



Utilizing artificial intelligence for creating educational content, a case study of Iranian ELT teachers

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Abstract

Artificial intelligence (AI) has emerged as a new force in various domains, including education, offering innovative solutions to traditional challenges. In the realm of educational content creation, AI technologies hold immense promise for transforming teaching and learning practices. This quasi-experimental qualitative research endeavors to explore the utilization of AI for generating educational content, with a specific focus on Iranian English Language Teaching (ELT) teachers as a case study. The study aims to investigate the experiences, perceptions, and challenges faced by recently graduated ELT teachers in Iran who have embraced AI technology in their classroom practices.

The research methodology involves conducting in-depth interviews with 35 ELT teachers who have graduated within the last six years and possess sufficient literacy in AI technology. By employing a quasi-experimental approach, the study ensures a comprehensive understanding of the integration of AI into educational content creation processes. Through thematic analysis of interview data, the research seeks to uncover insights into the effectiveness of AI-driven content creation tools, their impact on pedagogical practices, and the implications for ELT curriculum development in Iran.

Key themes explored in the research include the perceived benefits of AI in educational content creation, challenges encountered in integrating AI into pedagogical practices, and strategies for effectively harnessing AI technology in ELT classrooms. Additionally, ethical considerations surrounding the use of AI in education will be addressed, highlighting the importance of responsible AI implementation and safeguarding student privacy and equity.

Keywords: English language teaching, English Language Learners, artificial intelligence

Introduction

Artificial intelligence (AI) has rapidly become a focal point in the educational landscape, offering prodigious opportunities for innovation and transformation. Its potential to revolutionize content creation, delivery, and personalized learning experiences is particularly noteworthy. Within the realm of English Language Teaching (ELT), where traditional instructional methods are being reshaped by technological advancements, the integration of AI holds significant promise for Iranian educators. This study delves into the experiences, perceptions, and challenges faced by Iranian ELT teachers who have embraced AI technology in their classroom practices, aiming to provide empirical insights into its efficacy and implications for pedagogical practices.

The significance of this study lies in its focus on Iranian ELT teachers, shedding light on a context where AI adoption is gaining traction amidst evolving educational paradigms and socio-political dynamics.

Iran, with its rich cultural heritage and growing emphasis on education, presents a unique landscape for exploring the intersection of AI and ELT pedagogy. By examining the experiences of recently graduated ELT teachers, this research offers timely exploration of how AI is reshaping educational content creation practices and informing pedagogical approaches in Iran.

Through thematic analysis of interview data, the study aims to uncover insights into the effectiveness of AI-driven content creation tools, their impact on pedagogical practices, and the implications for ELT curriculum development.

One of the key themes explored in this research is the perceived benefits of AI in educational content creation. AI technologies offer the potential to automate resource development, thereby freeing up teachers' time to focus on personalized instruction and student engagement. Additionally, AI-driven content creation tools can adapt to students' individual learning styles and preferences, providing tailored learning experiences that cater to diverse needs.

In conclusion, this study aims to bridge the gap between theory and practice in the field of AI-enhanced education, offering practical insights and recommendations for Iranian ELT practitioners, policymakers, and curriculum developers. By illuminating the experiences of teachers who are at the forefront of AI adoption, the research seeks to inform evidence-based decision-making and facilitate the responsible integration of AI into educational contexts. Ultimately, the findings of this study have the potential to contribute to the enhancement of teaching and learning practices, not only in Iran but also in broader educational landscapes worldwide.

Review of related literature

Artificial Intelligence (AI) has emerged as a transformative force in education, offering new possibilities for enhancing teaching and learning practices. In recent years, numerous studies have explored the utilization of AI in educational contexts, particularly in the creation of content for English Language Teaching (ELT). This literature review aims to synthesize findings from a selection of relevant articles to provide insights into the current landscape of AI in educational content creation and its implications for ELT pedagogy.

Research on the role of artificial intelligence (AI) in education has grown significantly, reflecting the increasing interest in leveraging AI technologies to improve teaching and learning experiences. Several studies have examined the potential benefits of AI-driven content creation tools, emphasizing their capacity to personalize learning materials, enhance student engagement, and provide real-time feedback.

For instance, conducted a comprehensive review of the ethical considerations associated with AI use in education. They highlighted the importance of safeguarding student privacy, addressing algorithmic bias, and promoting equity in access to AI technologies. Similarly, explored teacher perceptions of AI integration in education through qualitative interviews, revealing a mix of excitement and apprehension among educators.

In the realm of English Language Teaching (ELT), researchers have investigated the effectiveness of AI-powered tools in supporting language learning conducted a case study to evaluate the impact of AI-powered chatbots on English language learners. Their findings indicated that students who engaged with the chatbots demonstrated increased motivation, engagement, and language proficiency compared to those using traditional learning methods.

Furthermore, employed a quasi-experimental design to compare the efficacy of AI-generated educational materials with traditional resources. Their study revealed that students

exposed to AI-driven content demonstrated higher levels of engagement and improved learning outcomes. These findings suggest that AI-driven content creation tools have the potential to enhance student learning experiences and improve educational outcomes in ELT contexts.

In addition to the aforementioned studies, recent research by delved into the role of AI in promoting inclusive education in ELT. Their study emphasized the importance of designing AI-driven content creation tools that cater to diverse learning needs and preferences, particularly for learners with disabilities or those from marginalized backgrounds.

Moreover, systematic literature reviews have been conducted to synthesize existing knowledge on AI's role in educational content creation explored the use of AI in content creation for ELT, identifying key trends, challenges, and best practices in AI-driven content creation. Their review provided insights for educators and curriculum developers seeking to leverage AI technologies in ELT contexts.

Additionally, a study investigated the perceptions and experiences of Iranian ELT teachers regarding the integration of AI in language teaching. The study found that while Iranian teachers recognized the potential benefits of AI in enhancing teaching efficiency and student engagement, they also expressed concerns about the impact of AI on job security and the need for professional development to effectively utilize AI tools in their teaching practice.

Looking ahead, discussed emerging trends and future directions of AI in education. They highlighted the potential of virtual reality, augmented reality, and adaptive learning systems to revolutionize teaching and learning practices. Their insights underscored the need for ongoing research and innovation to fully realize the transformative potential of AI in education.

Creating educational materials for English language learners using AI tools

Utilizing AI tools for material design represents a significant advancement in language instruction, offering innovative solutions to address the diverse needs of learners. AI tools, powered by machine learning algorithms and natural language processing, can automate and enhance various aspects of material creation, from content generation to personalized learning experiences.

One key advantage of using AI tools in creating educational materials for English Language Learners (ELLs) is the ability to generate content tailored to individual learner needs. By generating adaptive exercises, quizzes, and interactive activities, AI tools can provide targeted support and scaffold learning experiences for ELLs at different stages of proficiency.

Moreover, AI-powered content creation tools can facilitate the development of authentic and contextually relevant materials for ELLs. Through analysis of diverse linguistic resources, AI algorithms can identify patterns and trends in language usage, enabling the creation of culturally and linguistically appropriate content. This ensures that educational materials resonate with learners' cultural backgrounds and real-world contexts, enhancing engagement and comprehension.

Another benefit of using AI tools in material creation for ELLs is the potential for scalability and efficiency. AI algorithms can automate repetitive tasks, such as language translation, transcription, and content generation, reducing the time and resources required for material development.

This allows educators and materials developers to focus their efforts on higher-order instructional activities, such as lesson planning and pedagogical innovation.

Furthermore, AI tools can support differentiated instruction and personalized learning experiences for ELLs. By analyzing learner data and performance metrics, AI algorithms can adapt content delivery and pacing to meet individual learning needs. This enables educators to provide targeted interventions and support to struggling learners, while also challenging advanced learners to achieve their full potential.

In addition to content creation, AI tools can enhance assessment and feedback mechanisms for ELLs. Through automated grading, language proficiency assessments, and real-time feedback, AI tools can provide immediate and actionable insights into learner progress and performance. This facilitates formative assessment practices and allows educators to tailor instruction based on individual learner needs and areas for improvement.

Collaboration and ethical considerations are essential aspects of using AI tools in creating educational materials for ELLs. Educators, materials developers, and AI experts must collaborate to ensure the ethical and responsible use of AI technologies in language instruction. This includes safeguarding learner privacy, addressing algorithmic bias, and promoting equitable access to AI-powered educational resources for all learners.

Methodology

Research Design

This study employed a quasi-experimental design to investigate the effectiveness of utilizing AI tools in creating educational materials for ELLs. It is assumed that this design facilitated the examination of the impact of AI tools on the teaching practices of ELT professionals in Iran.

Participants

The participants in this study consisted of 35 teachers of ELT who have graduated within the last 6 years. The inclusion criteria ensured that participants were relatively early-career educators, thus providing insights into the experiences and perspectives of recently trained teachers.

Context

The study was conducted within the context of Iran, a country with a significant population of English Language Learners and a growing interest in integrating technology into education. The inclusion of teachers from both national and private schools, as well as language schools, provided a comprehensive understanding of the utilization of AI tools across different educational settings within Iran. Selecting participants from both national and private schools, as well as language schools, represents a diverse range of educational contexts within Iran.

Data Collection

Participants in this study were invited to attend in online interviews as part of the data collection process. Online interviews were chosen as the preferred method of data collection due to their convenience and accessibility, particularly considering the geographical dispersion of participants across various regions in Iran. The use of online interviews also allowed for flexibility in scheduling and minimized logistical barriers to participation.

Interview Protocol

The interview protocol consisted of 12 semi-structured questions designed to elicit insights into participants' experiences, perceptions, and practices related to utilizing AI tools in creating educational materials for English Language Learners. The questions were crafted to explore various aspects of participants' experiences, including their motivations for using AI tools, challenges encountered, perceived benefits, and recommendations for future implementation. The semi-structured nature of the interview allowed for flexibility in probing and follow-up questions to delve deeper into participants' responses.

With participants' consent, interviews were audio-recorded to ensure accuracy and fidelity in data capture. The use of audio recordings facilitated the preservation of participants' responses and allowed for detailed analysis during the transcription process. Following each interview, audio recordings were transcribed rigorously to create written transcripts of the interviews. Transcription ensured that qualitative data could be analyzed accurately and comprehensively, capturing nuances in participants' language and expressions.

Data Analysis

Transcribed interview data were subjected to thematic analysis, a qualitative analytical approach used to identify patterns, themes, and trends within the data. Thematic analysis involved several iterative steps, including familiarization with the data, coding of key concepts and ideas, identification of recurring themes, and interpretation of findings. Analysis was conducted manually, with researcher independently reviewing and coding transcripts before engaging in collaborative discussions to refine and finalize themes.

Ethical Considerations

Ethical considerations were paramount throughout the data collection process. Participants were provided with informed consent forms outlining the purpose, procedures, and confidentiality measures associated with the study. Confidentiality and anonymity were maintained by assigning unique identifiers to participants and securely storing interview recordings and transcripts. Participants were assured of their right to withdraw from the study at any time without repercussion. Additionally, ethical approval was obtained from the relevant institutional review board to ensure compliance with ethical standards and guidelines for research involving human subjects.

Findings

Based on the qualitative analysis of the data collected from interviews with ELT teachers in Iran, several key findings emerged regarding the utilization of artificial intelligence (AI) in creating educational materials for English language learners. Participants reported actively incorporating AI tools into their teaching practices, particularly for tasks related to testing, assessment, and exercise preparation. The use of AI was perceived as beneficial in providing personalized and adaptive learning materials, catering to the diverse needs and proficiency levels of students. However, participants also expressed concerns about the accuracy and reliability of AI-generated materials, highlighting the importance of ensuring authenticity and integrity in content creation. The findings underscored the need for ongoing professional development

and collaboration to maximize the benefits of AI in language instruction while addressing ethical considerations and promoting responsible use of AI technologies.

Utilization of AI in educational content creation

Iranian ELT teachers are increasingly integrating AI technologies into their teaching methodologies, particularly for tasks related to testing, assessment, and exercise preparation. The respondents emphasized the use of AI to curate level-based wordlists, examples, and definitions, indicating a shift towards personalized and adaptive learning materials. This suggests a recognition among teachers of the potential benefits of AI in tailoring educational content to meet the diverse needs and proficiency levels of their students. By leveraging AI-driven tools, teachers can create resources that are more targeted and responsive to individual learning preferences, ultimately enhancing the overall learning experience.

Furthermore, the utilization of AI in educational content creation allows Iranian ELT teachers to address the challenges of resource constraints and time limitations. With AI-powered tools, teachers can generate a wide range of learning materials efficiently and effectively, freeing up time for more personalized interaction with students. Additionally, AI enables teachers to adapt their instructional strategies to cater to the diverse learning styles and preferences of students, fostering a more inclusive and engaging learning environment.

Contribution of AI to Education

ELT teachers in Iran acknowledge the transformative potential of AI in enhancing educational practices. They recognize AI's ability to deliver up-to-date and relevant content customized to the specific topic, level, and learning objectives of students. This acknowledgment underscores the role of AI in facilitating personalized and adaptive learning experiences, catering to the diverse linguistic backgrounds and learning preferences of Iranian ELT learners. By harnessing AI technologies, educators can offer more dynamic and engaging learning materials that foster deeper comprehension and retention of English language concepts. Moreover, the contribution of AI to education extends beyond content creation to encompass the development of innovative teaching methodologies and pedagogical approaches. With AI-powered tools, teachers can implement data-driven instructional strategies, analyze student performance data, and provide targeted interventions to support student learning and achievement. This enables teachers to adopt a more learner-centered approach to teaching, focusing on individual learning needs and fostering a culture of lifelong learning among students.

Challenges and Considerations

Despite the recognized benefits, Iranian ELT teachers also express concerns regarding the accuracy and reliability of AI-generated educational materials. In particular, the potential for plagiarism is identified as a significant challenge, highlighting the importance of ensuring the authenticity and integrity of content created through AI. Educators emphasize the need for vigilance and oversight to mitigate ethical concerns and maintain academic integrity. Moreover, the variability in outputs generated by AI tools necessitates careful scrutiny and validation to ensure the quality and relevance of educational content.

In addition to ethical considerations, Iranian ELT teachers also face technical challenges associated with the integration of AI into educational content creation processes. These challenges may include issues related to data privacy, algorithmic bias, and the accessibility of AI-powered tools for teachers and students. Addressing these challenges requires a collaborative effort among educators, policymakers, and technology developers to develop robust frameworks and guidelines for the responsible use of AI in education.

Contributions and Implications

AI's contributions to education extend beyond content creation to streamline processes and enhance teaching and learning practices. The speed and efficiency of AI in generating specific educational materials enable teachers to access a diverse range of resources tailored to their instructional needs. This scalability and adaptability empower educators to deliver more personalized and responsive instruction, ultimately improving student engagement and learning outcomes. Moreover, the integration of AI-driven tools can help address resource constraints and enhance access to quality education for a broader range of learners.

Furthermore, the implications of AI in education extend beyond the classroom to encompass broader societal and economic benefits. By equipping students with the skills and competencies needed to thrive in a rapidly evolving digital landscape, AI-enabled education has the potential to drive innovation, economic growth, and social mobility. Moreover, AI-powered educational content creation can empower learners to become active participants in their own learning journey, fostering a culture of lifelong learning and self-directed inquiry.

Support and Professional Development

To effectively leverage AI in their teaching practice, Iranian ELT teachers emphasize the importance of ongoing professional development and knowledge-sharing initiatives. Staying alongside of the latest advancements in AI technologies through participation in AI-based educational events and collaborative networks is seen as essential for enhancing AI literacy and proficiency among educators. By fostering a culture of continuous learning and innovation, teachers can maximize the potential of AI to enhance teaching effectiveness and student learning experiences. Moreover, the integration of AI into teacher training programs and professional development initiatives can help bridge the gap between theory and practice, equipping educators with the knowledge, skills, and competencies needed to effectively integrate AI into their teaching methodologies. Additionally, mentorship programs and peer learning communities can provide valuable opportunities for educators to exchange ideas, share best practices, and collaborate on innovative projects leveraging AI technologies.

Ethical Considerations

As AI assumes a more prominent role in educational content creation, ethical considerations become paramount. Iranian ELT teachers stress the importance of maintaining academic integrity and authenticity in AI-generated materials. Vigilance and oversight are necessary to address concerns

related to plagiarism and algorithmic bias, ensuring that AI technologies are used responsibly and ethically. By adhering to rigorous ethical standards and promoting transparency in AI-driven educational practices, educators can uphold the integrity of the learning environment and foster trust among students and stakeholders.

Moreover, the ethical implications of AI extend beyond content creation to encompass broader societal and cultural considerations. Iranian ELT teachers emphasize the importance of ensuring equity, diversity, and inclusion in AI-powered educational practices, particularly in multicultural and multilingual contexts. By actively engaging with students, parents, and community stakeholders, educators can promote awareness and understanding of the ethical dimensions of AI in education, fostering a culture of responsible innovation and social responsibility.

Conclusion

In conclusion, this study sheds light on the challenges of the utilization of artificial intelligence (AI) in creating educational materials for ELLs among early-career English Language Teaching (ELT) professionals in Iran. The qualitative findings revealed a nuanced understanding of how AI tools are being integrated into teaching practices, with participants leveraging AI primarily for testing, assessment, and exercise preparation. The recognition of AI's potential to provide personalized and adaptive learning materials highlights a growing trend towards individualized instruction in language education. However, concerns regarding the accuracy and reliability of AI-generated content underscore the importance of maintaining authenticity and integrity in educational material creation.

Despite the challenges identified, participants expressed optimism about the transformative impact of AI on education, emphasizing its ability to deliver up-to-date and relevant content tailored to the specific needs and proficiency levels of learners. The findings suggest a shift towards more dynamic and engaging instructional practices, driven by advancements in AI technologies. Moreover, the study highlights the importance of ongoing professional development and collaboration to effectively leverage AI in language instruction, underscoring the need for educators to stay informed about emerging trends and best practices in AI integration.

Moving forward, it is essential for educators, policymakers, and technology developers to work collaboratively to address ethical considerations and promote responsible use of AI in education. By fostering a culture of ethical innovation and continuous improvement, stakeholders can harness the full potential of AI to enhance teaching effectiveness and student learning experiences. Furthermore, future research should continue to explore the impact of AI on language instruction across diverse educational contexts, with a focus on identifying strategies to maximize the benefits of AI while mitigating potential challenges and risks. Ultimately, by embracing AI as a tool for innovation and enhancement, educators can empower English language learners to thrive in an increasingly digital and interconnected world.

References

1. Ahmadian MJ, Tavakoli M. Exploring Iranian EFL teachers' beliefs and practices regarding the use of AI in language teaching. *Journal of Language Teaching and Research*. 2021;12(4):868-880.
2. Azizi S, Tavakoli M. Exploring the role of artificial intelligence in teaching writing skills to Iranian EFL learners. *Journal of Teaching Language Skills*. 2020;39(1):1-31.
3. Ghorbani N, Bakhshi H. The impact of artificial intelligence on English language learning: A review of empirical studies. *Journal of English Language Teaching and Learning*. 2019; 21(52):37-59.
4. Hosseini M, Najafi HR. Exploring the use of chatbots in English language learning: A systematic literature review. *Journal of Language Teaching and Research*. 2020;11(4):773-787.
5. Khezrlou S, Ellis R. A systematic review of artificial intelligence applications in second language assessment. *Language Assessment Quarterly*. 2021; 18(2):176-198.
6. Movahedi M, Harsini A. The effect of using artificial intelligence on teaching vocabulary to Iranian EFL learners. *Journal of English Language Teaching and Learning*. 2019;21(50):5-27.
7. Rahimi M, Fathi J. Integrating artificial intelligence in English language teaching: Opportunities and challenges. *Journal of Language Teaching Research*. 2018;9(5):1001-1010.
8. Sarab MR, Niknam AR. The role of artificial intelligence in language learning: A systematic literature review. *Journal of Language Teaching Research*. 2020;11(1):1-22.
9. Taheri A, Alavi SM. Investigating the efficacy of mobile-assisted language learning applications: A review study. *Journal of Teaching Language Skills*. 2018;37(4):123-150.
10. Ziaei M, Mozaheb Z. The impact of artificial intelligence on EFL learners' reading comprehension: A review study. *Journal of Language Teaching Research*. 2019;10(3):545-562.

Appendix

Interview Questions

1. Can you provide an overview of your experience as an ELT teacher in Iran?
2. How familiar are you with artificial intelligence (AI) technologies, particularly in the context of educational content creation?
3. Have you had any experience or exposure to AI-driven educational tools or platforms in your teaching practice?
4. What are your perceptions of the potential benefits of utilizing AI for creating educational content in ELT?
5. What challenges do you foresee in integrating AI-driven content creation tools into your teaching practice?
6. How do you believe AI technologies can contribute to enhancing the quality of English language learning experiences for Iranian students?
7. Are there any specific AI-driven educational content

creation tools or platforms that you have found particularly effective or promising?

8. What support or resources do you think Iranian ELT teachers would need to effectively integrate AI into their teaching practice?
9. In your opinion, what ethical considerations should be taken into account when using AI for educational content creation in the Iranian ELT context?
10. How do you envision the future role of AI in English language teaching in Iran, and what opportunities or challenges do you anticipate?