

Chapter 7

Exploring the Impact of Various Leverages on the Application of AI in Teaching and Learning Activities

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ABSTRACT

Modern pedagogy uses educational digitalization and AI to enhance teaching and learning. Ho Chi Minh City, Vietnam's IT hub, is a fascinating place to explore AI in education. Despite the growing interest in AI-driven educational technology, there is little empirical study on the practical effects and usefulness of AI integration in Ho Chi Minh City education. Thus, this research examines how infrastructure, learner-teacher connections, and early efficiency strategy affect AI in educational digitalization. The qualitative study included semi-structured interviews with teachers, administrators, and students from public and private schools in Ho Chi Minh City. Thematic analysis will identify trends, topics, and responder views. Results show that stakeholders are mostly positive about AI's potential to improve educational experiences and results, as well as technology access and digital literacy, while students emphasize the importance of human

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contact and empathy in learning. Policymakers and educators may utilize AI to innovate and improve education.

INTRODUCTION

Artificial Intelligence (AI) is revolutionizing industries across the globe, and education is no exception. From adaptive learning platforms to intelligent tutoring systems, AI offers new possibilities for improving educational outcomes by personalizing learning experiences and automating administrative tasks. In particular, AI technologies have the potential to enhance teaching methods, increase operational efficiency, and provide data-driven insights that can help educators make informed decisions. However, while AI holds promise for transforming education, its implementation comes with significant challenges. These challenges include ensuring equitable access to technology, providing adequate training for educators, and addressing concerns about the depersonalization of learning environments.

Ho Chi Minh City, the technological center of Vietnam, provides a compelling case study for examining the integration of AI in education. Vietnam has been rapidly expanding its digital infrastructure in recent years, positioning itself as a key player in Southeast Asia's tech industry. With a growing population of tech-savvy students and forward-thinking educational institutions, Ho Chi Minh City is well-positioned to experiment with AI-driven educational solutions. However, despite the city's technological advancements, there is a notable gap in the empirical research that explores how AI is being practically applied in classrooms and what impact it is having on students and teachers.

The motivation behind this chapter stems from the need to bridge this gap in understanding. While much has been written about the potential of AI in education on a theoretical level, less attention has been paid to the real-world implications of AI implementation in specific educational contexts. This chapter aims to address that gap by exploring how AI is being integrated into the teaching and learning processes in Ho Chi Minh City. The study investigates key levers—such as infrastructure, teacher-student

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