

Chapter 19

Use of AI in the Curriculum Development of Transnational Higher Education

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ABSTRACT

The chapter explores the transformative impact of Artificial Intelligence (AI) on curriculum development in transnational higher education. It highlights how AI-powered tools and data analytics foster dynamic, inclusive, and personalized learning experiences for diverse global student populations. By leveraging AI, institutions can create curricula that adapt to student performance, preferences, and market demands. The chapter showcases successful AI implementations, noting a 30% increase in student retention and a 25% improvement in learning outcomes. It also examines new AI trends, such as predictive analytics and Machine Learning, and anticipates how AI will shape future TNE curricula. Ethical considerations, including privacy and data bias, are discussed to ensure responsible AI use. This review offers insights for educators, administrators, and policymakers on integrating AI into curriculum development to enhance quality and accessibility in higher education worldwide.

INTRODUCTION

Defining AI and Its Relevance in the Modern Educational Landscape

AI is fundamentally restructuring many sectors of human life, and education, certainly, does not stand excommunicated from it. At the core, AI is defined as a domain in computer science that focuses on the creation of computer systems that can perform tasks generally requiring human intelligence, such as visual perception, speech recognition, decision-making, and language translation (Russell & Norvig, 2021). In the educational context, AI includes a host of technologies, such as ML, Natural Language

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Processing (NLP), and predictive analytics, to analyze huge volumes of data in order to inform and enhance the teaching and learning processes (Bialik et al., 2019). It is deeply relevant in current times.

The world is getting digital day by day, so education should go along to meet new demands and harness new technologies to stay ahead. AI also affords solutions for the many pressing challenges of the current domain of education, including the ability to deliver on personalization of learning and efficiency in the use of resources, and to ensure that students achieve better outcomes in their learning experiences (Naseer, Khalid, et al., 2024; Naseer, Khan, et al., 2024). Since AI techniques are used in analyzing big data, it has the potential to give information on students' performance, detect at-risk students, and suggest interventions for improving learning outcomes (Rabelo et al., 2023). Besides, AI-powered adaptive learning systems will be able to optimize learning content for the specific needs of each student, thereby increasing their engagement and retention (Churi et al., 2022).

The Unique Challenges and Opportunities in TNE

Unique challenges and opportunities in TNE represents all kinds of educational provisions or deliveries that transcend national boundaries; they may be virtual, blended, or physical but are usually intended for credit (Knight, 2015). TNE seeks to provide an education of the same quality to students regardless of location, so it promotes global learning and international collaboration. However, TNE harbors some unique challenges to its effective operation, such as cultural and linguistic differences, different levels of educational standards, and a need to target different diverse student populations with different learning preferences and needs (Heffernan et al., 2018). Among them, cultural and linguistic differences are the most significant ones in TNE.

Students from diverse cultural backgrounds may have various expectations and experiences of educational practices, and this would definitely influence engagement and performance (Lurinda et al., 2022). Language barriers could as well become a challenge, especially with regard to students who do not speak the instruction language as their mother tongue. These issues demand curricula that would be sensitive to the varied cultures and inclusive enough to meet the needs of a large international students' base. AI can play a vital role in addressing many of these challenges by offering tools and insights aimed at developing more inclusive, culturally sensitive curricula. For example, such will enable the analysis of students' performance and engagement data to identify trends and patterns that can inform more relevant teaching approaches and materials for the benefit of students by educators themselves. Artificially intelligent language processing tools will also enhance accessibility through allowing real-time translation and language support, overcoming language barriers and making courses friendlier to non-native speakers (Youde, 2020). Besides, AI not only brings with it formidable challenges but also promising opportunities for TNE.

By harnessing AI, educational institutions can develop curricula that are more dynamic and in response to the needs of students and the requirements in the global job market. AI scans job-market-related data in the process of identification of potential emerging trends and skills in demand, which forms the base for institutions to design curricula that are needed to arm the students for the future world of work. AI can also facilitate international collaboration as educators from various nations come together for developing a common curriculum, sharing best practices, and co-creation of educational content.

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