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Introduction by Editors of the Special Edition

Introduction: Language Teaching Feedback and Assessment Aided by Digital Technologies

Jesús García Laborda[1], Jorge Arús Hita [2], & Amir Mashhadi[3]

[1]Modern Philology Department, College of Education, Universidad de Alcalá, Guadalajara, Spain; *jesus.garcialaborda@uah.es*

[2]Corresponding author, English Studies Department, Philology College, Universidad Complutense de Madrid, Madrid, Spain; *jarus@ucm.es*

[3]Department of English Language and Literature, Shahid Chamran University of Ahvaz, Ahvaz, Iran; *mashhadi.scu@gmail.com*

The rapid advancement of technology, particularly artificial intelligence (AI), has had a profound impact on language assessment. Innovations such as G-Rubric, chatbots, and tools like AntConc are transforming how language proficiency is evaluated, offering new opportunities for automated feedback and enhancing Language Assessment Literacy (LAL). This special issue (SI) explores the integration of AI-aided assessment tools in various official contexts, including university entrance exams (EVAU) and Spain's Escuela Oficial de Idiomas (EOI) system. By examining these developments, we aim to provide insights into the future of language assessment in digital learning environments, focusing on how AI can facilitate more effective, equitable, and personalized language evaluation.

One primary area of innovation is the use of automatic feedback tools, such as G-Rubric, for the assessment of written and oral language skills. G-Rubric, an AI-driven automatic correction tool, has been deployed in multiple contexts, demonstrating versatility and effectiveness. For instance, in the realm of English for Specific Purposes (ESP), G-Rubric has been used to evaluate English essays, providing detailed, immediate feedback that enhances learners' understanding of language use in specific professional contexts (Díez Arcón & Martín Monje, 2021).

Beyond written assessments, AI-based chatbots are increasingly being utilized for oral language assessments. In university access exams like EVAU, chatbots simulate real-life conversations, providing a scalable and consistent method for assessing oral proficiency. These chatbots can engage students in dialogue, offering a unique opportunity to evaluate their spontaneous language use, pronunciation, and fluency (Huang, Hew & Fryer, 2022). Such tools are particularly valuable in large-scale assessments, where human examiners may struggle to provide timely and individualized feedback.

AI is also reshaping LAL among educators and learners. With the rise of Generative AI (GenAI) tools, educators need to develop a deeper understanding of how these technologies can be integrated into language assessment practices effectively. One study highlights the importance of LAL in fostering teachers' ability to critically engage with AI tools, ensuring their ethical and effective use in the classroom (Casal-Otero et al., 2023). Additionally, AI-aided Adaptive Learning Environments (ALEs) are contributing to the enhancement of LAL by providing data-driven insights into learner progress, enabling more personalized and adaptive assessment approaches (Hollander et al., 2024).

Data-Driven Learning (DDL) is another significant trend facilitated by AI in language education. DDL approaches leverage large datasets and tools to analyze learner language use, identify common errors, and provide targeted feedback (Kilimci, 2017). In Digital Learning Environments (DLEs), automatic formative assessment tools powered by AI are becoming indispensable. These tools enable continuous monitoring of learner progress, allowing educators to provide timely formative feedback that supports language development (Ryan, 2020).

In relation to the digitalization of language assessments, Spain's EOI system exemplifies the broader trend toward automated and AI-supported language evaluation. Utilizing platforms such as Trelson software and Moodle, the EOI system is transitioning to more digitalized assessment methods, aiming to enhance accessibility, reliability, and scalability. This transition reflects the growing recognition of the potential of AI and digital tools to streamline assessment processes while maintaining high standards of reliability and validity.

This SI is composed of seven papers. The first "*Teacher vs. machine correction: Comparing assessments of students' reading comprehension and writing skills*," evaluates G-Rubric in assessing Spanish language students,

highlighting technological gaps compared to English tools. The findings suggest that demographic factors influence grading, and while G-Rubric aligns with less experienced teachers' scores, the study recommends using such tools alongside human evaluation due to current limitations and the need for further refinement.

Another contribution, "*Tutor vs. automatic focused feedback and grading of student ESP compositions in an online learning environment,*" examines G-Rubric's use in providing automated feedback for grading Tourism English essays in distance learning. While G-Rubric provides consistent, targeted feedback, it struggles with content evaluation and plagiarism detection. A blended approach, combining G-Rubric with human tutors' expertise, is suggested to enhance learning, requiring further refinement for specific needs.

The third paper, "*Issues in the design and implementation of chatbots for oral language assessment*", discusses the challenges in designing and implementing chatbots for oral language assessment, notably ensuring accurate speech recognition, maintaining a natural conversation flow, and providing meaningful feedback. Technical limitations related to recognizing varied accents and pronunciations and evaluating spontaneous speech accurately are highlighted. Additionally, according to the authors, designing chatbots that simulate human interaction effectively and assess speaking proficiency fairly, while accommodating diverse linguistic backgrounds, remains a complex task requiring further refinement and research.

The fourth paper, "*English medium instruction educator language assessment literacy and the test of generative AI in online higher education,*" addresses how GenAI affects LAL among educators in online Higher Education (HE) programs using English as a Medium of Instruction (EMI). The paper reveals educators' limited knowledge and uncertainty about LAL, particularly regarding assessment policies and practices. It emphasizes the need for collaboration, policy development, and skill enhancement to address the challenges posed by GenAI in assessments.

The fifth paper, "*Language teachers' assessment literacy in AI-aided adaptive learning environments*" examines how LAL enhances teaching quality in ALEs for English teachers. It finds that AI-aided ALEs improve LAL and personalized feedback. Senior teachers develop higher LAL, while experienced teachers demonstrate better teaching quality. Challenges include content fragmentation and increased workload.

The sixth study, "*Digitalized language assessment in Spanish official language schools (EOI): Current opportunities and challenges,*" explores the transition to digital language assessments in Spain's EOI system using Trelson software and Moodle. The findings show that digital and paper tests produce similar results, suggesting that digital assessments can maintain test authenticity and security while providing comparable outcomes to print-based tests. Positive student feedback indicates that digital assessments, with careful implementation, can enhance language education quality.

Finally, "*Exploring the relationship between out-of-class engagement with English and academic achievement at university level,*" investigates the casual English-language activities of aspiring primary school teachers, highlighting a strong preference for activities such as listening to music and watching films or series, mainly for enjoyment. It emphasizes a significant positive connection between these activities and academic success in learning English as a second language, particularly noting the positive impact of watching English-language media with subtitles on reading, writing, and overall course grades. Gender distinctions were observed, with males leaning toward gaming and females participating more in various informal practices. The study suggests that informal exposure to English, especially through media consumption, can boost language skills, advocating for the integration of informal learning resources into teaching practices to align with modern learning approaches and technological advancements. It also stresses the importance of adapting L2 teacher training programs to keep pace with the evolving educational landscape.

In conclusion, as AI technologies continue to evolve, their impact on language assessment is becoming increasingly evident. From automatic correction tools like G-Rubric to chatbots for oral assessments and ALEs, these innovations are not only transforming how language proficiency is evaluated but also redefining the relationship between teachers, students, and assessment methods. These technologies bring unprecedented efficiency, scalability, and precision to language assessment, offering new avenues for personalized, real-time feedback and creating more engaging and dynamic learning environments. Furthermore, the integration of AI in language assessment is contributing to the enhancement of LAL among both educators and learners, equipping them with the skills and knowledge necessary to navigate and optimize the use of these tools in diverse educational contexts.

However, as the adoption of AI in language assessment grows, it is critical to recognize the limitations and ethical challenges that come with these technologies. While AI can enhance assessment practices, educators must be mindful of potential issues such as algorithmic bias, data privacy concerns, and the risk of over-reliance on automated systems. The role of the human evaluator remains essential in ensuring the validity, reliability, and fairness of assessments. Therefore, a blended approach that combines the efficiency of AI tools with the expertise and insight of human educators is key to maximizing the benefits of these innovations. By fostering a deeper understanding of the potential and limitations of these technologies, this SI contributes to a more thoughtful and critical exploration of the role of AI in language assessment, paving the way for more effective and equitable assessment practices in the digital age.

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Shahid Chamran University of Ahvaz