Integrating Emotional Intelligence Into Artificial Intelligence for 21st Century Learners:
Enhancing School Violence Prevention

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ABSTRACT

The convergence of EI and AI represents a groundbreaking approach to addressing contemporary educational challenges. This article explores the revolutionary integration of emotional intelligence into artificial intelligence, focusing on its practical applications in school violence prevention and preservice teacher training. Through comprehensive examination of theoretical foundations, empirical research, and real-world case studies, the authors demonstrate how this interdisciplinary approach transforms educational environments. The article addresses critical aspects including: implementation strategies for AI-enhanced EI programs in diverse educational settings, evidence-based protocols for violence prevention using emotional analytics, innovative approaches to preservice teacher training utilizing AI-driven simulations, ethical considerations and best practices for responsible technology integration, and cultural sensitivity requirements for global implementation.

INTRODUCTION

The 21st century has witnessed a profound transformation in education, driven by rapid technological advancements and evolving societal challenges. Modern classrooms face unprecedented complexities, including cyberbullying, digital addiction, mental health issues, and increasingly diverse student populations from various cultural, linguistic, and socio-economic backgrounds. These challenges demand innovative

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approaches that go beyond traditional educational paradigms to create safe, inclusive, and emotionally intelligent learning environments. Emotional intelligence (EI), first conceptualized by Salovey and Mayer (1990), emphasizes the ability to perceive, understand, and regulate emotions while effectively interacting with others. Additionally, these students demonstrate better peer relationships and reduced instances of aggressive behavior. Recent studies highlight EI's crucial role in fostering interpersonal understanding, with their longitudinal study showing that students with developed EI skills are less likely to engage in violent behavior and more likely to intervene positively in peer conflicts (Gukssa, 2023; Kakarla, 2025). Artificial intelligence (AI) has transformed educational practices through the development of systems capable of real-time emotional analysis. For instance, AI-powered tools enhance teaching effectiveness by personalizing learning experiences and adapting to individual student needs (Kaswan et al., 2024; Sumathy & Navamani, 2024). These advancements in AI technology have created new opportunities for enhancing emotional intelligence development in educational settings. For example, the integrated systems of convergence of EI and AI utilize machine learning algorithms to analyze patterns in student behavior, enabling early detection of emotional distress and potential conflicts (Vistorte et al. (2024) .

This chapter explores the revolutionary integration of emotional intelligence into artificial intelligence, focusing on its practical applications in school violence prevention and preservice teacher training. Through comprehensive examination of theoretical foundations, empirical research, and real-world case studies, we demonstrate how this interdisciplinary approach transforms educational environments. The chapter addresses critical aspects including: implementation strategies for AI-enhanced EI programs in diverse educational settings, evidence-based protocols for violence prevention using emotional analytics, innovative approaches to preservice teacher training utilizing AI-driven simulations, ethical considerations and best practices for responsible technology integration, and cultural sensitivity requirements for global implementation.

THEORETICAL FOUNDATIONS AND COMPONENTS OF EMOTIONAL INTELLIGENCE

Emotional intelligence (EI) represents a multifaceted construct encompassing the capacity to recognize, comprehend, and regulate emotions within oneself and others. Initially conceptualized by Salovey and Mayer (1990), EI has evolved into a cornerstone framework for understanding social–emotional functioning across educational and professional contexts. Goleman (2005) expanded the construct through his mixed model, emphasizing emotional competencies as critical predictors of personal and organizational success. The ability model of EI (Mayer et al., 2008; Mayer et al., 2016) delineates four core branches - emotional perception, facilitation, understanding, and regulation - each representing a distinct yet interdependent set of cognitive-affective processes (Mayer et al., 2016).

The intersection of artificial intelligence and emotional intelligence has emerged as a transformative research frontier in education. A 2025 study examining generative AI and EI development in higher education found that both faculty (52%) and students (54%) support integrating AI tools into online learning environments to develop emotional intelligence capabilities (Longhart & Rana, 2025). This convergence reflects a broader paradigm shift wherein AI-driven affective computing enables real-time emotion recognition, adaptive feedback, and personalized emotional support that complement traditional pedagogical approaches. Systematic reviews demonstrate that machine learning and facial recognition technologies show promising potential in enhancing pedagogical strategies and creating adaptive learning