

Chapter 3

Digital Transformation and the Role of AI in Modern Education System

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Abstract

This Chapter focuses on how the use of Digital Technologies (Artificial Intelligence) is transforming contemporary learning systems. The Chapter outlines how Digital Transformation in education involves much more than simply digitizing educational materials; rather, it represents a radical transformation to new Pedagogies, Institutions, and Learning Engagements. Digital Transformations in Education as a result of the use of AI will include individualized, efficient, and data-driven learning and teaching processes by way of Intelligent Tutoring Systems (ITSs), Adaptive Learning Systems (ALSSs), and Predictive Analytics. The administrative implications of using AI, such as operational efficiency, academic integrity and decision making, are also discussed. Additionally, the Chapter discusses ethical issues associated with AI in education including data privacy, bias through algorithms, and digital inequity. A discussion of what this means for both Teachers and Learners is presented with an emphasis on AI Literacy, Critical Thinking, and Lifelong Professional Development. Finally, the Chapter presents a number of Policy Directions and Recommendations for inclusive, human-centered, and equitable implementations of AI in Education and Learning Systems with quality infrastructure and ethical governance. The Chapter concludes with an emphasis on a balanced approach to implementing AI in Learning Systems, particularly considering a focus on Lifelong Learning and Equity.

Keywords: Artificial Intelligence, Education System, Digital Transformation, Educational Technology and Digital Pedagogy.

Introduction

The pace of disruption of education due to rapidly advancing digital technologies has been transformative in the twenty-first century; as the fourth industrial revolution indicates digital transformation is about far more than simply putting textbooks in digital format or adding a Learning Management System (LMS) for example; digital transformation is about changing the way we provide education, design education, and conceptualize education. Fundamentally, it is