Special Issue on Generative AI and Assessment: Perspectives from the Field

Introduction to the Special Issue

Generative Artificial Intelligence (GenAI) is revolutionising educational landscapes, challenging traditional paradigms and creating unprecedented opportunities. This special issue of *Education Research and Perspectives* delves into the transformative potential of GenAI in assessment practices across diverse educational contexts. Comprising seven insightful articles, this volume brings together conceptual frameworks and innovative strategies, showcasing the multifaceted role of GenAI in reshaping, assessment in higher education.

Foundations of Assessment in the GenAI Era

The issue opens with a comprehensive exploration of assessment design fundamentals through the AARDVARC framework by Chapman, Zhao, and Sabet. This paper underscores the enduring importance of assessment literacy while addressing the disruptive impact of GenAI, offering actionable strategies for creating good assessment tasks in the GenAI era. Their work provides a robust foundation for integrating GenAI into assessment practices responsibly and effectively.

Discipline-Specific Innovations

The middle section of the issue delves into discipline-specific applications of GenAI, highlighting the opportunities and challenges in various fields. Sabet, Zhan, and Shishehgarkhaneh explore how GenAI can enhance assessment practices in engineering education. Their article addresses ethical concerns and validity challenges while presenting AI-driven frameworks that enhance assessment design. In another engineering education paper, Zhan and Wang focus on electrical engineering, a discipline characterised by hands-on learning and technical precision. Their study investigates how AI tools can enhance lab-based and project-based assessments, providing dynamic feedback while preserving critical technical and problem-solving skills. In the subsequent paper, Wang and Zhan examine the transformative role of GenAI in computer science education, a field with unique demands such as scalability, personalisation, and rapidly evolving curricula. Their work highlights how GenAI can automate repetitive tasks, optimise code testing, and deliver personalised feedback, enabling educators to focus on fostering creativity and higher-order thinking skills.

Wang and Zhang, in the fifth paper, take a different perspective, exploring the integration of GenAI into English as a Foreign Language (EFL) classrooms. By treating GenAI as a collaborative peer in the feedback process, their framework focuses on improving writing skills, enhancing peer learning, and preparing students for an AI-integrated world.

Synthesising Evidence on GenAI in Assessment

The final section of the issue presents two systematic reviews that synthesise empirical findings on the impact of GenAI on educational assessment. Zhao, Chapman, and Sabet reviewed 19 empirical studies on educators' and students' perceptions of GenAI, Gen AI's effectiveness in enhancing assessment practices, and critical recommendations for future research. Their work provides a comprehensive overview of empirical evidence on GenAI and educational assessments, opportunities and challenges in this field, offering valuable insights for researchers, educators and policymakers. Xuyen's systematic review concludes the issue by focusing on the ethical implications of GenAI in assessment. By critically examining how GenAI disrupts traditional notions of originality and academic integrity, this paper advocates for the development of a robust ethical framework.

This special issue captures the multifaceted impact of GenAI on educational assessment, offering theoretical frameworks, discipline-specific applications, and systematic syntheses of current evidence. Collectively, these contributions empower educators, researchers, and policymakers to respond to the challenges and take the opportunities associated with GenAI, ensuring that assessment practices remain innovative, equitable, and aligned with educational goals.

Dr. Peyman G. P. Sabet

Dr. Peyman G.P. Sabet is a Doctor of Education candidate at the University of Western Australia with a focus on educational psychology and the internationalisation of Australian tertiary education. He also holds a PhD in language and intercultural education from Curtin University where he works as a lecturer in TESOL. Peyman has been involved in language pedagogy and linguistics for more than twenty-five years, with a wealth of teaching experience and publications in a number of peer-reviewed journals. Peyman's research expertise lies in the areas of Interlanguage Pragmatics, Intercultural Communication, Intercultural Competence, Assessment, Vague Language and second language acquisition.

Dr. Jian Zhao is an early-career researcher at the Graduate School of Education, University of Western Australia, where she completed her PhD in December 2022. Specialising in mental health measurement, assessment design, and mixed-methods research, she has contributed to projects on the mental health of Chinese international students in Australia and the prediction of self-harm, suicidal behaviours among young people in Western Australia. Dr. Zhao developed instruments for assessing coping strategies and monitoring mental health changes, which have been used by other researchers. Her work is published in peer-reviewed journals such as *Frontiers in Psychology*, *Frontiers in Education*, *Behavioural Science*, *International Journal of Qualitative Studies on Health and Well-being*, and *Social Behaviour and Personality: An International Journal*. Her key research interests include mental health measurement, assessment design, international student mental health, coping strategies, resilience, and the prediction of suicide and self-harm.