

Chapter 14

The Role of Artificial Intelligence Autonomy in Higher Education in India

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ABSTRACT

To leverage the benefits of artificial intelligence applications for experiential learning, many higher education institutes have started using artificial intelligence by adopting many artificial intelligence-driven technologies. Some of them are chatbots, generative AI, concepts of virtual tutors, and providing students with various automated assessment tools for their own assessment, which might change the traditional teaching methodology. This chapter examines the role of artificial intelligence autonomy in higher education in India, deep-diving into AI's impact on students' learning outcomes by leveraging AI-driven technologies in education. This research will specifically have five major variables that will be examined and measured. These variables are usage intention, thought autonomy, action autonomy, sensing autonomy, and culture. This study will examine the five main dimensions of AI autonomy: usage intention, thought autonomy, action autonomy, sensing autonomy, and culture.

1. INTRODUCTION

To leverage the benefits of applications of artificial intelligence for providing experiential learning, many higher education institutes have started the usage of artificial intelligence by adopting many artificial intelligences driven technologies. Some of them are chatbots, generative AI, concepts of virtual tutors and providing students with various automated assessment tools for their own assessment which

DOI: 10.4018/979-8-3693-9062-7.ch014

might change the traditional teaching methodology. Niu et al. (2024) find out that advancement and increasing applications of AI technology in higher education not only provide more efficient tools for teachers in long-term and focused teaching, but also provide new active and independent spaces for sustainable self-motivated learning for college students. Learning can be customised by AI as per student need as stated by Chatterjee & Bhattacharjee (2020). AI played a crucial role in redefining the Indian education by making their educational journey more personalized and shifting the charge of learning from teachers to students but role of AI in higher education is still very limited cited by Surugiu et al. (2023). This needed because there is generally high student- teachers ratio makes student interaction minimal as stated by Chen et al. (2023)

This study will look forward for examining the role of artificial intelligence autonomy in higher education in India, deep diving into the impact that AI made on students learning outcomes by leveraging AI driven technologies in field on education. This research will specifically have 5 major variables which will be examined and measured. These variables are usage intention, thought autonomy, action autonomy, sensing autonomy, and culture. Salinas-Navarro (2024) investigates how GenAI can enhance teaching and learning by constructively addressing study situations beyond conventional learning approaches and cultivating high-order skills and knowledge acquisition. AI raises question of academic integrity. Academic integrity is defined as “being honest in academic work and taking responsibility” (East & Donnelly 2012). “The many facets of academic integrity, from plagiarism to contract cheating” This unit will cover the concept Artificial intelligence and its various autonomous dimensions and implications of integrating AI in education

This study will study and examine the five main dimensions of AI autonomy: usage intention, thought autonomy, action autonomy, sensing autonomy, and culture. These variables or five specific dimensions are taken in to consideration of assessing the role of artificial intelligence in influencing autonomous learning in higher education. Niu et al. (2024) says that when people believe that a machine or algorithm can independently sense the external environment, think about reasons, plan, and take action to solve problems.

1.1 Opportunities and challenges with AI integration in Higher education

If we talk about Indian education systems, artificial intelligence offers plethora of opportunities and set of challenges when we talk specifically about adoption of AI driven technologies in the field of education. In India, due to pandemic covid-19, acceptance of AI amongst students have accelerated a lot. Students and teachers are understanding how to use AI rationally to get benefits in the field of education to maximize learning outcome. Now a days government is also promoting the same by coming up with NEP (new education policy). However, adopting Artificial intelligence can impose several challenges which might be difficult in tackling and finding solutions. Some of those challenges are limitations of tech infrastructure in India, privacy is a major concern and who to integrate ethics with AI is also a concern. Despite all these challenges, Artificial intelligence Is considered an asset for all stakeholders of educational institutions. AI is beneficial because of its capacity of making autonomous decisions and fostering an autonomous learning environment.

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