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Montessori Public  
Policy Initiative



# What We Know About What We Do

THE EVIDENCE BEHIND MONTESSORI PRACTICE



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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*.

# Student Autonomy & Choice

## Montessori Practice

A central tenet of Montessori pedagogy is the assumption that children are inherently oriented towards growth, development, and fulfillment of their potential. The philosophy holds that, when provided a supportive, well-structured environment, children will select appropriately challenging work that is ideal for their own learning and development.<sup>1</sup> Teachers, peers, and the physical classroom environment ensure that a child's choices remain constructive for themselves and their classroom community.<sup>2</sup> Montessori students, therefore, experience a high degree of autonomy and choice within their classrooms. Their school days center around extended (at least 2-, but ideally 3-hour) blocks of uninterrupted time during which students may largely decide what to work on, where, with whom, in what order, and for how long. Over the course of their three years in a mixed-age classroom, Montessori students receive instruction and are provided opportunities to practice concepts across all subjects that are appropriate for both their age and skill level. But because instruction is highly differentiated, they will not necessarily get lessons at the same time nor in the same order as other children.

## What the Research Says

In contrast to Montessori practice, standards and accountability-focused policies at the federal, state, and district levels often require that all public-sector teachers, Montessori or otherwise, adhere to pre-sequenced curricula, pacing-guides, and testing regimens that constrict their ability to allow self-determined activity in their classrooms. These policies, coupled with the orientation of many teacher preparation programs, can influence teachers towards more directive, less autonomy-supportive classroom practices and beliefs about children.<sup>3,4</sup> As a result, multiple large-scale studies have found that even in preschool, children spend the overwhelming majority of their time in teacher-led, whole-group, didactic instruction.<sup>5,6</sup> This is concerning, given the wealth of research demonstrating that whole group<sup>5</sup> and directive approaches<sup>7</sup> are detrimental to students' motivation and learning, in particular, learning that involves conceptual understanding and creative processes.<sup>8</sup> These patterns are of significant concern to Montessori educators, who experience pressure to sacrifice student autonomy and individualized instruction for the sake of having all children learn according to an externally mandated sequence and pace.<sup>9, 10, 11</sup>

Montessori education is thoroughly aligned with the abundant body of research supporting Self-Determination Theory<sup>12, 13, 14</sup> perhaps *the* prevailing humanistic framework of our time.<sup>15</sup> Self-Determination Theory posits that people naturally tend “to seek out novelty and challenges, to extend and exercise [their] capacities, to explore, and to learn” as long as three foundational psychological needs are met, namely those for autonomy, competence, and relatedness.<sup>8</sup> (p. 70)

“Students who experience autonomy-supportive environments consistently demonstrate beneficial outcomes on a wide and holistic array of developmental measures,<sup>3</sup> throughout the lifespan,<sup>22</sup> and across cultures.<sup>14, 21, 22</sup>”

1. **Autonomy** is the “sense of psychological freedom” that accompanies one’s ability to engage in activities aligned with their authentic interests, preferences, and needs, with freedom and choice as crucial prerequisites.<sup>16</sup> (p. 148)
2. **Competence** is fostered by classroom structures that limit the number and complexity of choices, ensure developmentally appropriate instruction, and carefully sequence learning.<sup>17</sup>
3. **Relatedness** is promoted when learning is embedded within personally and culturally relevant contexts,<sup>14</sup> connected to prior knowledge and interest,<sup>18</sup> and situated in warm interactions with teachers and collaborative activities with peers.<sup>14</sup>

When teachers foster children’s self-determination by acting in highly flexible, adaptable ways, they are engaging in “autonomy-supportive” strategies, which are widely endorsed by educational research. Such strategies include:

- the provision of meaningful choice
- respecting student ideas and decisions,
- allowing the child’s initiative and interests to guide activity,<sup>19</sup>
- providing time for independent<sup>3</sup> and self-paced<sup>20</sup> learning
- displaying less reliance on written instructional materials,<sup>3</sup> and
- supporting authentic student problem-solving and decision-making in a wide range of contexts such as what to learn and how, modes of assessment, and identifying multiple solutions to problems.<sup>21</sup>

All of these strategies are hallmarks of Montessori practice, which is expressly designed to foster children’s autonomy and self-determination.<sup>14</sup> Students who experience such autonomy-supportive environments consistently demonstrate beneficial outcomes on a wide and holistic array of developmental measures,<sup>3</sup> throughout the lifespan,<sup>22</sup> and across cultures.<sup>14, 23, 24</sup> These include:

- Academic benefits such as improved overall academic functioning,<sup>16</sup> early reading and math performance,<sup>25</sup> higher task performance,<sup>26</sup> and deeper approaches to learning,<sup>27</sup>
- Noncognitive benefits such as higher intrinsic motivation,<sup>28, 29, 30</sup> self-regulation<sup>31, 32, 33</sup> interest, effort, and engagement,<sup>34</sup> preference for challenge, mastery orientation and curiosity,<sup>8</sup> and

- Social-emotional benefits, including greater overall wellbeing, adaptive functioning, vitality,<sup>35</sup> higher sense of competence and self-worth,<sup>29</sup> and fewer problem behaviors.<sup>16</sup>

For the last three decades, Montessori programming has expanded precipitously in the public sector. With nearly 600 public Montessori schools (and growing), Montessori constitutes the largest “alternative” pedagogy represented in U.S. public schools.<sup>36</sup> Research continues to highlight its potential to both improve and equalize student outcomes on a wide range of important academic and noncognitive measures,<sup>37</sup> but fidelity of implementation appears key to its success.<sup>38, 39</sup> Unfortunately, Montessori educators, researchers, and advocates report that many policies that encourage standardized, teacher-led instruction pose significant barriers to high fidelity implementation within the public sector.<sup>40</sup> Although Montessori has been shown to be most impactful for students from low income<sup>37</sup> and historically marginalized<sup>41, 42, 43</sup> populations, smaller effect sizes have been found in public contexts.<sup>44</sup> This may be attributable to pedagogical compromises, such as decreased student autonomy, made in the interest of standards compliance. Students and families, therefore, will reap the most benefit from Montessori when policy is designed to allow for full implementation of the model.<sup>11</sup>

## Recommendation

An established body of research strongly supports the claim that classroom autonomy and choice, like that provided by Montessori schools, offer a host of cognitive and noncognitive benefits for students. Even so, accountability-oriented policies, including mandated subject-area “blocks,” pacing guides, annual benchmarks, and kindergarten readiness requirements, tightly restrict teachers’ ability to foster student autonomy and choice in the classroom. **In order to maximize the learning potential of students in Montessori programs, it is recommended that Montessori schools be afforded flexibility in instructional pacing and sequencing, as well as benchmark frequency.**



## ENDNOTES

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