Chapter 6
Lifelong Learning Systems in the age of AI: Effectiveness, Challenges, and Strategies

Juvrianto Chrissunday Jakob
https://orcid.org/0000-0002-5267-3448
Politeknik Negeri Ambon, Indonesia

Maslan Abdin
https://orcid.org/0009-0006-9670-437X
Politeknik Negeri Ambon, Indonesia

Sri Ananda Pertiwi
https://orcid.org/0009-0009-6022-3066
Universitas Musamus, Indonesia

Nihla Afdaliah
https://orcid.org/0000-0002-9233-8513
STAIN Majene, Indonesia

ABSTRACT

The era of artificial intelligence, in which technological breakthroughs affect the dynamics of employment and education, has given rise to the notion that lifelong learning systems have become an essential necessity. Through the provision of a method that is individualized, adaptable, and effective, artificial intelligence technology makes a substantial contribution to the development of skills. The application of artificial intelligence in the field of professional training facilitates the creation of individualized learning experiences, improves access to a vast array of educational resources, and raises the level of training quality through the utilization of thorough

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data analysis. Additionally, artificial intelligence improves adult education by providing a platform that accommodates a variety of learning styles and paces, speeds up the learning process, and increases student engagement throughout the process.

INTRODUCTION

The Concept of AI Learning

In today's world of quickly expanding artificial intelligence (AI), the need of continuous learning has grown exponentially for individuals striving to remain relevant and competitive. Lifelong learning, defined as the continuous practice of obtaining new knowledge, skills, and competencies throughout one's life, is no more a choice endeavor, but rather an essential mindset in the face of technological and societal developments. AI plays a critical role in transforming how education and skill development are conducted by breaking down traditional time and location constraints. Unlike traditional education models, which frequently require learners to be physically present at specified times and locations, AI-powered learning platforms provide unparalleled flexibility, allowing people to participate in educational activities whenever and wherever it fits into their personal schedule.

This accessibility guarantees that learning is no longer limited to formal institutions or time periods, but rather becomes an integrated, seamless aspect of daily life. Furthermore, AI technologies personalize learning experiences by tailoring content to each learner's specific needs, pace, and preferences, which boosts engagement and effectiveness. AI supports continuous self-improvement by providing real-time feedback and leveraging vast digital resources, not only in personal development (such as learning new hobbies or knowledge), but also in professional growth, where upskilling and reskilling are critical to navigate changing job markets and career demands (Gabriel et al., 2022). Finally, AI serves as a powerful enabler, promoting a culture of lifelong learning and empowering humans to adapt, prosper, and grow in an increasingly complicated and dynamic world.

AI not only facilitates information access but also customizes the educational experience. AI-driven educational systems may customize instructional resources and methodologies to suit individual learning preferences and requirements. The system evaluates student data, identifies their learning patterns, and modifies the difficulty level or pertinent subjects (Holmes et al., 2019). This approach enhances the learning process, making it more efficient and customized to the capabilities of each participant, a feat frequently challenging to accomplish in conventional education, which tends to be more generalized.