Digital Technologies in STEM Education



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Al tutorbot

to support learning and teaching

A *Proof of Concept* of a student-focused chatbot was created, catering to diverse language and support needs, and providing a secure learning aid for minors.

The focus was on Al's role in enhancing learning and teaching, assessing prompt effectiveness, tailoring bots for specific needs, and considering Al tool costs and design.

The bot utilizes OpenAI GPT-4, built on Microsoft Azure's OpenAI Service, ensuring data privacy within the organization's cloud. The bot was trained on open educational resources from various subjects.

The bot has been utilized by students for a variety of tasks including discussions, project work, lab reports, abstracts, summaries, text simplification, translations, homework, and preparation for exams.

Teachers have employed the bot for lesson planning, creating and grading questionnaires, producing accessible materials, and evaluating student texts.



The bot efficiently aided in task completion and project work, with high-quality language and a user-friendly interface.

The bot's performance was sometimes slow, requiring precise prompts for responses and struggled with large texts; segmenting texts improved its efficiency.

Enhancements for the bot could include voice control, spoken responses, and image generation capabilities.

More than 20 teachers from basic education, upper secondary general education and vocational education and training were involved in iterative co-creation with their learners.