

Chapter 3

Preparing Educators for the AI-Enhanced Classroom: Strategies and Training

Andi Asrifan

 <https://orcid.org/0000-0002-9934-6129>

Universitas Negeri Makassar, Indonesia

Maemuna Muhayyang

Universitas Negeri Makassar, Indonesia

Sadaruddin Sadaruddin

 <https://orcid.org/0000-0001-6890-1540>

Universitas Islam Makassar, Indonesia

Syamsuardi Saodi

 <https://orcid.org/0000-0001-8551-9300>

Universitas Negeri Makassar, Indonesia

Like Raskova Octaberliana

 <https://orcid.org/0009-0001-8829-5266>

UIN Maulana Malik Ibrahim, Indonesia

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ABSTRACT

AI is revolutionizing education with personalized learning, real-time feedback, and better instruction. To improve learning and efficiency, teachers are using AI-powered tutoring and grading technologies. Schools are unprepared to deploy AI tools for data privacy, algorithmic bias, and equitable access. Many teachers are unprepared for AI's technological and ethical problems in education. To assist teachers incorporate AI, this chapter covers professional development, hands-on training, and ethics. Our research shows that concentrated AI training can considerably increase instructors' AI tool use and responsibility. Results suggest that AI in education can create more customized and egalitarian learning environments with proper management and professional growth. These repercussions highlight the need for educators, governments, and institutions to collaborate to use AI's potential while preserving student privacy and promoting justice in education.

INTRODUCTION TO AI IN EDUCATION

Artificial intelligence (AI) is rapidly changing education, creating new opportunities and problems for educators and students (García-Martínez et al., 2023) (AalSaud, 2021) (Bittencourt et al., 2020). AI has shown promise in improving learning outcomes and personalizing training, sparking interest in its use in education. AI systems can scan massive amounts of data, provide real-time feedback, and adjust to student needs, making teaching more personalized and effective (Joshi et al., 2021) (Luan et al., 2020). Intelligent tutoring systems (ITS) use AI algorithms to coach students personally through tailored learning pathways. A major benefit of AI in the classroom is its capacity to accommodate different learning styles and speeds.

AI's promise in education is exciting, but it faces challenges (Luan et al., 2020). Schools, parents, and governments struggle to incorporate these tools safely, ethically, and effectively. As AI becomes more common in education, educators are leading the way. Teachers need technical abilities to employ AI tools and pedagogical knowledge to integrate them into

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