Chapter 1
Artificial Intelligence and the Whole Child Approach:
Unleashing Social-Emotional Learning Potential in Primary Education

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ABSTRACT

This chapter delves into the transformative role of Artificial Intelligence (AI) in shaping students' Social Emotional Learning (SEL) in primary education, examining the benefits, challenges, and future implications. With AI-enhanced tools fostering students' interpersonal skills, emotional expression, and academic resilience, schools can create dynamic, inclusive learning environments that support the Whole Child approach. However, AI integration raises critical concerns around data privacy, psychological effects, potential increases in anxiety, and the erosion of critical thinking and problem-solving skills. Teachers, too, face barriers, including the lack

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of technical knowledge and training needed to implement AI effectively and confidently. This chapter discusses the role of educators in leveraging AI responsibility and provides key practical implications on how to prepare students for emotional and academic success in the 21st century.

INTRODUCTION

Artificial intelligence (AI) has become an integral part of the modern world, addressing the complexities of globalization and the demands of a knowledge-driven society. From the way we communicate with each other to how we learn, work, and behave, AI is reshaping the fabric of our daily activities. Virtual voice assistants such as Siri and Alexa, smart home systems, interactive toys, and educational applications are just a few examples of how AI is seamlessly woven into our routines. Its ability to process large amounts of data and make predictions is driving creativity and innovation across industries, transforming both individual and societal experiences.

From an educational perspective, AI has emerged as a solution, offering tools that personalize students' learning. For instance, AI can analyse patterns in students' behaviour and academic performance, providing insights that help educators tailor their teaching methods to students' needs. AI enhanced tools can flag students who may be struggling with specific concepts, enabling timely intervention (Luckin et al., 2016). These tools or software applications can make decisions about the learning path of an individual student and the content to choose, provide cognitive scaffolding to help and engage students (Luckin et al., 2016).

AI is transforming daily administrative tasks such as grading and data entry, creating spaces for educators to focus more on teaching and student interaction (Chassignol et al., 2018). Similarly, by evaluating data trends, such as test scores, attendance, and engagement levels, AI supports data-driven decision-making that fosters more effective learning environments. Another significant influence of AI in education lies in its ability to provide real-time feedback. AI-enhanced tools such as *Class Companion* can instantly evaluate student work and offer personalized and detailed feedback. Moreover, *Grammarly* provides real-time assistance in writing, helping students refine grammar and writing style as they compose texts. This immediately helps foster student engagement and reinforces learning by addressing errors as they occur (Zawacki-Richter et al., 2019). These advancements not only improve work efficiency consistently but also reduce the administrative burden on educators leading to more work happiness.

On a broader scale, AI plays a pivotal role in shaping the global economy and societal trends. It underpins advancements in fields such as healthcare, business, and education, making life more efficient and interconnected. As AI continues to evolve,