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The Dynamics of Self-Regulated Learning and Emotional Regulation in the Educational Path: A Theoretical Review

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Abstract

Self-regulated learning and emotional regulation are considered essential competencies for students' academic success and well-being. This article presents a theoretical review exploring the interdependence between both constructs, highlighting how they mutually influence motivation, task engagement, resilience, and emotional adjustment throughout the educational journey. Following an in-depth conceptual analysis, pedagogical interventions that integrate SRL and ER are described, including practices such as mindfulness, cognitive reappraisal, metacognitive strategies, formative feedback, and social and emotional learning programs. These theoretically grounded and practice-oriented interventions have proven effective in fostering more self-regulated, positive, and emotionally healthy learning environments. The article also discusses pedagogical implications and suggests directions for future research, with emphasis on individual and contextual factors, as well as the potential of educational technologies in supporting the development of these competencies. The intentional inclusion of SRL and ER in pedagogical practices thus proves essential for a more effective, equitable, and responsive education aligned with the demands of the 21st century.

Keywords

Emotional Regulation, Self-Regulated Learning, Academic Success, Pedagogical Interventions, Socio-Emotional Learning, Student Well-Being

1. Introduction

In recent years, there has been a growing concern among teachers and educators regarding students' attempts to manage their own learning process, as well as their

efforts to achieve success through activities that directly impact the initiation, direction, and persistence of these efforts. Self-regulated learning (SRL) emerges as a crucial developmental process, anticipating the outcomes of students' educational trajectories over time and across various fields of knowledge (Lourenço & Paiva, 2024). SRL involves students' ability to monitor and control their behavior, emotions, and thoughts during the learning process, being a determining factor in their academic success and preparation for future challenges (Schunk & Zimmerman, 2023).

SRL skills, however, do not develop in isolation but are influenced by a set of internal and external factors, such as students' maturity, the school environment, and interactions with teachers. In particular, emotional regulation (ER) plays a central role in this process, as the ability to manage one's own emotions has a direct impact on the effectiveness of SRL (Gross, 2015). The interaction between ER and SRL has been recognized as an essential aspect of academic success, especially in adolescents, who are in a period of intense emotional development while also being challenged to navigate the complexity of the learning process (McRae & Gross, 2020; Schunk & Zimmerman, 2023).

The literature shows that ER facilitates SRL, as students who can control and modulate their emotions tend to demonstrate greater persistence in tasks, higher motivation, and better academic performance (Gross, 2015; Zimmerman, 2008). Managing emotions not only influences the ability to focus attention on tasks and maintain self-control but also enables students to handle frustrations and challenges in a more adaptive way (Zeidner, 2014).

Authors such as Schunk and Zimmerman (2023) highlight that by understanding how ER and SRL interact, educators can better support students, helping them develop skills to manage the emotional aspects of the learning process and integrate these abilities into their educational journey. The development of emotional and self-regulation skills from the early years of schooling has significant implications not only for academic performance but also for students' emotional and psychological well-being (Cavalcanti et al., 2023).

Therefore, the integration of ER with SRL is not just a matter of learning efficiency but a fundamental necessity for the overall development of students. Educational support that considers these two dimensions enables students to develop self-control and self-efficacy skills, key aspects for successful learning and their preparation for adulthood and future challenges (Koole & Aldao, 2016).

In summary, the relationship between ER and SRL is essential not only for optimizing academic performance but also for ensuring that students are prepared to face the complexities of the modern world with a balanced and resilient approach.

2. The Constructs under Study

2.1. Self-Regulated Learning

Recently, a significant decline in proficiency in reading, mathematics, and science

has highlighted a concerning global issue: the lack of student engagement and motivation, as indicated in the latest report from the Programme for International Student Assessment (PISA; OCDE, 2023). These deficits are not limited to the academic context but also have significant social repercussions, affecting both individual and collective development (Lourenço & Paiva, 2024).

In a scenario of rapid changes and constant advancements, the education system must go beyond merely transmitting knowledge, positioning itself as a space that promotes adaptation and resilience (Gianfelice et al., 2024). Students' ability to keep up with the evolution of various fields of knowledge has become an imperative necessity, serving as a key factor in facing the challenges of an ever-changing world.

Thus, understanding and improving academic performance is a central priority, not only to raise educational standards but also to ensure a more balanced and sustainable future for the next generations. By analyzing academic performance from a broad and integrated perspective, it becomes possible to understand the interaction of motivational and cognitive variables in the learning process (Zimmerman, 2008).

When students take an active role in their educational journey, they are able to mitigate the lack of guidance and the limited conceptions about learning that hinder their metacognitive strategies, self-efficacy beliefs, and study effort, reflecting in their academic performance (Lourenço & Nogueira, 2014).

To address the issue of low academic performance, a coordinated effort is needed that integrates metacognitive, motivational, and behavioral strategies within the school environment. SRL thus emerges as a key concept, as it describes the processes through which individuals direct and control their cognitions, emotions, and behaviors to achieve academic goals (Efklides et al., 2018; Lourenço & Paiva, 2025; Muis et al., 2016; Zimmerman & Schunk, 2011).

The theoretical model of Zimmerman & Schunk (2011) suggests that SRL and ER are interconnected, as underlying processes such as executive functions and metacognition play a crucial role in adapting to the environment and managing academic performance. Furthermore, research shows that SRL is an evolving process, becoming more coordinated over time and having a predictive effect on school outcomes, from childhood through to higher education (Hoyle & Dent, 2018; Usher & Schunk, 2018; Blair & Razza, 2007; Zachariou & Whitebread, 2019).

Student autonomy plays a central role in SRL, as it is necessary to promote strategies that encourage active and proactive control of learning. SRL involves the ability to adjust cognition, motivation, and behavior in order to achieve educational goals, allowing students to monitor the effectiveness of their strategies and develop essential skills for high academic performance (Schunk & Zimmerman, 2023; Alliprandini et al., 2023).

Students who develop self-regulation skills demonstrate superior academic performance, as they use cognitive and metacognitive processes before, during, and after the learning process (Arcoverde et al., 2022). These students monitor their

cognition, motivation, learning environment, and behavior, which allows them to adopt a deeper and more meaningful approach to school tasks (Silva et al., 2019; Figueira & Duarte, 2019).

Studies indicate that initial self-regulation skills, often assessed through executive functioning, are associated with greater effortful control, better interpersonal relationships, and greater adaptation to the school context (Blankson et al., 2017; Diamond, 2016; Rimm-Kaufman et al., 2009). Furthermore, students who implement SRL strategies, such as goal-setting and seeking information, tend to achieve better academic results (Costa et al., 2022; Pereira, 2023).

To enhance academic success, it is essential to use approaches that combine metacognitive aspects (goal setting and knowledge activation), motivational aspects (self-efficacy perception and task value), and behavioral aspects (time management and seeking help). These strategies prove effective in promoting active and SRL (Valle & Connor, 2019).

Although the relationship between study methods and academic performance is not always linear, students with higher cognitive competence demonstrate a superior ability for self-regulation, using more effective strategies to discipline behavior and manage study time (Lourenço & Paiva, 2016). As a result, these students become more proficient and achieve better outcomes.

Research in recent decades has highlighted SRL as an essential construct for learning and academic success. Early studies focused on time monitoring and resource management (Zimmerman, 2023), later evolving to understand the role of motivation and self-regulation strategies in academic performance (Schunk & Zimmerman, 2008).

The application of this framework in educational contexts allows for a better understanding of individual differences in academic performance and reinforces the importance of SRL as a determining factor for academic excellence (Lourenço & Paiva, 2017). Thus, future studies should continue to explore the relationship between motivational variables and SRL processes in order to foster more effective teaching tailored to students' needs (Wolters & Brady, 2021).

2.2. Emotional Regulation

The increasingly higher academic demands and growing competitiveness in the educational environment trigger a diverse set of emotions in students, which can significantly influence their performance and academic success (Cavalcanti et al., 2023; Chaves, 2025). The need to meet high standards, meet tight deadlines, and face constant evaluations can trigger both positive emotions, such as enthusiasm and satisfaction, and negative emotions, including anxiety, frustration, and fear of failure. These emotions play a central role in students' engagement in academic activities, affecting their motivation, persistence, and the strategies they use to learn.

Despite this, much of the research has focused on the study of isolated emotions and specific contexts, such as anxiety in evaluation situations, neglecting other

emotions equally relevant to learning, such as enthusiasm, boredom, or hope (Zeidner, 2014). Although the focus on academic anxiety is understandable, given its frequency and negative impacts on performance, this approach limits a broader view of the influence of a wide range of emotions on the learning experience.

In recent years, it has become clear that emotions cannot be dissociated from learning processes. Recent studies show that academic emotions affect not only essential cognitive processes, such as attention and memory, but also self-regulation ability, social interaction, and adaptation to the educational context (McRae & Gross, 2020; Postareff et al., 2017). Thus, understanding the impact of emotions on learning goes beyond immediate academic outcomes, being also essential for psychological well-being, intrinsic motivation, and the development of socioemotional skills necessary for long-term success.

In addition to influencing academic performance, emotions play a central role in the construction and maintenance of interpersonal relationships (Chaves, 2025). They are an essential component of close relationships, both in their positive and negative impact (Bowlby, 1982; Mikulincer & Shaver, 2005). Recent literature highlights the importance of interpersonal closeness, particularly in the quality of the student-teacher relationship, and its impact on students' academic emotions (Goetz et al., 2021). These findings broaden the scope of research on learning and educational environments, highlighting how the quality of relationships can influence the emotional experience in the academic context.

Following this line of research, contemporary studies demonstrate the relationship between attachment styles and how individuals establish interpersonal connections, as well as their influence on motivation and self-regulation (Blalock et al., 2015; Orehek et al., 2017). Different attachment styles are associated with distinct forms of ER, determining how students cope with academic challenges (Fraley et al., 2006). Therefore, understanding the mechanisms of ER becomes essential to understanding its relationship with learning and academic performance.

ER refers to a set of biological, behavioral, and social processes that allow for the modulation, maintenance, or inhibition of emotional experiences in terms of intensity, valence, and duration. This mechanism contributes to adaptation to the demands of the environment and the pursuit of individual goals in a dynamic context (McRae & Gross, 2020). In the academic context, it enables students to mobilize metacognition, motivation, and strategic action in managing their emotions, facilitating learning and adaptation to school demands.

Metacognition in ER translates to the ability to identify and describe emotions, as well as to select appropriate strategies to modulate them throughout the learning process (Koole & Aldao, 2016). Motivation for ER is manifested in students' efforts to adjust or maintain emotional states, such as curiosity, calmness, and satisfaction, that support their educational goals (Hutchinson et al., 2021). Strategic action, in turn, involves the application of different ER strategies to maximize academic performance (Hutchinson, 2013; Perry et al., 2018).

The literature in Developmental Psychology and Education emphasizes that ER

is an essential factor for SRL, having a direct impact on academic outcomes (Cole et al., 2018; Strain & D'Mello, 2015). Students with effective ER skills demonstrate greater academic well-being, actively engage in educational activities, and achieve superior performance (Di Leo et al., 2019; Richards & Gross, 2000).

Although there is still no absolute consensus in the literature regarding the definition of ER, the most widely accepted model is based on the studies of James Gross, a key reference in experimental research in the field (Gross, 2013). According to this model, ER can be understood as the ability to identify which emotions are being experienced, when they occur, and how they are expressed. ER is also guided by individual goals in the surrounding emotional context, serving as a reference to assess the current emotional state and adjust future behaviors (Kring & Sloan, 2009).

According to Gross's (Gross, 2013) modal model of emotions, ER strategies can be classified into three main categories: situational (situation selection and modification), cognitive (reappraisal and attentional engagement), and behavioral (response modulation), encompassing different approaches (Moodie et al., 2020). Situation selection involves making decisions to avoid contexts that trigger negative emotions or favor situations that promote positive emotions. Webb et al. (2018) highlight that this strategy can contribute to well-being and reduce the experience of negative emotions.

Situation modification refers to altering external aspects of the environment in order to reduce its emotional impact. Although similar to situation selection, this strategy focuses on transforming elements of the emotional context (Gross, 2013).

As for attentional focus, it includes strategies like distraction, which redirect attention to neutral or positive stimuli with the goal of minimizing negative emotions. However, excessive use of this strategy without flexibility can have adverse consequences (Boelens et al., 2022).

Cognitive reappraisal occurs before the full activation of the emotional response and aims to modify the interpretation of a situation to reduce its emotional impact. This strategy is particularly effective when the emotional response is not yet intense (Moodie et al., 2020) and in contexts of uncontrollable stress (Troy et al., 2013).

Finally, emotional response modulation aims to influence the intensity and duration of the emotional response through internal or external strategies. This approach can minimize the effects of emotion on the experiential, behavioral, and physiological levels (Cutuli, 2014). Furthermore, the belief that emotions can be modified is a predictive factor for success in ER (Gross, 2015).

Thus, ER is a multidimensional construct with relevant implications in both clinical and academic contexts. Therefore, future research should continue to explore which strategies are most effective for students' ER and under what circumstances these are most beneficial. Deepening the understanding of the interaction between ER and learning processes is essential to promote a more balanced academic environment conducive to educational success.

3. The Interaction between Self-Regulated Learning and Emotional Regulation

SRL and ER are interconnected processes that play a fundamental role in academic success. The interaction between these two constructs can be seen as a dynamic cycle, where emotion management directly influences learning regulation and, in turn, SRL contributes to greater emotional competence.

In the educational context, students' ability to regulate their emotions impacts their motivation, persistence, and the use of effective metacognitive strategies, favoring academic performance. In parallel, SRL, with a focus on goal setting, progress monitoring, and adaptation of study strategies, helps manage academic stress and improve emotional resilience. The integration of these two processes strengthens students' adaptation to academic challenges and their socioemotional skills (Blair & Razza, 2007; Efklides et al., 2018; Gross, 2015; Hoyle & Dent, 2018; Muis et al., 2016).

Students who develop ER skills are more persistent in challenging tasks and adjust their behavior in an adaptive way, which facilitates the adoption of more effective SRL strategies. Similarly, students with strong SRL skills have an easier time dealing with negative emotions such as anxiety and frustration, using coping strategies that maintain motivation and focus, even in adverse situations (Zeidner, 2014; Lourenço & Nogueira, 2014; Silva et al., 2019).

This cycle of interdependence between SRL and ER suggests that teaching practices that promote both competencies have a profound impact on students' academic well-being, in addition to preparing them to face the demands of the modern world in a balanced and autonomous way. Thus, it is essential that education considers not only the development of cognitive skills but also emotional management, promoting a more integrated and adaptive learning process (Zimmerman & Schunk, 2011; Wolters & Brady, 2021).

It is also important to underline that this interaction is mediated by individual differences in students' emotional and cognitive profiles. Factors such as temperament, emotional maturity, executive functioning, and motivational style can significantly influence how each student develops and integrates SRL and ER strategies. Considering these profiles is essential to ensure more differentiated and effective pedagogical interventions, fostering inclusive learning that is better adapted to students' real needs.

4. Pedagogical Interventions That Integrate Self-Regulated Learning and Emotional Regulation

The integration of SRL and ER within pedagogical practices has gained increasing attention as a promising approach to enhance both academic performance and students' psychological well-being. This section presents a selection of evidence-based interventions that illustrate how educational settings can intentionally foster SRL and ER in a complementary and holistic manner. These strategies—ranging from mindfulness and cognitive reappraisal to metacognitive training, form-

ative feedback, and socio-emotional learning (SEL) programs—demonstrate the potential of targeted pedagogical approaches to support students in becoming more autonomous, emotionally balanced, and resilient learners.

4.1. Mindfulness and Relaxation Techniques

Mindfulness is a mental practice that involves the intentional development of attention and awareness, innate human qualities that are often overlooked in the current context of multitasking. More than a set of techniques, mindfulness is a systematic training of the mind aimed at cultivating full attention—a state of awareness focused on the present moment, deliberately and without judgment (Kabat-Zinn, 2017).

This practice promotes the observation of one's own thoughts, emotions, and sensations with acceptance, even when unpleasant, avoiding automatic reactions. The two central pillars of mindfulness are self-regulation of attention and openness to experience, allowing the individual to remain present and aware in an intentional and welcoming way (Cebolla & Demarzo, 2016).

Mindfulness can be applied in the classroom as an effective pedagogical intervention to promote both SRL and emotional regulation, contributing to a more focused, calm, and reflective learning environment. The benefits observed in an educational context are evident in the increase in attention and academic performance, the reduction of anxiety and school stress, the improvement of empathy, classroom climate, and interpersonal relationships, and a greater ability to cope with frustration and self-regulate behavior (Carvalho & Anastácio, 2023; Wilson & D'Almeida, 2020).

4.2. Cognitive Reappraisal

Cognitive reappraisal is a form of cognitive modification that involves reinterpreting a situation with the goal of altering the associated emotional response. This process involves cognitively transforming the perception of negative stimuli, giving them a new, less emotionally charged meaning (Fortes et al., 2022).

As an emotional regulation strategy, cognitive reappraisal has been shown to be an important protective factor in the relationship between negative affect and psychological well-being. Individuals who frequently use this strategy tend to share their emotions more and develop closer and more satisfying interpersonal relationships (McRae & Gross, 2020).

From a clinical perspective, the consistent use of adaptive strategies like cognitive reappraisal often distinguishes healthy individuals from those with mood disorders. Studies indicate that clinical groups with depression or anxiety exhibit lower use of this strategy (Aldao et al., 2015). For this reason, cognitive therapies often focus on training in cognitive reappraisal, with its positive effects on reducing depressive and anxious symptoms being well-documented (Gross, 2015).

In the educational context, cognitive reappraisal can be taught to students through different pedagogical approaches:

- Teacher modelling, where the teacher verbalizes processes of reinterpreting difficult situations;
- Role-playing or dramatization activities, which encourage students to explore different perspectives on challenging events;
- Structured written reflection, which guides students in analyzing their emotional reactions and seeking alternative interpretations;
- Emotional reinterpretation charts, with ready-made phrases that help replace automatic negative thoughts with more adaptive perspectives.

These practices can be integrated across the school day, contributing to the development of socioemotional skills that are fundamental to well-being and learning.

4.3. Metacognition

Metacognition, understood as the awareness and regulation of one's own thinking processes, has been widely studied in the field of education due to its central role in SRL (Zimmerman & Schunk, 2011). According to Proust (2013), although there are divergences between scientific fields regarding the components, contexts of application, and methods, there is consensus on the definition of metacognition as knowledge about knowledge and as a mechanism for regulating cognition, acting as an executive and self-regulatory control, especially in educational contexts.

Recent studies have shown the benefits of integrating metacognition into teaching and learning processes, demonstrating significant improvements in student performance and the development of cognitive and self-regulatory skills (Avargil et al., 2018; Valenzuela, 2019). In this sense, metacognition provides a solid theoretical foundation for the implementation of intentional pedagogical interventions, allowing for the construction of metacognitive maps that help students develop a deeper awareness of their mental processes, with an emphasis on reflection.

In the classroom context, several practical strategies can be adopted to promote metacognition, including:

- Reflective journals: students record what they have learned, the challenges they faced, and the strategies they used to overcome them;
- Guided self-questioning: teachers teach students to ask questions like "Did I understand this?" or "What other strategy can I use?" while performing tasks;
- Checklists: students use lists to plan, monitor, and review the steps involved in school activities;
- Metacognitive modeling: the teacher verbalizes their own reasoning when solving a problem, demonstrating how to monitor thinking;
- Explaining pairs: students explain to each other the procedures used in a task, promoting the explicitness and regulation of thought.

These strategies foster not only content understanding but also the development of autonomy and self-regulation in learning.

4.4. Positive Feedback

In the contemporary view of formative assessment, a conception that strongly val-

ues the processes of pedagogical interaction and communication between those involved in the educational action stands out (Cristofari & Irala, 2022). Within this approach, feedback plays a central role, being considered an indispensable component for redirecting the educational action both by the teacher and the student.

According to Arinda and Sadikin (2021), feedback can be understood as an essential practice of formative assessment, with the goal of reducing the gap between current and desired performance. When used in a dialogical way, feedback significantly contributes to the quality of interactions between teachers and students. In this regard, Pitt and Norton (2017) argue that questions formulated by teacher's function as clarifying triggers, promoting reflection and the construction of knowledge.

Moreover, Ion et al. (2019) observed that students perceive feedback as an instrument that favors the development of their communication skills. Complementing this perspective, Haughney et al. (2020) emphasize that feedback should be positive, specific, timely, and capable of encouraging active student engagement in the learning process.

Finally, Irala and Mena (2021) reinforce that transformations in assessment practices are not only necessary but inevitable, especially when it is recognized that the learning process is as or more important than the results achieved.

Formative feedback, by focusing on the process and not just the result, helps students improve performance and regulate their own emotions. To do so, the teacher can use clear, specific, and constructive feedback, promote self-assessment, encourage peer feedback, and ask questions that stimulate reflection. In addition, brief individual dialogues that acknowledge students' emotions strengthen the bond and increase engagement.

4.5. Social-Emotional Learning (SEL) Programs

Social-emotional learning is an essential educational process for human development that aims to promote social and emotional skills in children, youth, and adults (Aygün & Taşkın, 2022). It involves integrated curricular and relational approaches in the school context to foster personal, academic, and social growth (Cefai et al., 2021). The competencies developed include emotional management, effective communication, empathy, responsible decision-making, and the building of positive and ethical interpersonal relationships (Jagers et al., 2021).

Intervention programs for the development of social-emotional skills have gained prominence due to their proven relevance in promoting health, reducing risk factors, and strengthening protective factors in the educational context (Coelho et al., 2016). According to CASEL (2012), such programs should start in preschool and extend through to secondary education, integrating: explicit instruction with structured plans and concrete content; integration into daily pedagogical practice; involvement of the entire school community; and the use of informal curriculum. This SEL model structures social-emotional competencies into five

key domains: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Walton et al., 2023).

Various intervention programs have been developed internationally to promote social-emotional competencies, focusing on objectives such as mindfulness, social support, resilience, and mental health. Among the most recognized are PATHS, FRIENDS, and Second Step, widely implemented in different countries (Cefai et al., 2021).

The RESCUR (Resilience Curriculum for Schools in Europe) targets children aged 4 to 12 and focuses on promoting resilience through six themes: healthy relationships, effective communication, growth mindset, self-determination, strengths, and overcoming challenges (Cefai et al., 2022).

The PROMEHS program aims to strengthen school mental health through socio-emotional education and risk behavior prevention (Cefai et al., 2021). The UPRIGHT program targets adolescents and is based on four pillars: coping, social-emotional learning, self-efficacy, and mindfulness (Miragall et al., 2020).

Other initiatives include SEEVAL, focused on building inclusive schools based on values (Sonnleitner, 2021), and Zippy Friends, aimed at children aged 5 to 7, which teaches strategies for coping with everyday difficulties (Sloan et al., 2017).

In Australia, programs such as KidsMatter Primary and MindMatters promote mental health and school well-being with the involvement of the entire educational community, while in the United Kingdom, the SEAL program offers a comprehensive curriculum focused on the social-emotional development of children and youth (Goldberg et al., 2019). In addition to these, several other programs such as 4Rs, MindUp, RULER, Positive Action, Making Choices, You Can Do It! Education, Responsive Classroom, I Can Problem-Solve, Head Start, and Strong Start show consistent evidence of a positive impact on children's well-being and academic performance (Aygün & Taşkın, 2022; Jones et al., 2019).

Overall, SEL interventions benefit all students, but show more significant effects in children with greater vulnerabilities and needs, improving both behaviors and academic outcomes (Jones et al., 2019).

4.6. Critical Analysis of Pedagogical Interventions

The interventions analyzed reflect a significant evolution in the conception of teaching and learning, recognizing that academic success depends not only on cognitive mastery but also on emotional balance and the capacity for self-regulation. Interventions such as mindfulness and cognitive reappraisal work on the emotional and behavioral level; metacognition and positive feedback strengthen cognitive self-regulation; while SEL programs integrate these dimensions in a holistic and systemic perspective.

In terms of impact on learning, all contribute to improving academic performance, either through increased attention and motivation or by promoting autonomy and effective study strategies. Regarding emotional well-being, they help reduce symptoms of anxiety, stress, and demotivation, creating favorable condi-

tions for the personal and social development of students.

However, the effectiveness of these interventions depends on contextual factors such as teacher training, school involvement, student profiles, and the continuity of practices. Therefore, the integration of these approaches should be done intentionally, coordinated, and sustainably, with institutional and political-pedagogical support.

5. Conclusions

The relationship between SRL and ER proves to be essential for understanding students' academic performance and well-being. Previous studies (Schunk & Zimmerman, 2023; Zimmerman, 2013; Zimmerman & Schunk, 2011) demonstrate that students' ability to manage their emotions directly influences motivation, persistence, and the effectiveness of self-regulation strategies used throughout their educational journey. Thus, students who develop more effective ER tend to show greater engagement in school tasks, greater resilience in the face of academic challenges, and better emotional adjustment throughout their educational path.

In addition to the impact on academic performance, ER and SRL play a fundamental role in students' emotional and psychological well-being. The inability to manage emotions can contribute to high levels of anxiety, demotivation, and difficulties in adapting to the school environment (Gross, 2015; Zeidner, 2014), highlighting the importance of pedagogical strategies that simultaneously promote ER and SRL. Moreover, the pedagogical practices described in this work, such as mindfulness, cognitive reappraisal, and socioemotional education programs, present themselves as promising approaches to simultaneously foster SRL and ER in the school context.

Given the relevance of these two constructs, directions for future research are proposed to deepen their study. Firstly, it would be relevant to explore individual differences in students' emotional and cognitive profiles by analyzing factors such as age, temperament, executive functioning, and motivational style, in order to understand how these elements, moderate the interaction between SRL and ER. First, it would be relevant to analyze individual differences in how students develop SRL and ER over time, identifying factors such as age, gender, and motivational profile that may influence this relationship. Second, the implementation of specific interventions in the school context, such as ER training programs and metacognitive strategies, could provide empirical evidence on the impact of these skills on academic success.

Despite the breadth of the review, a systematic and detailed assessment of the methodological quality of the studies analyzed was not carried out. The diversity of methods used in the cited research may lead to conclusions with varying levels of robustness, and some evidence may lack consistency or be contradictory. This point highlights the need for future research to examine the methodological quality of studies on SRL and ER more deeply in order to strengthen the empirical foundation and provide a clearer understanding of the effectiveness of pedagogi-

cal interventions in this context.

Additionally, future research may explore the role of contextual factors, such as family support and the school environment, in the interaction between ER and SRL. Understanding how different contexts influence the development of these skills could contribute to educational practices that are more tailored to students' needs. Finally, the growing use of technology in education raises questions about its potential in promoting SRL and ER, making it relevant to investigate how digital tools can help students manage their emotions and optimize their study strategies.

In summary, deepening the interdependence between SRL and ER will not only optimize academic performance but also promote a more balanced and resilient development of students. Including these constructs in future research and pedagogical practices will contribute to a more effective educational environment that is adapted to the demands of the 21st century.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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