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Advancing Geography Education with Artificial Intelligence (AI): Exploring Personalised Learning Strategies

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ABSTRACT This study examines how AI-driven tools enhance pedagogical experiences in tertiary geography in South Africa. Adopting an interpretivist qualitative case study, researchers surveyed 20 student teachers to analyse the adoption of adaptive technologies. Results indicate that these systems markedly advance conceptual mastery, scholarly results, and intrinsic motivation. Nevertheless, infrastructural constraints, scholastic integrity hurdles regarding citation, and potential cognitive dependency remain prominent barriers. Although AI serves as a powerful augmentation to conventional instruction, its efficacy depends on reforming digital frameworks and ethical standards. The findings urge institutions to prioritise professional faculty development and robust connectivity to navigate the 21st century educational transformation.