

Advancing Education through GAI Tools : A Comprehensive Review of Student Experiences

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Abstract

The rapid development of Generative Artificial Intelligence (GAI) tools has drastically transformed the landscape of education by making individualised, effective, and engaging learning experiences possible. This article discusses the impact of different GAI tools such as ChatGPT, Gemini, Khanmigo, Grammarly, Notion AI, Google Classroom, Cognii, Gradescope, Turnitin, and QuillBot on student engagement, learning, and academic integrity. These tools offer personalised academic assistance in the form of content creation, writing improvement, adaptive feedback, and automated marking. ChatGPT and Gemini have adaptable learning support, whereas Khanmigo encourages step-by-step problem-solving to cultivate critical thinking. Grammarly and QuillBot polish writing mechanics but are weak on content analysis. Notion AI and Cognii enable self-regulated learning but are limited in data quality and flexibility. While Google Classroom and Gradescope simplify classroom management and grading, they have challenges in terms of inclusivity and policy flexibility. Turnitin is central to ensuring academic integrity, yet the danger it poses is to diminish learning as a compliance-based process. The conclusion drawn is that while GAI solutions augment 21st-century learning with personalisation and automated processes, using them effectively has to be based on ethical use, fair access, good pedagogical foundations, and human monitoring. Educators and institutions have to adopt a balanced strategy that protects education quality while harnessing the transformative capacity of AI for lifelong learning.

Keywords

Generative Artificial Intelligence (GAI), Student Engagement, Academic Integrity, Personalized Learning, Education Technology.

