

Chapter 8

Fostering Personalized Learning and Achieving Equity in Education: The Role of AI-Powered Curriculum Development

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ABSTRACT

This chapter, discuss how AI technologies can be applied in curriculum design, especially in promoting individualized learning and equity in education. The need for personalized learning has been emphasized, as educational settings are becoming more complex and AI has the ability to process students' information and modify the educational content in accordance with the learners' tastes and interests. With the use of adaptive learning devices, educators assist in developing adaptive curricula which fit learners with diverse educational and cultural backgrounds. This chapter in addition touches on the issues of biasness in AI systems and the potential of such systems being able to cater for all categories of students without loss of cultural relevance. In this paper, we illustrate how AI can help detect and prevent learning gaps and hence take timely actions to avoid the gaps. Finally, this chapter has called for cooperation across educators, technologists, and policymakers so AI technologies are used optimally and all learners are provided with balanced and tailored education.

INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) presents transformative opportunities for reshaping educational practices, particularly in curriculum development. As classrooms become increasingly diverse, traditional instructional methods often struggle to meet the varied needs of all learners. In this context, AI offers innovative solutions that can bridge these gaps, enabling educators to tailor learning experiences to individual student requirements. AI-driven tools have the potential to revolutionize how educators analyze vast amounts of data to gain insights into student performance, learning styles, and specific needs, allowing for the creation of adaptive curricula that respond in real-time to students' strengths and weaknesses. However, the integration of AI in education is not without its challenges. While AI can enhance personalized learning by ensuring that each student receives an appropriate level of challenge and support, its deployment must be critically evaluated to ensure equity and fairness.

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