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AI in Language Teaching, Learning, and Assessment

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Preface

Welcome to *AI in Language Teaching, Learning, and Assessment*. This book marks a pivotal exploration into the dynamic realm of artificial intelligence (AI) within the context of language education. In recent times, the advent of technologies like ChatGPT has ignited fervent discussions about the role and impact of AI in educational settings (Kasneci et al., 2023; Perkins, 2023).

WHY AI AND LANGUAGE EDUCATION?

I still vividly remember my first conversation on ChatGPT. I was talking with a Spanish teacher back in early December 2022. She was deeply impressed by its myriad possibilities extending from simulating human conversation to generating intricate responses that encompass diverse tasks such as answering queries, crafting essays, and composing music. But at the same time, she was worried about academic misconduct and its impact on assessment methods, and even expressed concern over the possible replacement of language teachers in the future, which I greatly empathized with. We did not know how much it would impact our teaching and how educational systems would respond to it, but we were certain it would change the current pedagogical environment profoundly and that we must be ready for such changes.

We were right. The introduction of ChatGPT has spurred divergent opinions, both commendations and apprehensions, within academia (Meyer et al., 2023; Shen et al., 2023). While some educators envision its potential as an asset for teaching, learning, and assessment (Hong.,2023; Kohnke, 2023; Kohnke et al., 2023; Rudolph et al., 2023), others voice concerns regarding its effect on academic integrity and ethical considerations (Cotton et al., 2023; Rane et al., 2023; Teng, 2023), incorrect or misleading information (Borji, 2023), and other issues such as biased or inappropriate content (Baidoo-Anu et al., 2023; Sallam, 2023).

Undeniably, the drawbacks associated with AI in education merit attention (Qadir., 2023). However, the inexorable march of technological advancement necessitates an adaptable educational landscape - one that embraces emerging technologies while upholding ethical standards (Kamalov., 2023; Perera et al., 2023). Thus, there arises an imperative need to delve deeper into AI, navigating its complexities to harness its positive potential in education. Motivated by precisely these points, I set about creating *AI in Language Teaching, Learning, and Assessment*.

Preface

EXPLORATION, ASPIRATION, AND COLLABORATION

This book zooms in on the intersection of AI and language education, aiming to explore how AI can be effectively supervised, ensuring academic integrity while bolstering its role in teaching, learning, and assessment.

Throughout its chapters, this book endeavors to address pivotal inquiries such as unpacking the challenges inherent in AI application within language education and strategies to mitigate them, identifying resources to ensure the ethical and secure deployment of AI in academic settings, scrutinizing the merits of integrating AI in language teaching, learning, and assessment, presenting and analyzing successful cases illustrating the effective utilization of AI in educational contexts, and pioneering discussions on potential advancements and future trajectories for AI in language education.

Chapters from the below countries or regions are included in the book: Canada (Lobalsamo, Segreti, Jamali & Gaspari), Hong Kong (Lee & Chen), Ireland (Liu, Sanmartín), India (S. Singha, R. Singha & Jasmine), Malaysia (Ng & Ravana), Turkey (Dincer & Bal, Uysal & Yüksel), United Kingdom (Bengsch), United States (Barrios-Beltran, Czerkawski, Khazaal, Lee, Lys, Wang). Their objectives are to offer insights, contemporary research perspectives, and educational cases that stimulate academic dialogues while advocating for the judicious use of AI in language education. All the chapters aspire to disseminate best practices within the language teaching community and foster collaboration to navigate potential biases or discriminatory outcomes arising from AI deployment.

I invite readers on an enlightening journey through the nuances of AI in language education, urging collaborative efforts toward harnessing its potential for the betterment of educational landscapes worldwide.

STRUCTURE OF THE BOOK

This book caters not only to those passionate about language education but also to language learners, educators, researchers, scholars, and AI developers seeking to explore and apply AI in educational domains. It is a comprehensive resource offering a roadmap to bridge the realms of AI technology and language education.

The chapters encompass a wide spectrum of topics, including but not limited to the synergy between artificial intelligence and pedagogy, explorations into AI's influence on teaching materials, assessing the impact of AI in educational evaluation, the convergence of AI and applied linguistics, and pioneering advancements in AI-driven language education development.

This book is divided into three sections:

Section 1: Preview - AI and Language Education

Section 2: Perspectives - What People Say About AI

Section 3: Practice - Use of AI in Language Education

There are three chapters in Section 1.

1. The Integration of ChatGPT in Language Education: Exploring Contexts, Assessing Impacts, and Unpacking Implications

Liu delves into ChatGPT's integration in language education, discussing research contexts, benefits, and current issues. Through comprehensive exploration of AI in language education, Liu offers insights into its implications for teaching and learning.

2. Enhancing Language Teaching Materials Through Artificial Intelligence: Opportunities and Challenges

Addressing the paradigm shift in language education, S. Singha, R. Singha, and Jasmine provide a comprehensive overview of AI and language education by exploring AI's potential for personalized learning and ethical considerations. They emphasize collaboration between AI developers and educators to navigate biases, privacy, and customization, ultimately fostering capable individuals in a digitally connected world.

3. The Reality of Artificiality: The Impact of Artificial Intelligence on Language and Culture Course Assessments and Rubrics

Reflecting on AI's impact on assessment design in a language and culture course, Lobalsamo, Segreti, Jamali, and Gaspari address AI tools' influence on assignment creation and original coursework production. Their chapter emphasizes the need for continued research in AI and education, especially regarding AI-detection technologies and academic rigor.

There are five chapters in Section 2.

4. Enriching the Teaching-Learning Experience by Using AI Tools in the L2 Classroom

Through insights from questionnaires and follow-up conversations, Barrios-Beltrán assesses AI's impact on L2 education, presenting insights from questionnaires and activities aligned with language learning skills. The chapter emphasizes AI's role in immediate feedback, simplifying complex concepts, and creating inclusive classrooms, advocating for ethical AI implementation and educator training.

5. A Qualitative Journey on Instructors' Perceptions of Artificial Intelligence in EFL Education

Dincer and Bal delve into EFL instructors' perspectives on AI in education, uncovering intricate attitudes and concerns through a qualitative study by interviewing 21 diverse university instructors. They reveal insights into AI's adaptability, pedagogical impact, technical proficiency requirements, and ethical/security concerns. Their chapter emphasizes the need for ongoing research to effectively integrate AI in language instruction while acknowledging the challenges and benefits educators encounter.

6. AI-Powered Lesson Planning: Insights From Future EFL Teachers

Focused on pre-service EFL teachers, Uysal and Yüksel examine AI-driven lesson plans designed for 5th-grade writing classes. Using a mixed-methods approach, they assess the efficacy of AI-generated plans, identifying strengths in engagement and structure while noting areas for improvement in differentiation and assessment. Their chapter underscores the necessity of AI literacy in teacher training for effective AI utilization in diverse language teaching contexts.

7. Discussions of Using AI in Language Education in Hong Kong

Investigating Hong Kong's discourse on AI in language education, Lee and Chen analyze newspaper articles from 2018-2023. They delve into debates and viewpoints from various stakeholders, shedding light on perceptions of AI's effectiveness and challenges in language education.

8. What Are Students Saying About AI as an Academic Tool?

Ng and Ravana delve into the impact of AI, including ChatGPT, on the academic experiences of learners. Their chapter aims to uncover students' intentions and perceptions regarding the use of AI in language learning. Grounded in the Theory of Planned Behavior, they present insights from Malaysian tertiary education institutions, shedding light on how students view AI-powered tools for academic writing and its influence on their language learning behavior.

There are seven chapters in section 3.

9. Integrating ChatGPT Into a Culture-focused Flipped Curriculum for Chinese as a Foreign Language: Experiments and Implications

Focusing on ChatGPT's role in a culture-focused flipped curriculum for Chinese as a foreign language, Wang discusses its performance in generating scenarios and scripts for intercultural communication practice. While noting ChatGPT's linguistic accuracy, Wang explores challenges in generating context-specific scripts, suggesting its use as a reference tool rather than a primary learning resource.

10. Redefining Traditional Pedagogy: The Integration of Machine Learning in the Contemporary Language Education Classroom

Examining the shift in language instruction due to digital transformation, Bengsch explores Machine Learning's potential in personalized language learning experiences, presents a speaking practice prototype app "TalkToMe," and addresses ethical concerns, aiming to bridge traditional methodologies and AI-driven education.

11. Creating Stories: Generative Artificial Intelligence Tools as Writing Tutors

Lys explores the use of prompt-driven ChatGPT in developing children's stories by a group of advanced German learners. The chapter highlights ChatGPT's role as a thinking partner, aiding students in brain-

storming, vocabulary expansion, and language pattern learning. The discussion focuses on project setup, prompts used for content elicitation, and the integration of AI-generated illustrations.

12. Redesigning a Foreign Language Course With the Help of AI: Benefits and Challenges

Focusing on the redesign of a foreign language (Arabic) course, Khazaal evaluates the use of AI to align with Sustainable Development Goals (SDGs). It explores how AI facilitates experiential learning, encouraging students to reflect on sustainability issues. Khazaal highlights positive contributions and challenges of AI in achieving the redesign goals, particularly in elements related to High-Impact Practices (HIPs) and significant learning.

13. Utilizing a ChatGPT Workshop to Foster Ethical Awareness and Enhance L2 English Writing Revision Processes in University Academic Settings: ChatGPT Workshop for Effective and Ethical L2 English Writing

Exploring a ChatGPT workshop's design for multilingual university students, Lee focuses on enhancing L2 English writing skills. The chapter emphasizes ethical use, providing personalized feedback, and improving revision processes while offering recommendations for educators and future AI-related research.

14. Leveraging AI and Pluralistic Approaches for Language Teaching: A Focus on Inter-Comprehension Between Related Languages

Sanmartín introduces pluralistic teaching approach utilizing ChatGPT, aiming to enhance inter-comprehensive awareness among English speakers studying Spanish. Sanmartín provides parallel contrastive analyses of translations, focusing on structurally asymmetrical grammatical phenomena between Romance languages and English.

15. Designing Language Learning Experiences With Generative AI Tools

Czerkawski emphasizes the opportunities AI presents for language learners, highlighting its potential for personalized learning experiences and timely feedback. The chapter underscores the broader applications for instructors, suggesting ways to leverage generative AI in curriculum design and addressing diverse learner needs. Despite the advantages, Czerkawski acknowledges the challenges of effective design for language learning environments using AI and advocates for the adoption of learning experience design (LXD) principles to ensure meaningful outcomes.

IN SUMMARY

In navigating the nuanced terrain of AI in language education, this book has ventured into diverse realms and unveiled multifaceted insights and perspectives. Each chapter has contributed a crucial piece to the mosaic of understanding AI's impact on language instruction.

Preface

Through qualitative studies, experimental implementations, and analyses of AI tools like ChatGPT, our contributors have delineated both the promises and the challenges associated with integrating AI into language teaching and learning. The discourse on AI's capacity to adapt to individual learning needs, its ethical implications, and its potential to revolutionize pedagogical dynamics have been both enriching and thought-provoking.

We have explored the potential of AI as a creative writing partner, a facilitator for intercultural communication, and a tool for enhancing the quality of language learning materials. As we journeyed through the evolving landscape of AI in language education, ethical considerations such as privacy, academic integrity, and bias mitigation, have stood as guiding beacons illuminating the way forward.

However, this exploration is not merely an endpoint but a catalyst for continued discourse and growth. It underscores the imperative need for ongoing research, pedagogical adaptation, and educator preparedness to harness the potential of AI while safeguarding the integrity of language education.

As the educational horizon continues to evolve, the integration of AI within language education signifies not just a technological shift but a paradigmatic transformation. It signifies a collaborative alliance between human proficiency and technological prowess, fostering an environment where AI serves as a catalyst for personalized, dynamic, and inclusive language learning experiences.

I hope this compilation serves as a comprehensive guide, a catalyst for discussions, and an impetus for further exploration of AI's role in language education. May it inspire educators, researchers, developers, and policymakers to collaboratively pave the way for an educational landscape that embraces innovation, ethics, and inclusive pedagogical practices. Together, let us embark on this transformative journey in language education, where the synergy of AI and human expertise propels us toward an ever evolving, empowered educational future.

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