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A Serious Game to Strengthen Prompting Skills

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Abstract

The rapid rise of generative AI demands new competencies from both students and teachers, including the ability to formulate effective prompts. However, many learners struggle to express their intentions clearly or to iteratively improve poor prompts. This study presents FAIZE, a serious game designed to develop prompting skills in an accessible, motivating and collaborative way. Using a design-based research approach, the game was developed through multiple iterative cycles, informed by literature on AI literacy, effective prompting, and game-based learning. Playtests with student teachers and lecturers demonstrated that FAIZE supports learners in recognizing prompting errors, applying structured improvement strategies (such as the DROP-model), and engaging in metacognitive conversations about AI use. The game combines humor, timed challenges and role rotation to reduce performance pressure and strengthen learning through peer feedback. Results indicate that FAIZE increases awareness of prompt quality, stimulates reflective dialogue, and offers a low-threshold entry point for responsible AI use in teacher education. The final prototype is suitable for both professional development of educators and skill-building in higher education classrooms. This paper discusses the design principles, observed learning effects, and practical implications for integrating serious games into AI literacy curricula.

Keywords: AI Literacy, Game-Based Learning, Generative AI, Prompting Skills, Teacher Education