and potential benefits or challenges of integrating these AI-powered tools in the context of language learning and instruction.

Participants

The sample was selected to represent a diverse range of perspectives from individuals directly engaged in the language education process and who had firsthand experience with utilizing presentation technologies in their teaching or learning activities. The EFL teachers included in the study represented a range of experience levels, from early-career educators to seasoned professionals, and came from various educational institutions, such as secondary schools, language centers, and universities. The student participants were drawn from diverse cultural and linguistic backgrounds, reflecting the multicultural nature of many EFL classrooms, and ranged in age from 25 to 35. This diversity among the participants was intended to provide a rich and nuanced understanding of the research objectives.

Instrument and Procedures

In this study, an online inventory of AI presentation assistants was developed and validated. I prepared an item pool based on the literature and field experts' knowledge. I developed questions based on the Likert scale, and the responses ranged from "strongly agree" to "strongly disagree". An EFL expert was invited to review the first-draft questionnaire. Based on expert feedback, some changes were made in the content and language of the questions. The final version of the inventory included 1. For what purposes do you primarily use AI presentation assistants? 2. To what extent are you satisfied with the performance of the AI presentation assistants you have used? 3. How would you rate the quality of the content generated by AI presentation assistants? 4. Do you believe AI presentation assistants can improve the quality of your presentations? 5. How comfortable are you with AI presentation assistants accessing your data and past presentations to provide better recommendations? 6. How have AI presentation assistants impacted your efficiency in creating presentations? Etc. And about 10 minutes was considered to answer these questions. To ensure content validity, the survey instrument was piloted and revised based on experts' feedback.

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After piloting and finalizing the inventory, I shared the link to the instrument on social media platforms, mainly including Telegram channels and groups. After gathering the responses, I analyzed the data through extracting themes and categories from the questions.

Results

Desired Features for Future AI Presentation Assistants

The analysis of the questionnaire responses revealed several critical insights into the current state and potential future of AI in presentation assistants. Users expressed a keen interest in enhancing specific features to improve their experience with these tools.

Accessibility and User-Friendly Interface

Respondents emphasized the need for a more intuitive and easy-to-navigate interface. The demand for enhanced accessibility features highlights the importance of making AI tools more inclusive and accommodating to diverse user needs. The suggested improvements were simplifying the user interface and incorporating features such as voice commands and assistive technologies. These enhancements can make AI tools accessible to a broader audience, including those with disabilities, ultimately fostering a more inclusive digital environment (DiSalvo et al., 2017). Moreover, by creating interfaces that are easier to use, AI developers can ensure that users of varying technical expertise more readily adopt these tools.

Performance and Accuracy

There is an apparent demand for better performance and accuracy in AI presentation assistants. Users seek reliable, high-quality outputs with fewer errors, indicating a need for investing in advanced algorithms to enhance the precision and consistency of AI-generated content. Improved performance would increase the efficiency of creating presentations and boost user confidence in relying on AI tools for professional and educational purposes. Ensuring these systems can produce accurate and dependable results is crucial for widespread adoption and effectiveness as AI develops.

Real-Time Feedback and Suggestions

Additionally, users wanted real-time capabilities to provide immediate suggestions for improving content, grammar, and visuals during creation. This feature would significantly enhance the user experience by allowing adjustments to be made on the fly. Real-time feedback can help users create polished and professional presentations more efficiently, reducing the time spent on revisions. By incorporating sophisticated natural language processing and image recognition technologies, AI presentation assistants can offer timely and relevant suggestions, thereby improving the overall quality of presentations.

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Personalization and Adaptive Learning

There is a strong interest in personalization among users. They want AI tools that adapt to their preferences and past usage patterns, offering tailored templates and content suggestions. Implementing adaptive learning systems would enable AI to provide a more personalized experience, catering to individual user needs and styles. Personalized AI tools can save users time by anticipating their needs and preferences, making the presentation creation process more efficient and enjoyable. Moreover, adaptive learning can help AI systems improve by learning from user interactions, leading to more accurate and useful recommendations.

Voice Integration

Another notable suggestion was the integration of voice recognition capabilities. Users envision a system where they can dictate their content, and the AI will transform it directly into presentation material, streamlining the content creation process (Davies & Eynon, 2018). Voice integration can make AI presentation assistants more accessible and user-friendly, particularly for individuals who prefer speaking over typing or those with mobility impairments. By leveraging advanced speech-to-text technologies, AI tools can effectively capture spoken content and convert it into well-structured presentations, enhancing efficiency and convenience.

Educational Integration

Finally, some respondents see the potential for AI to play a significant role in educational contexts. This could involve direct integration into educational tools or providing user guidance, such as tutorials or tips on enhancing visuals. AI can assist educators in creating engaging and effective learning materials, thereby improving educational outcomes. Furthermore, AI-driven tutorials and tips can help users develop better presentation skills, making these tools valuable for creating presentations, learning, and professional development (Engin & Treleaven, 2019). AI-driven tutorials and tips suggest an opportunity to expand the use of AI beyond conventional presentation tools and into educational fields, supporting teachers and students in various aspects of learning and teaching.

Improvements Needed for AI Presentation Assistants

While users appreciate the existing capabilities of AI presentation assistants, they highlighted several areas for improvement.

Enhanced Accessibility and Ease of Use

Users frequently mentioned the need to make AI tools more accessible and easier to use. Simplifying the interface and functionality can help cater to a broader audience, including those who may not be tech-savvy. Enhancing accessibility features such as voice commands, screen readers, and customizable display settings can make AI tools more inclusive. By reducing

complexity and improving the interface's intuitiveness, developers can ensure that users of all skill levels can efficiently utilize AI presentation assistants.

Feedback Mechanisms

Moreover, there is a call for robust feedback systems where users can report issues and suggest improvements. Developing effective channels for user feedback is essential for informing continuous improvements. Implementing in-app feedback forms, regular user surveys, and active user communities can provide valuable insights into user experiences and preferences. These feedback mechanisms can help developers quickly identify and address issues, ensuring that the AI tools evolve in line with user needs and expectations.

Contextual Understanding

Improving AI's ability to understand the context and purpose of presentations is another significant area for enhancement. Users want AI to provide more relevant content and design suggestions based on specific objectives, such as business pitches, educational lectures, or creative storytelling. By integrating advanced natural language processing and machine learning algorithms, AI presentation assistants can better comprehend the nuances of user input and generate content that aligns with the intended message and audience. This contextual understanding can enhance the relevance and impact of the presentations created using AI tools.

Customization Options

Offering more customization options is also crucial. Users seek greater control over design elements and content to tailor presentations to their unique needs. This includes flexibility in choosing templates, adjusting layouts, selecting color schemes, and incorporating multimedia elements. Enhanced customization features can empower users to create presentations that reflect their personal or organizational style, making the tools more versatile and user-centric. A wide range of customization options can cater to diverse user preferences and use cases, from corporate presentations to educational projects.

Creativity and Cultural Sensitivity

Lastly, the importance of enhancing AI's creativity and cultural sensitivity in its recommendations is highlighted. Users desire AI suggestions that are not only creative but also culturally appropriate, reflecting a broader understanding of different contexts and perspectives. This involves training AI models on diverse datasets encompassing various cultural norms, artistic styles, and regional preferences. By fostering creativity and cultural awareness, AI presentation assistants can offer suggestions that are innovative and respectful of cultural differences. This approach can enhance AI tools' global applicability and acceptance, making them more valuable across different regions and industries.

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Additional Comments

Transitioning to broader insights, users provided additional comments that offered a more comprehensive view of their expectations and perceptions.

Integration into Daily Life

Many respondents believe that AI will become an integral part of daily activities across various professions, suggesting a growing acceptance and reliance on AI tools to simplify tasks and increase efficiency. This perspective reflects a broader trend toward normalizing AI technologies in everyday workflows. Users envision AI as a supplementary tool and a central component of their professional toolkit, streamlining tasks ranging from routine data management to complex decision-making processes. As AI becomes more embedded in daily operations, its role in enhancing productivity and effectiveness is expected to expand, influencing how various industries operate.

General Satisfaction

Some users expressed satisfaction with the current functionalities of AI tools, indicating that existing features are meeting their needs to some extent. However, this satisfaction is coupled with encouragement for further development and innovation to enhance the user experience. Users appreciate the efficiency and support provided by current AI capabilities but also recognize the potential for these tools to evolve further. This feedback underscores the importance of continuous innovation in AI development, ensuring that tools remain relevant and beneficial in an ever-changing technological landscape.

Future Outlook

Participants are optimistic about AI's evolving role and potential impact. They foresee significant advancements that could further integrate AI into various contexts, making it a more indispensable tool. This optimism is fueled by the rapid pace of AI innovation and the growing sophistication of AI applications. Users anticipate that future AI tools will offer even more advanced features, such as enhanced predictive analytics, more intuitive user interfaces, and deeper integration with other technologies. This future outlook emphasizes the importance of staying ahead of trends and continuously improving AI tools to meet evolving user expectations and needs.

Recommendations for AI Development

Based on the findings, several recommendations can be made to guide the future development of AI presentation assistants.

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Focus on User Experience

To begin with, prioritizing user experience is essential. AI tools should be designed to be intuitive and accessible to all users. Enhancing the user interface and providing explicit, easy-to-follow instructions can make AI tools more user-friendly. This focus on user experience can also include developing comprehensive tutorials and help guides that can assist users in navigating and utilizing the full range of features offered by AI presentation assistants.

Implement Real-Time Assistance

Furthermore, developing real-time feedback capabilities can significantly improve the user experience. By offering immediate suggestions for content improvement, such as grammar corrections and visual enhancements, AI tools can help users create higher-quality presentations more efficiently. Real-time assistance can also include interactive features that guide users through the presentation creation process, offering tips and best practices to enhance their output.

Leverage Personalization

Additionally, leveraging adaptive learning to offer personalized recommendations based on individual user preferences and past interactions can make AI tools more relevant and effective. Providing options for user profiles and preference tracking can enhance personalization capabilities. This approach ensures that AI presentation assistants can tailor their suggestions and features to match each user's specific needs and styles, making the tools more useful and engaging.

Enhance Feedback Systems

Creating robust channels for user feedback is crucial for continuous improvement. Implementing feedback loops to address user concerns and integrate suggestions into updates can help ensure AI tools evolve based on real user experiences. Establishing regular feedback collection mechanisms, such as surveys and user forums, can provide valuable insights into user satisfaction and areas for enhancement, driving the development of more responsive and user-centered AI solutions.

Consider Context and Creativity

Moreover, improving AI's understanding of context to provide more relevant content and design suggestions is essential. By leveraging advanced natural language processing and contextual analysis, AI tools can better tailor their outputs to the specific goals and themes of presentations. Fostering creative freedom and cultural sensitivity in AI recommendations can help make suggestions more appropriate and valuable to a diverse user base. This involves training AI models on various cultural contexts and creative approaches, ensuring the tools can cater to a global audience with varied preferences and requirements.

Discussion and Conclusion

The findings of this study may reveal a mix of perspectives from EFL teachers and students regarding the use of AI-powered presentation assistants. On the one hand, the integration of AI technologies in language education, as highlighted by the existing literature, suggests that EFL practitioners may see the potential benefits of these tools in enhancing language learning and teaching experiences.

For instance, the EFL teachers may express interest in the adaptive learning capabilities of AI-based presentation assistants, as described by Huang et al. (2023), which could help personalize the learning experience for students with diverse language proficiency levels. Additionally, the teachers may recognize the value of AI-powered virtual conversation partners, as explored by Khasawneh (2023) and Zou et al. (2023), in providing students with additional opportunities for interactive language practice and engagement.

On the other hand, the participants may also voice concerns or challenges related to the integration of AI technologies in their language classrooms. The teachers, in particular, may express apprehension about the potential impact of AI-enabled tools on their role and pedagogical approaches, as suggested by the broader discussions on algorithmic government and the automation of public services (Engin & Treleaven, 2019).

Furthermore, the student participants may share their perspectives on the user experience and perceived effectiveness of AI-assisted presentation tools, which could provide valuable insights into the practical implications of these technologies for language learning. Aspects such as the impact on L2 motivation, self-regulated learning, and overall learning outcomes, as examined by Wei (2023), may emerge as key areas of interest and concern among the student participants.

The diverse backgrounds and experiences of the EFL teachers and students included in the sample may also lead to nuanced and context-specific findings, highlighting the importance of participatory design and the need to broaden the disciplinary landscape in studies of technology integration in education, as discussed by DiSalvo et al. (2017) and Davies and Eynon (2018), respectively.

There are several areas that future studies could explore to enhance AI presentation assistants further. One key area is the evaluation of user satisfaction, mainly focusing on measuring teachers' and students' satisfaction with the AI assistant's functionality, usefulness, and ease of use. Understanding the user experience in educational settings can provide valuable insights into how these tools can be tailored to meet the specific needs of educators and learners. Furthermore, assessing the impact of AI assistants on learning outcomes is crucial. Future research could investigate how these tools influence student engagement, performance, and overall learning outcomes. By examining the direct effects of AI integration in educational environments, developers can identify best practices and optimize AI features to support effective teaching and learning. Additionally, studying the interactions between AI tools and students' motivation can shed light on how these technologies affect learners' enthusiasm and commitment to their studies. This includes exploring how AI can help motivate students struggling to stay engaged with traditional teaching methods. Moreover, examining the motivation of individuals who have

technophobia is vital. Understanding how AI presentation assistants can be designed to reduce anxiety and increase comfort among technophobic users can help make these tools more accessible to a broader audience. Continuous improvement is another critical area for future research. Regularly collecting user feedback can help identify areas for improvement and refine the AI assistant's capabilities. This iterative process ensures that AI tools remain responsive to user needs and adapt to changing requirements. Incorporating these evaluation metrics into future studies will enhance the functionality and usefulness of AI presentation assistants and ensure they are designed with a user-centric approach. This ongoing evaluation and improvement process will help solidify the role of AI in education and other professional settings, making it an indispensable tool for enhancing productivity and efficiency.

Ultimately, while this study provides valuable insights into AI presentation assistants' current state and future potential, the continuous exploration of user satisfaction, impact on learning outcomes, and iterative refinement based on user feedback will be essential. These efforts will drive the development of AI tools that are not only innovative and efficient but also highly effective in meeting the diverse needs of users across various domains. By focusing on these areas, future research can contribute to creating AI presentation assistants that are more adaptive, intelligent, and user-friendly, ensuring their place as integral components in professional and educational settings. Through such dedicated efforts, AI tools can continue to evolve, offering unprecedented support and transforming the way presentations are crafted and delivered, ultimately enhancing the productivity and effectiveness of users across the globe.

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