

Chapter 15

Perception About Usage of GAI Tools in Teaching and Research by Teachers and Students in Higher Education Institutions

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ABSTRACT

In recent days, due to the evolution of Artificial Intelligence, education and research are in the process of rapid development. The AI, particularly GAI tools such as individualized learning and intelligent tutoring systems, are recreating traditional pedagogies and research methodologies. Consequently, in this chapter, global practices of AI in higher education are explored together with their applications in Journal publications. Surveys on AI acceptance reveal mixed perceptions among

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students and faculty. While students value AI's individualized learning experiences and self-paced study options, faculty acknowledge its ability to automate tasks but are worried about data privacy and students' ethical use of AI. Therefore, this chapter underlines a balanced method for AI integration, advocating for technical advancements that advocate educational values. To this end, recommendations and guidelines for adopting AI tools in higher education are provided with special emphasis on the role of educators to be aware and committed to conform with Institutional AI policies.

SECTION 1: INTRODUCTION

The rapid advancements in Generative Artificial Intelligence (GAI) have fundamentally reshaped various sectors in the short time, particularly the education sector. As GAI technologies become increasingly integrated into teaching and research processes, their impact on higher education institutions is profound and far-reaching (Akgun & Greenhow, 2021; Roll & Wylie, 2016). This chapter explores educators' and learners' attitudes and experiences toward adopting and using GAI tools in academic settings.

The GAI application in education, also known as Generative Artificial Intelligence in Education (GAIED), marks a shift from teacher-centric methods to student-centric methods (Akgun & Greenhow, 2021). These tools facilitate personalized instruction and improve the quality of education and learning outcomes by creating a more inclusive learning environment (Roll & Wylie, 2016). Additionally, GAI is being used to manage various administrative tasks, which permits educators to spend more time and energy in the teaching and learning process rather than being busy with administrative duties.

Understanding teachers' and students' GAI literacy levels is becoming more and more crucial as GAI is continuously incorporated into educational procedures. According to (Crompton & Burke, 2023) GAI literacy, in this sense, refers to the understanding of what GAI is, how to utilize it, and the ramifications of its integration into society and education. To teachers, especially in higher learning institutions and academics, GAI literacy is essential in the appropriate incorporation of the tools into practices and the ability to persist in working in an educational context (Zawacki-Richter et al., 2019). In this way, the educator who has mastered GAI can use it in various ways to advance the engagement of students, refine the delivery of instructions and self-advance the academic research as much as feasible (Tsai, 2019)

However, one cannot deny teaching-related benefits as well as a definite prospect of GAI in the future; nevertheless, numerous challenges and problems regarding the further application of GAI persist. One of the main challenges is associated with

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