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Integrating AI-Supported IELTS Writing Tasks into an ELT Writing Course for Sustainable Teacher Education: A Qualitative Study of Pre-Service English Teachers' Experiences

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ABSTRACT: The integration of artificial intelligence (AI) into academic writing instruction has generated growing pedagogical and ethical debate, particularly in teacher education and high-stakes assessment contexts such as IELTS writing. Although AI-supported writing tools offer opportunities for feedback, revision, and language development, qualitative evidence on how pre-service English teachers experience these tools within structured ELT writing courses remains limited. This qualitative case study examines pre-service English teachers' experiences with AI-supported IELTS Writing Task 1 and Task 2 activities integrated into a compulsory Academic Writing course at a foundation university in İstanbul, Türkiye. The participants consisted of 49 pre-service English teachers. Data were collected through multiple qualitative sources, including initial and revised IELTS writing drafts, structured reflective journals, and semi-structured interviews with 10 purposively selected participants. The data were analysed using thematic analysis. The findings indicate that AI primarily functioned as a pedagogical scaffold supporting idea generation, revision, and linguistic awareness rather than replacing student authorship. Participants reported increased assessment literacy through closer engagement with IELTS criteria, heightened awareness of ethical use of AI, and growing authorial responsibility. Additionally, AI-supported writing practices contributed to learner autonomy, reflective practice, and the emergence of professional identities. The study suggests that pedagogically guided AI integration in IELTS writing can support sustainable ELT teacher education, aligning with SDG-4 by fostering digital competence and lifelong learning skills.

KEYWORDS: AI-supported writing; IELTS writing; pre-service English teachers; sustainable teacher education; assessment literacy.

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Introduction

Recent advances in artificial intelligence (AI) have profoundly influenced educational practices, particularly in second-language (L2) writing instruction, where AI-powered tools provide automated feedback on grammar, coherence, lexical choice, and organisation (Godwin-Jones, 2022; Zhai, 2022). These developments have reshaped how learners engage with drafting and revision processes, prompting renewed discussions in English Language Teaching (ELT) about authorship, the validity of feedback, and ethical use of technology (Kasneci et al., 2023).

At the same time, high-stakes language assessments such as the International English Language Testing System (IELTS) remain central to academic and professional mobility worldwide (Green, 2007). The writing component of IELTS is particularly demanding, as it requires genre awareness, task achievement, coherence and cohesion, lexical resource, and grammatical accuracy under time pressure (Moore & Morton, 2005). Consequently, preparing future English teachers to understand and critically engage with such assessment frameworks is essential not only for their own academic success but also for their future instructional and assessment roles (Taylor, 2009).

Within teacher education, sustainability has emerged as a key conceptual framework aligned with the United Nations' Sustainable Development Goal 4 (SDG-4), which emphasises inclusive and quality education as well as the preparation of qualified teachers for lifelong learning societies (UNESCO, 2017). In this context, SDG-4.4 highlights the development of relevant skills for employment and lifelong learning, while SDG-4.c stresses strengthening teacher education systems. Integrating AI literacy and assessment awareness into ELT programs may therefore contribute to sustainable teacher education by fostering digital competence, reflective practice, and pedagogical adaptability (Redecker, 2017).

Despite the growing body of research on AI in language learning, empirical studies have largely focused on performance outcomes or learner perceptions, often neglecting the lived experiences of pre-service teachers in structured academic writing contexts (Godwin-Jones, 2022). In particular, qualitative research examining AI-supported writing practices within IELTS-oriented ELT courses remains scarce. Addressing this gap is essential for designing responsible, pedagogically grounded, and sustainable models of AI integration in teacher education.

Research Aim and Research Questions

This study aims to explore how pre-service English teachers experience AI-supported IELTS writing tasks integrated into an ELT writing course and how these experiences contribute to sustainable teacher education within the SDG-4 framework.

The study addresses the following research questions:

1. How do pre-service English teachers experience AI-supported IELTS writing tasks in an ELT writing course?

2. What pedagogical benefits and challenges do they associate with AI-supported writing practices?
3. How do these experiences influence their understanding of academic writing, assessment, and professional identity?
4. In what ways do AI-supported IELTS writing practices contribute to sustainable teacher education aligned with SDG-4?

Methodology

Research Design

This study adopted a qualitative case study design, which enables in-depth exploration of participants' experiences within a bounded educational context (Merriam & Tisdell, 2016). This approach was particularly suitable for examining how AI-supported writing practices were perceived and enacted within a specific ELT writing course.

Participants

Participants comprised 49 pre-service English teachers enrolled in a compulsory Academic Writing course within an undergraduate ELT program at a foundation university in İstanbul, Türkiye. All participants had prior experience with academic writing but limited formal exposure to AI-supported writing tools before the course.

Data Collection

Data were collected through three complementary qualitative sources to ensure triangulation.

First, participants' IELTS Writing Task 1 and Task 2 drafts, including both initial and revised versions, were collected to examine revision practices and engagement with feedback. Second, students maintained structured reflective journals throughout the semester, documenting their perceptions of AI use, learning gains, ethical considerations, and revision strategies. Third, semi-structured interviews were conducted with 10 purposively selected participants at the end of the course to explore their experiences in greater depth.

AI-supported tools included grammar and style checkers, generative AI platforms used for brainstorming and feedback simulation, and paraphrasing tools used for lexical awareness. Importantly, students were required to submit original drafts before consulting AI tools and to document how AI suggestions were incorporated explicitly, emphasising ethical authorship and metacognitive awareness rather than automated text generation.

Research Results

AI *as a Pedagogical Scaffold*

Participants consistently described AI as a supportive revision scaffold rather than a replacement

for their writing. AI tools were perceived as "guides" that helped identify coherence issues, improve lexical precision, and refine grammatical accuracy, aligning with previous research on AI-mediated scaffolding in L2 writing (Zhai, 2022).

Development of Assessment Literacy

Engagement with IELTS rubrics, alongside AI feedback, enhanced participants' understanding of assessment criteria, particularly in task achievement and coherence. This finding supports claims that explicit engagement with assessment frameworks can foster assessment literacy among future teachers (Taylor, 2009).

Negotiating Authorship and Ethics

While initial concerns about authorship and voice were evident, guided instruction and reflective activities helped participants develop ethical awareness regarding AI use. This aligns with concerns raised in the literature regarding the authenticity of authorship and the need for pedagogical framing of AI tools (Kasneci et al., 2023; Selwyn, 2019).

Professional Identity Formation

Participants reported that AI-supported writing experiences influenced their visions of future teaching practices. Many articulated plans to use AI tools for formative feedback rather than summative assessment, reflecting emerging professional identities as reflective and ethically aware educators.

Sustainable Learning Skills

Finally, students reported increased learner autonomy, self-regulation, and reflective revision habits. These transferable skills correspond closely with the lifelong learning competencies emphasised in SDG-4 (UNESCO, 2017).

Conclusions

The findings indicate that AI-supported IELTS writing tasks can function as effective pedagogical scaffolds when embedded within principled instructional design, corroborating prior research on AI-mediated feedback in L2 writing contexts (Godwin-Jones, 2022). Rather than undermining the authenticity of writing, guided AI use enhanced metacognitive awareness, assessment literacy, and ethical sensitivity.

In alignment with SDG-4.4, participants developed transferable digital and academic skills essential for lifelong learning, including reflective practice and autonomous revision strategies (UNESCO, 2017). Furthermore, consistent with SDG-4.c, the study demonstrates how teacher education programs can prepare future educators to critically engage with AI technologies in assessment-driven contexts (Redecker, 2017).

Sustainable teacher education, therefore, requires not the uncritical adoption of AI but its

pedagogically grounded integration. When framed ethically and reflectively, AI-supported IELTS writing practices offer a promising pathway for developing digitally competent, assessment-literate, and professionally reflective ELT teachers.

Limitations and Future Research

This study was limited to a single institutional context and to a single academic semester. Future research could adopt longitudinal designs, incorporate quantitative measures of writing performance, compare AI-supported and non-AI-supported groups, and explore cross-cultural contexts to further examine sustainable AI integration in ELT.

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