

Research Digest

September 2025



Introducing the Research Digest

This Montessori Research Digest is the first in a quarterly series produced by the American Montessori Society to support educators, school leaders, and advocates in understanding current research relevant to Montessori education in the United States and globally.

Each edition of the Digest will explore a focused, timely topic in Montessori education—ranging from child development and learning outcomes to educational equity and classroom practices. The central aim of the series is to connect rigorous research findings with practical implications for Montessori teachers, guides, and administrators.

The Montessori Research Digest serves as a bridge between research and practice, highlighting what the evidence means for daily classroom work and long-term educational planning. Across future editions, a wide variety of issues will be addressed to reflect the diverse contexts of Montessori education in practice—from early childhood through adolescence, and in both public and private school settings.

Through this series, AMS affirms its commitment to evidence-informed practice, continuous improvement, and the advancement of high-quality Montessori education for all children.

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The Benefits of SEL in Montessori Education

This edition of the Montessori Research Digest highlights key research studies demonstrating the powerful role of Social and Emotional Learning (SEL) in supporting academic success, personal development, and classroom harmony—core aims of Montessori education.

Research shows that SEL approaches enhance students' ability to manage emotions, build positive relationships, and engage meaningfully with their learning environments. These outcomes align closely with Montessori principles, which emphasize independence, self-regulation, empathy, and respect for others.

In Montessori classrooms—where mixed-age groupings, freedom within limits, and purposeful work are central—SEL is not a separate curriculum but a natural outcome of the prepared environment and the guide's intentional practice. In this digest, we highlight compelling examples that showcase the significant benefits of integrating Social and Emotional Learning (SEL) into classroom environments at every developmental stage. This integration not only enriches educational experiences but also supports the Montessori method's holistic approach to nurturing the whole child.



Meet the Team

Montessori Learning, Research, and Innovation

The American Montessori Society prepares this series of electronic research digests.

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The Digest is available by email to all AMS member educators in PDF format.



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The Impact of Montessori Education on Emotional Intelligence: A Summary of Findings

A recent study titled "The Effect of Montessori and Traditional Methods of Education on Emotional Intelligence of Children" by Dhiksha and Shivakumara (2017) explores how different educational approaches impact the emotional intelligence (EI) of students aged 12–16. It draws on data from 1,082 students in India—549 from Montessori schools and 533 from traditional schools. Emotional intelligence (EI) was measured using the Bar-On Emotional Quotient Inventory, which assesses ten critical components of EI, including self-regard, empathy, impulse control, problem solving, emotional awareness, and flexibility. The findings reveal a striking difference in favor of the Montessori method across all EI dimensions, highlighting the significance of the educational environment in shaping emotional competencies.

The study's results demonstrate that Montessori students significantly outperformed their traditional peers in every measured aspect of emotional intelligence. For instance, in overall emotional intelligence, Montessori students scored an average of 57.69 compared to 42.08 for traditional students, a difference that was statistically significant ($p < .001$).

Montessori educators are uniquely positioned to nurture emotionally intelligent, empathetic, and resilient children.

The Montessori group also excelled in specific traits such as empathy, self-regard, and flexibility—skills that are fundamental to positive social interaction and emotional regulation. These findings support the view that Montessori's child-centered, experiential approach fosters a deeper emotional development than the conventional didactic model.

The study highlights how Montessori students exhibit higher levels of self-regard, indicating a strong sense of self-worth and confidence. They also show better impulse control and stress tolerance, suggesting that they are better equipped to manage emotions and stay composed in challenging situations. Furthermore, their elevated empathy scores imply a greater ability to understand and relate to the feelings of others, which is essential for healthy interpersonal relationships.

Interestingly, the study also explored the role of gender in emotional intelligence outcomes. While Montessori girls scored slightly higher than boys in self-regard and empathy, overall gender differences were not pronounced or consistent. This suggests that while individual differences exist, the method of education plays a more critical role in shaping emotional intelligence than gender alone.

In conclusion, the findings affirm that Montessori education provides a strong foundation for the development of emotional intelligence. By supporting independence, emotional awareness, and respectful social interaction, the Montessori method not only prepares children academically but also nurtures their emotional well-being. As educators and parents continue to recognize the importance of emotional intelligence for lifelong success, Montessori education stands out as a powerful approach for cultivating these essential human skills.



The Research in Focus

- Encourage social connections through mixed-age collaboration, group projects, and peaceful conflict resolution
- Give students meaningful choices, support their autonomy, and trust them to manage their time and emotions.
- Use materials and activities that require students to think critically and independently resolve challenges.
- Model and teach respectful communication. Invite students to share their ideas and listen actively in return.
- Maintain a prepared environment that minimizes stress, allows freedom within structure, and supports self-regulation.
- Prioritize emotional growth as much as academic learning. Recognize emotions as part of the child's holistic development.

Dhiksha, J., & Shivakumara, K. (2017). The effects of Montessori and traditional methods of education on the emotional intelligence of children. *European Journal of Education Studies*, 3(4)

Making the Implicit Explicit: SEL as a Mirror for Early Childhood Practice

In “Social and Emotional Learning and Early Childhood Education: Redundant Terms?” Moreno, Nagasawa, and Schwartz (2018) explore the complex interplay between Early Childhood Education (ECE) and the contemporary Social and Emotional Learning (SEL) movement. The authors argue that, while ECE has long embodied SEL principles through its whole-child approach, recent developments in educational policy have prompted a reevaluation of whether SEL should be explicitly adopted within ECE frameworks. Using Martha Minow’s “dilemma of difference” as a theoretical lens, the authors question whether highlighting SEL as a distinct domain helps or hinders efforts toward equity, inclusion, and holistic child development.

The article outlines ECE’s deep historical roots in social-emotional education, dating back to Enlightenment philosophers and early childhood pioneers like Dewey, Montessori, and Froebel. These figures emphasized morality, emotional resilience, and social development as foundational to early learning. In contrast, the modern SEL movement emerged in response to systemic inequities in U.S. education, particularly those rooted in race and socioeconomic status. Despite these different origins, both ECE and SEL converge around the democratic ideal of educating for compassionate citizenship and moral agency (Dewey, 2004; Comer, 1988). Still, authors caution that modularizing SEL risks reducing it to scripted instruction, potentially undermining the integrated practices long valued in ECE.

A key finding is that while exemplary ECE models such as those of Vivian Paley, Reggio Emilia, Montessori, and Waldorf education successfully embed SEL into everyday interactions, this integration is not the norm. Many early childhood programs, especially those subject to economic and political pressures, struggle to implement these ideals fully. As the authors note, high-quality SEL practices are often inconsistently realized, particularly in under-resourced settings (Bishop-Josef & Zigler, 2011). Thus, adding explicit SEL curricula may not be redundant but rather necessary to bridge the gap between philosophical intention and classroom reality, especially in light of growing evidence that early SEL skills predict long-term success (Jones et al., 2015; Moffitt et al., 2011).

The authors also review empirical research on structured SEL programs in preschool contexts. Although many studies report positive effects on social behavior, the benefits are often modest and highly context dependent. Programs such as PATHS and Incredible Years demonstrate particular effectiveness when coupled with teacher support systems and embedded pedagogies (Bierman & Motamedi, 2015). However, much of this evidence is drawn from comparisons with average or below-average ECE settings, rather than with idealized models where SEL is already interwoven into the curriculum. This suggests that the distinction between “modular” and “embedded” SEL may be more pragmatic than philosophical.

In conclusion, Moreno et al. (2018) recommend a cautious yet proactive alignment between SEL and ECE. While an ideal ECE model might theoretically render separate SEL programs unnecessary, the realities of implementation, teacher training, and systemic inequality complicate this picture. Explicit SEL frameworks can serve as valuable tools for public accountability and democratic reflection—especially when informed by the voices of educators and families. Rather than resisting the SEL movement out of concern for “schoolification,” ECE professionals are encouraged to lead it, ensuring that the principles of equity, kindness, and agency remain at the heart of early learning environments.



Insight Snapshot

- High-quality Early Childhood Education (ECE) and SEL are philosophically aligned but not always practically realized.
- Making SEL explicit in Early Childhood Education can strengthen democratic values and promote transparency by inviting shared reflection on the goals and methods of teaching.
- Exemplary models (Reggio, Montessori, Waldorf) show embedded SEL works
- Explicit SEL frameworks support teachers & accountability; however, scripted SEL may weaken authentic ECE practices

Moreno, A. J., Nagasawa, M. K., & Schwartz, T. (2018). Social and emotional learning and early childhood education: Redundant terms? *Contemporary Issues in Early Childhood*, 20(3), 221–235. <https://doi.org/10.1177/1463949118768040>

Kindness by Design: Embedded SEL Intervention in the Class



When education honors gender differences, collaboration calms boys and empathy nurtures girls.

Key Takeaways

- The Montessori method, which prioritizes emotional regulation and structured learning, showed stronger effects in reducing verbal aggression, especially among girls.
- The inclusive environments fostered by Montessori and PjBL methods—where respect, empathy, and peer mentoring are emphasized—appear to offer protective benefits for non-binary children.
- As frontline observers, teachers are often the first to witness bullying and are in a unique position to guide both victims and aggressors toward more constructive behavior.

This article explores how Montessori and Project-Based Learning (PjBL) interventions influence bullying behaviors among preschool and kindergarten-aged children, with a particular focus on gender differences. Drawing on data from classroom-based interventions, the study examines verbal bullying patterns before and after the implementation of Montessori and PjBL methods. Special attention is given to how these educational approaches can be adapted to address the diverse ways in which boys and girls express and experience bullying. The article noted that information about non-binary children may manifest differently and is still being explored, making it an area for growth.

The study employed random selection to conduct a before-and-after analysis of each model's application and assess the impact of the model's implementation on children's behaviors. The study's findings reveal a general reduction in verbal bullying across both intervention models. Among children in Montessori environments, verbal bullying decreased from 28.4% to 24.9%. The reduction was more pronounced among girls, dropping from 30.1% to 16.6% following the Montessori intervention. Similarly, children who participated in PjBL activities also showed a decline in bullying behaviors, with this approach demonstrating a more significant reduction across both genders. The structured and emotionally supportive nature of Montessori education appeared especially effective in helping girls manage verbal conflicts.

Gender differences in bullying behavior emerged as a key theme. While boys were more likely to exhibit physical forms of aggression, girls displayed higher instances of verbal and social bullying. The interventions seemed to align well with these behavioral patterns. PjBL, with its emphasis on collaboration and teamwork, was particularly effective in channeling boys' energy into cooperative projects. In contrast, the Montessori method, which prioritizes emotional regulation and structured learning, showed more potent effects in reducing verbal aggression, especially among girls.

Importantly, the study also considers the experiences of non-binary children, a group that is often underrepresented in bullying research. These children frequently face unique challenges, such as exclusion and misgendering, which may not align with traditional gendered understandings of bullying. The inclusive environments fostered by Montessori and PjBL methods, where respect, empathy, and peer mentoring are emphasized, appear to offer protective benefits for non-binary children. This finding reinforces the need for educational practices that are not only developmentally appropriate but also sensitive to gender diversity.

The role of teachers is highlighted as a critical component of intervention success. The Montessori approach encourages mixed-age classrooms and peer mentorship, fostering a sense of social responsibility and mutual care (Lillard & Else-Quest, 2006).

Overall, the findings from this study align with broader research supporting the integration of emotional and social learning into early education. The findings highlight the potential for hybrid approaches that draw on the strengths of both Montessori and PjBL methods. As Miller et al. (2021) suggest, combining structured emotional learning with collaborative, hands-on projects may offer a comprehensive framework for reducing bullying and promoting inclusivity in early education. While gender continues to influence how children express and respond to bullying, the educational method itself emerges as a more powerful determinant of positive behavioral outcomes.

Septriyani, T.; Hartati, S.; Meilanie, R. S. M. (2024). Gender-based influence of Project and Montessori learning on bullying in children. *Aulad: Journal on Early Childhood*, 7 (3), 765-776. DOI: 10.31004/aulad.v7i3.779.

From Words to Action: The Teacher's Role in Integrating SEL with English Language Learners

In this study conducted by Shapira & Amzalag (2025) SEL is defined as "the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities; manage emotions and achieve personal and collective goals; feel and show empathy for others; establish and maintain supportive relationships; and make responsible and caring decisions". This definition underscores the holistic nature of SEL, emphasizing its relevance not only for students but also for educators, which is the focus of Shapira & Amzalag's (2025) research. Within the unique context of English Language Teachers (ELT), where teachers often engage with linguistically and culturally diverse students, SEL offers tools to navigate emotional complexities and foster inclusive pedagogy. Educators report that developing SEL competencies enhances their ability to create inclusive classrooms that acknowledge and address the emotional and cultural needs of their learners. Many describe how SEL encourages critical introspection into their roles, identities, ideologies, and privileges as educators, leading to more ethical and compassionate teaching choices.

Shapira & Amzalag's (2025) study identifies five core competencies at the heart of SEL: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Teachers who possess strong emotional insight are better able to respond thoughtfully to classroom challenges, model empathetic behavior, and support students' holistic development. However, despite growing recognition of SEL's importance, its implementation within ELT and teacher education programs remains limited due to a range of systemic and contextual challenges. For example, many teacher training programs prioritize traditional pedagogical methods and content knowledge over social and emotional development. This content deficiency is compounded by a scarcity of resources tailored for SEL in language teaching contexts. Furthermore, educational systems often prioritize academic outcomes, which can lead to SEL being marginalized as a peripheral concern, perceived as time-consuming or misaligned with cultural norms, thereby deterring its integration into teacher training curricula.

Another critical component in promoting SEL is leadership within schools, yet leaders themselves often face similar gaps in their professional development. Additionally, the perceived vulnerability associated with expressing emotions in leadership roles may discourage school administrators from prioritizing SEL or seeking support. Experts advocate for structured, direct instruction and tangible tools to build leaders' and teachers' SEL capacities, emphasizing the need for systemic support at all levels of education.

In short, this study indicates that SEL is not a peripheral concern but a foundational component of effective teaching, especially in the field of English Language Teaching. Its potential to improve classroom culture, enhance teacher well-being, and boost student outcomes is well-documented. To fully realize this potential, SEL must be prioritized in teacher training, leadership development, and educational policy. Only by acknowledging the centrality of emotional intelligence and well-being can education systems create the inclusive, empathetic, and responsive environments that truly support both teachers and learners.

Strategies to consider: The adult's role

- Educators are in a constant state of growth and should remain 'teachers as learners' which leads to the strongest classrooms.
- Teachers should practice self-reflection in order to develop awareness of their strengths, weaknesses, and areas for improvement (Makoe, 2015).
- Teachers' awareness of SEL is important for creating an encouraging and caring learning environment that promotes students' social and emotional development (Burgin et al., 2021).
- Schools and administrators should provide support for purposeful professional development that appeals to teacher's individual growth.



Shapira, N. & Amzalag, M. (2025). Do teachers promote social-emotional skills? The gap between statements and actual behavior, *Cogent Education*, 12 (1), 2465919. DOI: 10.1080/2331186X.2025.2465919.



Researcher's Comments:

In Montessori classrooms, children are empowered to make choices about their learning, enhancing their self-awareness and confidence. The multi-age groupings foster peer mentoring and empathy, helping students develop respect and communication skills essential for understanding others' emotions.

The Montessori method beautifully nurtures emotional intelligence by also promoting independence and problem-solving skills, making it a powerful approach to holistic education.

Additionally, Montessori emphasizes peaceful conflict resolution and emotional regulation. Instead of relying on external discipline, children learn to recognize and express their emotions constructively, supporting their impulse control and stress tolerance.

While Montessori education provides strong tools for integrating social-emotional learning, there is

always room for growth as children navigate new challenges in a changing world. Educators who embrace lifelong learning are well-equipped to pursue professional development, enhancing their teaching and applying relevant, practical skills for today's students.

Administrators play a vital role in this journey. By encouraging educators to engage in self-reflection and fostering continuity across the school, they can address the gaps often found in teacher education programs regarding classroom management.

The role of adults is crucial to the success of social-emotional learning (SEL). Through ongoing reflection and professional growth, educators can model positive behavior, cultivate empathy and acceptance, and create a classroom community that cherishes learning from mistakes.

Through research we illuminate the path to unlocking every child's potential.

