

Title: Prospective Artificial Intelligence (AI) Applications in the University Education Level: Enhancing Learning, Teaching and Administration through a PRISMA Base Review Systematic Review

Author Names: Rashed Hossain¹, Hossain Jaman Sohag, Farhatul Hasan, Shainjida Ahmed, Al- Amin, Md. Mominul Islam

Abstract: Artificial Intelligent (AI) has been trying to improve education systems by enabling personalized learning, improving administrative efficiency and supporting decision making. This paper conducted the PRISMA based systematic methodology and article selection process were encompassed academic journal articles, conference papers and institutional reports with a focus on studies published between 2019 to 2024 such Key databases like Science Direct, IEEE Xplore and Google Scholar. After screening the 292 published articles, conferences, reports, 84 studies were finalized to conduct this paper for addressing the research gaps. While AI offers significant benefits, including personalized instruction and resource allocation, it also introduces ethical challenges related to data privacy, bias and equitable access to AI tools. The review highlights the role of AI in improving teaching efficiency through real time analytics and in supporting educators by automating routine tasks. Ethical considerations are addressed, particularly how universities manage data security and mitigate the risk of biased decision making. From the implication point of view, the study also explores possible solutions to bridge the digital divide, ensuring the students from diverse socio economic backgrounds can access AI driven learning tools. This research contributes to extend the relevant studies for the growing discourse on AI in education by offering practical insight and recommendations for maximizing AI's potential while minimizing its risks, providing a roadmap for future research.

Key words: Artificial Intelligence University Education Personalized Learning Intelligent Tutoring Systems (ITS) Higher Education Data Privacy Adaptive Learning Technology Educational Technology

<https://doi.org/10.57239/PJLSS-2024-22.2.00694>

<http://dx.doi.org/10.57239/PJLSS-2024-22.2.00694>