


Chapter 4


Integration of Social and Emotional Learning (SEL) With Artificial Intelligence Tools Through an LMS in Primary Education

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ABSTRACT

This pilot study investigates a Social and Emotional Learning (SEL) intervention in Greece with a Learning Management System (LMS) to analyze the impact of personal and classroom achievement goals on Self-Regulated Learning (SRL) strategies and SEL competencies in elementary students. Based on SRL and the CASEL framework, the intervention aims to enhance SRL practices, while learning social and emotional competencies in a caring digital community. The LMS, structured with LAMS, allows the visual ordering of learning activities. Fourteen students in 4th to 6th grades engaged in class-based AI-supported activities that encouraged self-control, collaboration, and goal setting. Pre-and post-intervention questionnaires evaluated achievement goals, SRL strategies, affect, and SEL competencies. Outcomes indicate increased self-regulation and self-management, confirming evidence on the beneficial impact of SEL on well-being and academics. This research

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emphasizes the promise of digital interventions in supporting both SRL and SEL in primary education.

INTRODUCTION

As societal dynamics have rapidly evolved, individuals have encountered significant ramifications across various domains of life, notably in the economic, social, and technological spheres (Pinchumphongsang & Chanchalor, 2020). Consequently, the competitive nature of life has intensified, presenting heightened challenges for individuals; it is imperative for them to adapt, as failure to do so may hinder their attainment of established objectives and their ability to thrive within this evolving context (Yong et al., 2023). Moreover, these rapid transformations have exacerbated the challenges faced by students globally, adversely affecting their mental and emotional well-being as well as their behavioral conduct (Woods & Pooley, 2015).

The developmental phase from ages 6 to 12 is vital for acquiring skills essential for psychological well-being, as it significantly influences the maturation of cerebral structures crucial for cognitive, emotional, and social growth (Castillo-Gualda et al., 2023). Numerous universal school-based social and emotional learning (SEL) initiatives implemented across the United States and Europe have demonstrated efficacy in enhancing social competencies while simultaneously mitigating emotional distress and behavioral issues (Li et al., 2022). SEL initiatives are progressively being adopted in primary educational institutions to promote the cultivation of social competencies, decision-making abilities, empathic understanding, and emotional regulation. These initiatives aim to mitigate adverse outcomes such as academic failure, behavioral issues, and potential substance misuse, while nurturing essential skills in children exhibiting diverse behavioral, social, and learning needs, including those from economically disadvantaged backgrounds (Calhoun et al., 2020).

The integration of SEL into educational curricula is regarded as a highly effective pedagogical strategy, as schools represent environments where students spend substantial periods of time and develop familiarity. This enables educational institutions to design learning opportunities that impart new knowledge and skills while simultaneously fostering students' physical and mental well-being in alignment with their surroundings (Carroll et al., 2020). Furthermore, the integration of artificial intelligence (AI) into educational settings holds considerable potential to enhance the implementation of SEL by providing tailored learning experiences, real-time feedback, and dynamic interventions that meet the unique needs of each student (Licardo & Lipovec, 2024).

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