



MPPI
Montessori Public
Policy Initiative



What We Know About What We Do

THE EVIDENCE BEHIND MONTESSORI PRACTICE



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Borgman, C., Shenk-Evans, W., Monnier, D., Kadambi, V., & Lillard, A.S. (2024). What we know about what we do: The evidence behind Montessori practice. The Montessori Public Policy Initiative. <https://montessoriadvocacy.org/white->

As part of MPPI's 2015 inaugural efforts to establish a unified voice for Montessori policy advocacy, the MPPI Council developed the foundational MPPI Montessori Essentials. This concise list outlines the core elements that define a high-fidelity Montessori program, providing a clear framework for policymakers to understand what Montessori is, and why Montessori advocates call for specific reforms that promote the growth and accessibility of high-quality Montessori education.

The Montessori Essentials were created in collaboration with MPPI's founding organizations, the American Montessori Society and the Association Montessori Internationale – USA, Montessori pedagogical standard bearers.

To further the impact of the Essentials, MPPI has partnered with UVA's Montessori Science Program to release the following series of literature reviews. These reviews compile and evaluate the evidence from wide bodies of educational, developmental, and psychological research to establish what is known about specific elements of Montessori practice. In doing so, they provide evidence in support of the MPPI Montessori Essentials and offer specific policy recommendations that align with current data, reinforcing the case for high-fidelity Montessori education. These user-friendly one-pagers can be used individually or combined into a longer publication titled *What We Know About What We Do: The Evidence Behind Montessori Practice*.

Adult-Child Ratios & Class Sizes

Montessori Practice

Montessori best practices call for larger class sizes and higher adult-child ratios than state policies typically allow in early childhood settings.^{1,2} In fact, these expectations are reflected in international Montessori accreditors standards. With a unique instructional approach, involving a high level of student independence, individual rather than whole class instruction, collaboration, and peer tutoring, the larger group sizes of Montessori classrooms promote independence and provide a wider range of activities, more potential peer tutors and collaborators, and greater opportunity for social learning through peer interactions.³ Most states, however, enforce class size or student-teacher ratio limits in early childhood classrooms that compromise Montessori practice and standards.

What the Research Says

Surprisingly, after decades of research into the link between class sizes/ratios and student outcomes, no definitive conclusions can be drawn, and class size reduction (CSR) policies have been successful in some states but remarkably expensive disappointments in others.⁴ Some studies show that class size matters, but not ratios,⁵ while others support the opposite conclusion.⁶ Some research finds positive effects of low ratios or small classrooms,^{7,8} mostly in the lower elementary grades, while at least two recent meta-analyses reveal very small benefit to none at all in early childhood.^{9,10}

Collectively, research findings concerning class sizes and adult-child ratios are complex, mixed, and inconclusive. As a result, some researchers recommend that policymakers thoroughly consider alternative interventions that are more consistently supported,^{11,12} as well as qualitative contextual differences like teacher quality and instructional strategies that enable high-quality learning in classrooms of varying sizes.^{13,14}

For instance, some authors argue that smaller class sizes may positively impact student outcomes by allowing teachers in traditional settings to increase the proportion of individualized instruction.⁸ However, in Montessori

classrooms nearly *all* instruction is individualized, which raises the question of whether those findings remain relevant within Montessori contexts. In addition, in studies where benefits of small class size have been indicated, it does not follow that implications for teacher-led environments translate to child-centered Montessori classrooms where children's learning often occurs through interactions with peers and materials.³ In fact, data from an ongoing, national-scale study suggest a different trend; whereas in conventional ECE classrooms, larger class sizes and higher ratios did in fact predict lower CLASS[®] quality scores, the *opposite* was found in Montessori classrooms. There, larger class sizes correlated with *higher* CLASS[®] scores.¹⁵ Montessori, therefore, may prove to be one context in which student success is achieved within larger classrooms.

“Class size is an exceptionally complicated construct which likely operates differently depending on the particular setting in which it is situated.”¹³

“But what about the Tennessee STAR experiment?”

The most influential research in support of CSR stems from the Tennessee STAR experiment of the mid-1980's, which yielded compelling evidence that smaller class sizes (but not lower ratios) provided advantages for student achievement, behavior, and engagement, and that the benefits were greatest for minoritized students.⁵ Follow up studies suggested that many of the benefits persisted for years.^{16, 17}

Not all analyses of the STAR data draw the same conclusions, though, and important methodological critiques have been made.^{18, 19} More questionable, however, is the appropriateness of generalizing the findings to other contexts and into the realm of widespread educational policy recommendations.⁴ To that point, when California, inspired by the STAR findings, invested \$1B per year on class size reduction, the results were disappointing. Quite small gains were found in student achievement, and the move exacerbated teacher shortages, leading to a troubling decline in teacher quality, particularly in elementary schools and for already underserved students.²⁰ As a result, resource gaps widened, and inequities worsened due to California's class size reduction policy.⁴

Recommendation

Context matters, so flexible policy approaches that account for differences in qualitative components such as instructional strategies and teacher preparation are advisable given the lack of clarity around the effectiveness of reduced class sizes and ratios. Several states have already added increases to group size and ratio allowances specifically for Montessori programs in which the staff meet specific qualifications and other required aspects of the Montessori approach are present.

MPPI's Mission and Vision

MPPI envisions a world enriched and made equitable through widely accessible and fully-implemented Montessori education.

To make this vision a reality, MPPI champions a policy landscape that expands equitable access to high-fidelity Montessori education. This goal is advanced through building the capacity of state associations, bridging the work of advocates and policymakers, and promoting public awareness of the Montessori approach.



ENDNOTES

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