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# Contents

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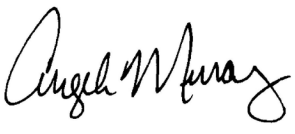
# From the Editor

Welcome to the spring 2021 issue of the *Journal of Montessori Research*. After a challenging year, we are pleased to bring you four important and timely articles. In fact, I am incredibly thankful for the authors, reviewers, and editors who have pulled together to produce three issues of the publication during a particularly stressful and unpredictable period for all of us. My hope is that these articles provide readers an opportunity to feel more connected to the broader field of Montessori education and to the growing body of research related to it, even while we were isolated.

When the world faced stay-at-home orders because of the COVID-19 pandemic last spring, I was inspired to reach out to colleagues to document the experience in a research study. The first two articles in this issue, parts 1 and 2 of "Montessori Education at a Distance," represent the results of my collaboration with coauthors Katie Brown, from the National Center for Montessori in the Public Sector, and Patricia Barton, who is a graduate student and Montessori educator.

In the third article in this issue, "Leading Reflective Practices in Montessori Schools" long-time Montessori leader, Sharon Damore, and her colleague, Barbara Rieckhoff, report on the development of a coaching protocol designed to support the developing capabilities of Montessori school leaders. The final article in this issue, "Second Language Corner for Children's House: A Practitioner–Researcher Journey Into Bilingualism in Montessori Education," was contributed by Romali Rosales Chavarría, who is an independent researcher currently working as a Spanish language specialist in Edinburgh, Scotland.

As we look forward to the fall issue, we sincerely hope that the pandemic situation improves around the world so that everyone has opportunities for a gradual return to friends, family, and colleagues.



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# Montessori Education at a Distance, Part 1: A Survey of Montessori Educators' Response to a Global Pandemic

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***Keywords**: Montessori, distance learning, COVID-19, pandemic*

**Abstract**: The transition to distance learning in the spring of 2020 caused by COVID-19 was particularly challenging for Montessori educators and students because key elements of the Method were not directly transferable to this new and hastily designed format. Hands-on learning with Montessori materials and learning in a community, as well as careful teacher observation, could not be easily replicated when children were learning from home. To understand how educators applied Montessori principles to serve children and families in these highly unusual circumstances, we surveyed Early Childhood and Elementary Montessori teachers about how they translated core elements of Montessori education to a distance-learning environment. The overall results suggest that Montessori distance-learning arrangements balanced live videoconference experiences for children with offline hands-on activities, while also relying on parents' and caregivers' involvement. Teachers reported that they largely designed learning experiences themselves, without significant support or guidance from school leaders. Still, teachers reported that they were able to uphold Montessori principles to only a moderate degree under the circumstances. While teachers understandably hunger for support, professional connections, and a return to the classroom experiences that drew them to the field of Montessori education, this study highlights factors that may affect the transition back to school for teachers, parents and caregivers, and students when face-to-face instruction resumes for all children.

The COVID-19 pandemic created an abrupt transition for children throughout the United States. This transition presented unique challenges for educators, parents and caregivers, and children involved in Montessori education because of the approach's unique design involving specific resources, actions, and goals. With a history of more than 100 years since its inception, Montessori education represents the largest alternative pedagogy available in the country today (Debs & Brown, 2017). According to the Montessori Census, maintained by the National Center for Montessori in the Public Sector (NCMPS) to "provide complete and accurate information about the state of Montessori in the United States," an estimated 2,700 Montessori schools exist in the United States, with roughly 500 of these in publicly funded schools (NCMPS, n.d.). We wondered how teachers across these schools could provide parents and caregivers with effective but reasonable Montessori-based activities for children to do at home when key elements were not directly transferable and parents and caregivers had varying degrees of capacity for implementing the Method.

## Theoretical Framework

While the literature regarding educational changes in response to a global pandemic is only now being written, key elements of Montessori practice are documented in a Montessori logic model published in 2019 (Culclasure et al., 2019). The model organizes key inputs, programming, and outputs of Montessori education. It also expands the programming section by providing details of resources, actions, and goals across age levels. This model provides a useful structure for considering the key elements of the Montessori Method that were affected by distance-learning set-ups that were hastily formed as families were required to social distance and follow stay-at-home orders across the country. Our focus was on the program-implementation portion of the logic model because it forms the core of the model, which helps to "consider and prioritize" the most critical program aspects (W. K. Kellogg Foundation, 2004, p. 5). The resources, actions, and goals that comprise the programming component of the logic model are shown in Figure 1.

First, we focused on the *resources* necessary for an authentic Montessori environment, which include the ordered environment teachers create for exposing children to the broad, interrelated Montessori curriculum.

***Figure 1***

Excerpt from Montessori Logic Model (Culclasure et al., 2019)

| Programming Across Levels | | |
|---|---|---|
| **Resources** | **Actions** | **Goals** |
| Ordered environments | Choose activities of interest | Purposeful activity |
| Broad, interrelated curriculum | Use real-life and manipulative materials | Sustained focus |
| Individualized instruction | Assist and collaborate with peers | Self-discipline and knowledge |
| Positive emotional climate | Resolve disagreements | Compassion for others |
| Clear expectations | Express self artistically | Positive attitude toward school |
| Experiences with nature | Move freely in classroom | Confidence and initiative |
| Adaptation for atypical development | Help maintain the environment | Contributing member of society |

Teachers emphasize instruction individualized to the level and needs of each child while providing a positive emotional climate with clear expectations. Opportunities for experiences with nature, as well as accommodations for atypical development, round out the necessary resources providing the foundation for children's activity in the Montessori Method. *Actions* that Montessori children engage in are based on choosing activities of interest largely with real-life and manipulative materials. While moving freely in the classroom and engaging in these activities, children assist one another, collaborate with their peers, and are empowered to resolve disagreements largely on their own. Children also express themselves artistically and help maintain the classroom environment. As a result of providing children with appropriate resources and opportunities to engage in the described actions, Montessori educators anticipate that children will achieve a number of specific *goals*. These goals include children sustaining focus while pursuing purposeful activities that they expect to result in self-discipline and knowledge, as well as confidence, initiative, and a positive attitude toward school. Other important goals revolve around interpersonal outcomes, such as compassion for others and becoming a contributing member of the classroom community and society at large (Culclasure et al., 2019).

Our focus for this study was on educators serving children at the Early Childhood (EC; i.e., ages 2½ to 6) and Elementary (El; i.e., ages 6 to 12) levels in the United States because the vast majority of Montessori classrooms serve children in these age groups (NCMPS, n.d.). While many of the principles of Montessori education apply across age levels, the Montessori logic model highlights elements that differ in approach or emphasis

between groups (Culclasure et al., 2019). For example, the EC level emphasizes one-on-one instruction, precise presentations, repetition, and exploring the environment. In contrast, the El level focuses on increased freedom and greater responsibility along with interactive small-group lessons and children planning and tracking their own activities.

Technology in Montessori classrooms was a topic of increasing debate even before the COVID-19 pandemic. Montessori professionals tended to agree that screens did not belong in EC classrooms and referenced support from the American Academy of Pediatrics guidelines (MacDonald, 2016). However, Greg MacDonald (2016), a director of Elementary training for the Association Montessori Internationale (AMI), noted,

> *From the Elementary years on, we are probably on the safest ground when we treat digital devices as potential tools for self-construction, and when we refrain from introducing them until sensorial avenues have been explored by the children, and exhausted. These devices should be "materials" in the classroom, and they should fully conform to Montessori philosophy and practice.* (p. 105)

With the tremendous emphasis on technology for delivering distance learning, Montessori education's resistance to digital devices for young children and only reluctant acceptance for El students further complicated the situation created by the school closures during the pandemic.

The unprecedented and rapid response to the COVID-19 pandemic in the spring of 2020 led us to wonder how, and if, the resources, actions, and goals outlined in the logic model, which are fundamental to Montessori education, could be effectively translated to a distance-learning setting. The questions arise because much of the rich history and philosophy of Montessori education is place-based and grounded in interpersonal interactions and physical activity in the environment. Therefore, the overarching objective of this study was to understand how Montessori schools and educators interpreted and applied Montessori principles to serve children and families in these highly unusual circumstances, given that key elements—primarily hands-on learning with Montessori materials, learning in a community, and direct teacher observation—were missing. To achieve this objective, we identified four specific research questions:

1. What was the teaching situation for Montessori EC and El educators during the distance learning necessitated by the COVID-19 pandemic?
2. What strategies did educators incorporate to provide a Montessori educational experience for children while they were learning from home?
3. How did teachers feel about their ability to accomplish the expected goals of a Montessori educational experience?
4. What did Montessori educators perceive to be the successes and challenges of families, as key partners in the distance-learning process, in supporting effective Montessori implementation?

## Methods

To address our research questions, we designed a survey research study with EC and El Montessori educators. The details of the study design and methods are provided in the sections that follow.

### Data Source

Data for this study came from a 15-minute, anonymous, online survey distributed via email and social media to Montessori educators. The survey, which is available in the appendix, was framed around the Montessori logic model, programmed in Qualtrics, and pretested by an expert panel of eight experienced Montessori educators before data collection began (Culclasure et al., 2019). The survey included closed-ended questions about specific practices employed as well as Likert-scale items and open-ended questions about teachers' perceptions of various aspects of the experience. The open-ended questions allowed participants to provide unstructured and unanticipated answers as well as further explanation of quantitative responses (Walston et al., 2017). In particular, although ordered environments, student choice, and freedom within limits are core Montessori principles, their application in a distance-learning format is new. Therefore, we chose to capture the various ways teachers implemented these strategies through open-ended questions rather than developing a preestablished list of possibilities from which teachers could choose.

A few of the logic-model items were modified or eliminated from the survey according to relevance. For example, we adjusted the item related to "moving freely in the classroom" to the more general term "independence" since students were not in classrooms. Other modifications to the logic-model framework were necessary when teachers were asked about parent success and challenges related to supporting the resources and actions necessary for Montessori education. One of the resources, "broad, interrelated curriculum," was not included because the curriculum itself was not viewed as a parent or caregiver responsibility. Similarly, "conflict resolution" was not included in the list of parent and caregiver successes and challenges because of limited opportunities for conflict in such isolated circumstances. Finally, we added "sustained focus" (an item from the Goals section) to the list of items for gauging teachers' perceptions of parent or caregiver capacity to provide necessary resources and facilitate children's activity.

Invitations to participate in the survey were distributed via email to 638 members of the Montessori teacher research panel, managed by the American Montessori Society (AMS), which includes teachers who have agreed to participate in online surveys. An announcement for the survey was also included in a weekly distribution of 32,213 emails from AMS, which generated 32 unique clicks. In addition, the survey was posted in multiple social-media outlets popular with Montessori educators (i.e., NCMPS, University of Kansas Center for Montessori Research, Global Montessori Network). Participants were encouraged to share the link with colleagues to expand the pool of participants. Data collection occurred between July 16, 2020, and August 12, 2020. Approval for this study was obtained from the University of Kansas Human Research Protection Program.

**Participants**

A total of 130 EC teachers and 92 El teachers initially responded to the survey. Of these, 122 EC and 90 El teachers reported using some form of distance learning in the spring of 2020, which was a requirement for participation. A very small number of those who started the survey did not complete it, and most of those who did not complete the survey answered less than half the questions (31 of 37 incomplete EC surveys contained responses to less than half the questions, and 13 of 15 incomplete El surveys contained responses to less than half the questions). So, we included data only from those teachers who completed the entire survey. Finally, we excluded the small number of international teachers who responded (seven EC, seven El), leaving a final survey sample of 78 teachers at the EC level and 68 teachers at the El level.

The median age of educators who participated in the survey was roughly 45, with 46% of the EC teachers and 50% of the El teachers younger than 45. Some of the key characteristics of the survey sample, described below, are in Tables 1–3. The vast majority of teachers (87% for EC, 93% for El) identified as White, but this lack of diversity is not surprising given that previous research has highlighted the lack of teachers of color as a challenge for the field (Debs & Brown, 2017). At both levels, more than half the teachers had completed an AMS-affiliated training program for the level they taught, with another one-fourth having completed an AMI-affiliated program. EC teachers were largely employed at independent schools, while El teachers were more evenly split between public and independent schools. Finally, regardless of level, schools were fairly evenly divided between large cities, midsize cities, and suburban areas. The remaining portion were in small cities or rural areas.

**Analysis**

Analysis of the survey data primarily involved descriptive statistics where we provided the means and standard deviations of measured scale variables and the frequency distribution in percentages for nominal variables. We reported the results separately for the EC and El levels because the relative emphasis of logic-model components and how they are expressed differ for EC and El classrooms, as noted previously. Because our primary goal was not to compare the two age levels, direct comparisons involving tests of statistical significance were not employed. However, we will posit explanations for the differences of note.

For the open-ended questions, we initially used a provisional coding approach to identify tentative codes, followed by focused coding to determine categories that emerged with relatively high consistency (Saldaña, 2009). To understand the frequency with which a code emerged, we converted the item counts to percentages of the total number of responding teachers. When reporting percentages, then, these numbers indicate the percentage of all responding teachers (78 EC; 68 El) whose comments reflected a given code.

**Table 1**
*Type of Teacher Training, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Completed AMS-affiliated training program | 56 | 54 |
| Completed an AMI-affiliated training program | 26 | 22 |
| Completed other training or in process | 13 | 22 |
| No formal training | 5 | 1 |

**Table 2**
*Type of School, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Public | 21 | 41 |
| Independent | 72 | 56 |
| Something else | 8 | 3 |

**Table 3**
*School Location, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| In a large city | 27 | 25 |
| In a midsize city | 26 | 28 |
| In a small city | 18 | 13 |
| In a suburb of a city | 26 | 24 |
| In a rural area | 4 | 10 |

## Results

The overall picture that emerged from the survey suggests that Montessori teachers designed distance-learning arrangements that balanced virtual and hands-on experiences for children with little input from school administration. We first discuss details of the remote-instruction situation teachers faced, followed by a breakdown of their strategies related to the resources and actions involved in Montessori distance learning. We conclude by examining how educators felt about their ability to uphold Montessori principles, as well as their perceptions of families' successes and challenges while navigating Montessori education from home.

### Distance-Learning Situation for Teachers

Before examining specific components of Montessori practices as outlined in the logic model, we first provide further details on the situation for educators in the spring of 2020. According to responding teachers, participation in distance learning was relatively high. More than three-quarters of participants reported that 60% or more of their students participated in remote learning. Specifically, teachers reported roughly three-quarters of El students ($M = 77.78\%$, $SD = 24.97$) and two-thirds of EC students participated ($M = 66.27\%$, $SD = 22.76$) in the spring of 2020. Even with high levels of participation, teachers recognized that families faced considerable challenges. Qualitative responses about collaborating with families suggested that educators understood and took into account these distance-learning challenges as they developed strategies for their students. One teacher articulated the challenges:

> *I got the feeling parents and caregivers were overwhelmed with so many things going on, they hardly took time to read the information I sent. And the community I work with are devoted parents and caregivers, but I think the situation was bigger than their energy.*

Teachers reported receiving varying levels of input from their schools regarding distance-learning strategies,

including both guidance to help them understand which strategies they were expected to employ and support in developing specific distance-learning strategies. Only one in five respondents at both levels reported receiving a great deal or a moderate amount of guidance about which strategies they were expected to employ for distance learning. However, El educators were less likely to say they received a great deal of guidance (see Figure 2). Patterns were similar when asked about the level of support educators received from administration for developing distance-learning strategies, with El teachers less likely to say they received a great deal or a moderate amount of support in developing distance-learning strategies (see Figure 3).

***Figure 2***

Amount of Guidance From School's Administration Regarding Expected Distance-Learning Strategies

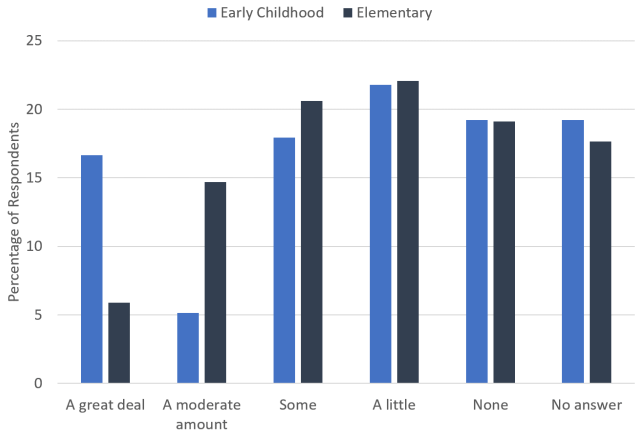
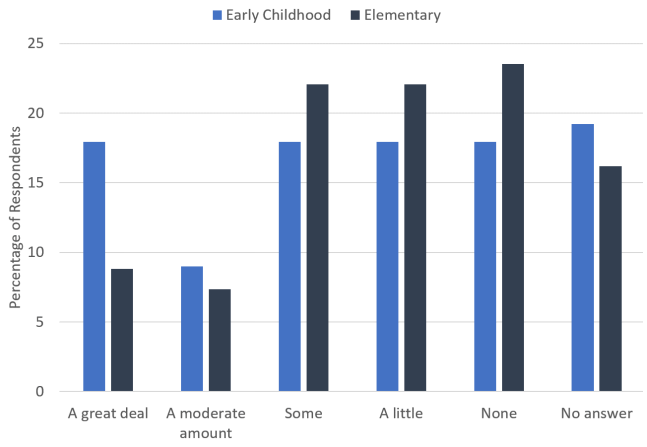



***Figure 3***

Amount of Support From School's Administration for Developing Distance-Learning Strategies




Educators reported that their distance-learning approach resulted in students dividing their time between screen-based activities (e.g., Zoom meetings, iPad apps) and hands-on activities (e.g., Practical Life activities like cleaning or preparing food, work with manipulatives), with hands-on activities representing just over half of students' work time ($M$ = 55.54%, $SD$ = 23.58 for EC; $M$ = 54.04%, $SD$ = 19.33 for El). A smaller portion of time was dedicated to screen-based activities ($M$ = 37.91%, $SD$ = 23.66 for EC; $M$ = 42.28%, $SD$ = 18.87 for El). Because it is possible for students to be engaged in work that might not be clearly considered either a hands-on or a screen-based activity, the sum of the two percentages does not necessarily equate to 100%.

In terms of the distance-learning strategies employed by Montessori teachers at both the EC and El levels, the vast majority engaged in live videoconferencing with students (see Table 4). Videoconference interactions with families were also common at both levels, with about two-thirds of teachers reporting they had used this strategy. Additionally, about half of teachers reported they had live-streamed read-alouds. El teachers were twice as likely as their EC counterparts to have distributed digital devices or other technologies to families, and El teachers were almost twice as likely to report using an electronic learning management system like Google Classroom. El teachers were also somewhat more likely to send physical materials or packets home for families. In summary, teachers were primarily responsible for designing the distance-learning arrangements for their students, with most teachers relying on live videoconference experiences without substantial support from school administration. Teachers believed that most families' involvement reflected their individual capacity under the circumstances to support their students' experiences with a combination of online and hands-on activities. With a better understanding of the basic structure of distance learning from the perspective of Montessori teachers, we now consider how specific elements of the logic model (i.e., resources, actions, and goals) were represented.

## Teachers' Application of Montessori Principles During Distance Learning

The Montessori logic model outlines the resources necessary for Montessori implementation, appropriate actions of children in Montessori classrooms, and the desired goals that would result. We used resources and actions from the model as the foundation for examining

**Table 4**
*Strategies Employed for Distance Learning, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Zoom or video interactions with students | 88 | 97 |
| Zoom or video interactions with families | 65 | 66 |
| Physical materials & packets for families | 60 | 74 |
| Read-aloud livestream | 53 | 51 |
| Electronic learning management systems | 42 | 79 |
| Digital devices or other technology provided to families | 23 | 46 |
| Other (please specify) | 24 | 18 |

**Table 5**
*Strategies for Preparing the Environment, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Involving parents & caregivers | 51 | 24 |
| Providing alternatives to Montessori manipulatives | 33 | 44 |
| Preparing lessons | 28 | 35 |
| Preparing for video conferencing with students | 26 | 9 |
| Preparing the teachers themselves | 21 | 13 |
| Providing technology & online resources | 14 | 28 |
| Creating videos | 14 | 10 |
| Creating work packets | 10 | 6 |
| Establishing a schedule | 6 | 7 |
| Providing hands-on materials | 4 | 10 |
| Providing supplies | 3 | 7 |
| Facilitating student choice | 3 | 9 |
| Facilitating independence | 3 | 4 |
| Encouraging creation of a work space | 1 | 3 |

Montessori teachers' application of Montessori principles during distance learning, as described in the sections that follow.

**Resources**

The Montessori logic model outlines seven important resources as the foundation for Montessori education. Teachers reported employing a range of strategies to provide students with the necessary resources while learning from home.

***Ordered Environments***

Diverging strategies emerged by age level when we examined the open-ended data on how teachers described preparing the virtual learning environment as illustrated in Table 5. Not surprisingly, the EC group relied heavily on parent involvement, followed by providing learning materials in lieu of Montessori hands-on manipulatives, preparing lessons, and preparing for videoconferencing interactions with students. At the El level, involving parents and caregivers had a smaller but still substantial role, but providing learning materials in lieu of Montessori hands-on manipulatives and preparing lessons were still prevalent. Providing technological resources was a much larger focus at the El level.

In their contextualized responses, many teachers provided details about the role of parents and caregivers in preparing the environment. One EC teacher noted, "It's dependent on the family and their involvement in helping with their child's prepared environment at home." Another added, "I hope we don't have to continue having to work like this. It's difficult to prepare an environment at [a] distance. I explained to the parents the importance of letting the child do [the work] themselves, but it was

almost impossible." In terms of providing hands-on materials, one El teacher noted teachers had to "prepare hands-on activities (experiments, sewing projects, etc.) and other materials to add to the packets for children to do at home." Technology at the El level is evident in this teacher's comment: "I need to make sure the technology fits what [the children] are doing and that they understand how to use it. I keep in mind how much time is spent on- and offline."

### *Broad, Interrelated Curriculum*

Teachers reported coverage of a full range of curricular subjects in distance learning, as illustrated in Table 6. Not surprisingly, Language and Math made up the largest proportion of instructional time, accounting for roughly half the time for both EC and El levels. Science/Social Studies and Cultural Subjects followed closely behind Language and Math. Practical Life and Sensorial areas (for EC) made up the smallest proportion of time in distance learning. Qualitative data from the survey also suggest teachers made an effort to create connections among various parts of the curriculum: "We also focused strongly on Practical Life, applied science and experimentation, and connected these elements naturally to LA [language arts] and Mathematics."

### *Individualized Instruction*

Table 7 outlines the strategies teachers used for individualizing instruction, generally showing greater individualization of instruction at the El level than at EC. A similar proportion of El and EC educators—close to half—reported giving personalized assignments, materials, and lesson plans. However, a third of EC educators indicated that all children in their classes received the same lessons, materials, and assignments; only half as many El participants said the same. El educators also appeared more likely than EC educators to differentiate assignments by grade level and to meet one-on-one with each child regularly. Considering the limited developmental capacity of EC students to navigate the technology often employed in personalizing assignments, these results do not seem surprising.

**Table 6**
*Percentage of Teaching Time Devoted to Each Area of the Curriculum, by Level Taught*

| | Early Childhood | | Elementary | |
|---|---|---|---|---|
| | *M (%)* | *SD* | *M (%)* | *SD* |
| Language | 26.99 | 12.01 | 25.47 | 8.94 |
| Math | 18.94 | 9.55 | 26.65 | 9.53 |
| Science and Social Studies | 16.09 | 11.49 | 20.75 | 8.60 |
| Cultural (music, movement, art) | 14.25 | 9.97 | 13.79 | 8.60 |
| Practical Life | 12.14 | 8.19 | 8.39 | 8.36 |
| Sensorial | 8.60 | 6.30 | N/A | N/A |
| Other | 2.99 | 5.92 | 4.96 | 9.25 |

**Table 7**
*Individualization Strategies, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Each child received personalized assignments, materials, and lesson plans. | 42 | 49 |
| Children received assignments, materials, and lesson plans according to their grade level (e.g., one plan for grade 1, one plan for grade 2, etc.). | 40 | 60 |
| All the children in my class received the same lessons, materials, and assignments. | 32 | 16 |
| I met one-on-one with each child regularly. | 31 | 43 |
| Other | 23 | 26 |

Traditionally, Montessori educators closely observe children at work to inform how to individualize and deliver instruction. We asked survey participants how they approached observation during distance learning, when they could not simply walk up to children and look over their shoulders as they worked. As shown in Table 8, three-quarters of EC educators relied on data reported by parents or caregivers, including narrative and photos, to take the place of in-person observation. While almost two-thirds of El participants also used parent or caregiver reports, the majority of these educators analyzed students' work products themselves. Close to half of respondents at both levels used videoconferencing to observe students at work.

***Positive Emotional Climate***

Overall, most participating Montessorians indicated that they were able to provide the resources for a positive emotional climate for learning, with more than three-quarters indicating that they did this *moderately well* (38% for both EC and El), *very well* (35% for EC, 38% for El), or *extremely well* (6% for EC, 7% for El) Another 19% of EC educators and 15% of El educators reported that they did this *slightly well*. Only 1% believed they did not do this well at all. This suggests that, despite the challenging circumstances presented by distance learning, Montessori educators continued to feel reasonably effective in providing a positive emotional climate for their students.

***Clear Expectations and Freedom Within Limits***

We offered an open-ended question to help us understand how teachers provided limits, given that typical limits established in the classroom may not be effective when children work from home. Once again, the picture was quite different for EC teachers and El teachers, as evident in Table 9. Both groups relied heavily on collaboration and communication with parents and caregivers, as well as on online etiquette lessons for children, while a sizable portion of both groups reported that they simply were unable to set limits or were unsuccessful at setting limits during this time. Beyond these strategies, El teachers reported implementing a larger number of additional approaches for establishing boundaries for children than did EC teachers. At

**Table 8**
*Observation Approaches, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Used parent-reported data, including narrative, photos, etc. | 75 | 63 |
| Analyzed students' work product | 38 | 89 |
| Observed students working via videoconference | 41 | 44 |
| Other (please specify) | 16 | 16 |
| None of these | 13 | 6 |

**Table 9**
*Strategies for Creating Limits, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Collaborating & communicating with parents and caregivers | 33 | 28 |
| Failing to set limits or not successfully setting limits | 24 | 18 |
| Encouraging online etiquette | 23 | 31 |
| Providing Grace and Courtesy lessons | 12 | 1 |
| Clarifying expectations for lessons and work | 12 | 29 |
| Relying on parents and caregivers for setting limits | 9 | 3 |
| Leveraging schedules, work plans, work records | 9 | 31 |
| Following child by offering flexibility or choice | 9 | 21 |
| Managing parent interference | 6 | 0 |
| Discussing and communicating issues with students | 6 | 3 |
| Checking in with students one-on-one | 5 | 19 |
| Relying on classroom strategies | 5 | 9 |

the Elementary level, teachers relied on children's engagement with the work itself, along with schedules, work plans, and work records, to provide structure and limits for children. El teachers also employed flexibility and student choice, as well as regular one-on-one check-ins with students.

Because teachers could not directly monitor children's activities or model desired behavior as they would in the classroom, they could only provide parents and caregivers with resources to understand appropriate expectations and had to rely on them to follow through on expectations because children were at home. Both EC and El teachers indicated that placing responsibility for follow through on parents and caregivers was difficult for many families. One EC teacher reported, "I am working to educate parents to set limits at home. I am also helping children understand that I am not physically there, but school [behavior] is still my expectation. Honestly, this part is very hard with primary-age [EC] children." Another similarly commented, "The challenge is that many parents don't have training or mental space/energy to develop the art of giving choice while inspiring and guiding the child to activities that will provide challenge and develop growth." El teachers reported similar challenges, with one saying, "It was a lot of struggling through working with parents. Parameters around live meetings were VERY successful, including setting rules together, but helping children accomplish work asynchronously was difficult." Another El participant added, "[Setting limits] is impossible to do without parent support. Additionally, not all children participated. Because the district did not require children to turn in or complete assignments, [enforcing expectations] was nearly impossible without parents."

### *Experiences With Nature*

Teachers relied heavily on families to facilitate experiences with nature; over 80% of respondents at both levels encouraged parents and caregivers to spend time with children outside (90% for EC, 85% for El), while more than three-quarters designed outdoor activities for children (76% for EC, 83% for El). Providing electronic resources about the natural world was a strategy widely employed by all teachers surveyed, and El educators were even more likely to do so (86% for El, 69% for EC). The previously discussed attitudes about the appropriateness of technology in Montessori classrooms likely helps explain the relatively lower level of reliance on nature-oriented electronic resources for EC teachers.

### *Adaptation for Atypical Development*

When asked how they were adapting lessons and activities for children with disabilities, participants were most likely to say that they provided additional one-on-one contacts via phone or web meetings and increased support for family members who were caring for the learner (see Table 10). Just over half of respondents at both levels indicated they employed these strategies. A substantial portion of teachers reported consulting with special educators to better serve children with disabilities

**Table 10**
*Adaptations for Children with Disabilities, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Additional support for family members caring for learner | 60 | 51 |
| Provided additional one-on-one contacts via phone or web meetings (more than other students) | 55 | 59 |
| Consulted with special educators to provide appropriate learning services online | 35 | 46 |
| Consulted with service providers (e.g., occupational therapists, speech language pathologists, or physical therapists) to help carry over specific goals into academic lessons online | 30 | 21 |
| Provided physical materials | 25 | 30 |
| Revisions to learner's IFSP, IEP, or BIP | 5 | 21 |
| Other (please specify) | 13 | 11 |
| Not applicable | 49 | 7 |

*Note*. IFSP = individualized family service plan; IEP = individualized education plan; BIP = behavior intervention plan.

through providing appropriate learning services online; a slightly smaller contingent reported consulting with service providers like occupational therapists and speech language pathologists. In describing work with special educators, one survey respondent said, "As we do in the classroom we adapt our approach to meet each child's needs. We adapted on-the-go to individual students." Adaptations reflect an attempt to honor the Montessori credo of "follow the child" even within the remote-learning context (Montessori, 2012, p. 7). Less than a third of participants at either level reported supplying children with physical materials as an adaptation. Approximately one-fifth of El respondents said they had revised children's individualized education plans (IEPs), while only 5% of EC respondents said they had done so.

**Actions**

The Montessori logic model describes key actions that children should engage in when the appropriate resources are available. Teachers in our survey described their approaches for facilitating these actions for their students.

***Choice***

We relied on open-ended responses to allow for wide-ranging responses regarding how teachers incorporated the crucial Montessori concept of giving children choices in their learning. Table 11 illustrates the percentages for each of the choice strategies mentioned. It shows that teachers at the El level incorporated a wider variety of choice strategies for their children than EC teachers did, with verbatim comments suggesting that significant choice was simply difficult to implement for the youngest children. At the El level, though, roughly half of teachers allowed students to choose which work to do in general, or at least in select areas. A smaller but still sizable number of El teachers also leveraged technology to facilitate student choice.

When we examined the verbatim responses, additional details emerged. Specifically, many teachers mentioned that children could choose the order in which to complete assignments, when to take breaks, and when to work during the day. Some teachers reported that children could opt in or out of participating in some activities. Even so, teachers were often unable to offer

**Table 11**
*Strategies for Allowing Student Choice, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Allowing students to choose which work to do | 37 | 46 |
| Making work optional | 14 | 13 |
| Leveraging technology | 14 | 21 |
| Involving parents & caregivers | 14 | 6 |
| Allowing students to choose the time to do their work | 10 | 15 |
| Offering a variety of work to choose from | 10 | 12 |
| Offering choice in select areas (enrichment, cultural, research, follow-up) | 6 | 57 |
| Incorporating little or no student choice | 6 | 1 |
| Allowing choice of books & reading materials | 5 | 7 |
| Allowing choice in how to demonstrate learning | 5 | 12 |
| Choosing the order for completing work | 3 | 3 |
| Offering flexibility to meet individual needs | 3 | 0 |
| Incorporating unstructured time | 3 | 1 |
| Leveraging choice tools (bingo, choice boards, menus, etc.) | 3 | 15 |
| Scheduling opportunities for children to show & tell | 3 | 0 |
| Allowing students to use materials available at home | 1 | 0 |
| Requiring or assigning some work | 1 | 10 |
| Grading not provided | 0 | 3 |
| Leveraging work plans | 0 | 7 |

as much choice in distance learning as they could in the classroom. An EC teacher commented:

> *This was the biggest change in distance learning. In order to plan lessons or activities with multiple children, there was very little choice involved. There were some choices that children [were] able to make in their work at home: which three-part cards they used or which story prompt they wrote from, etc.*

An El teacher had similar sentiments:

> *Without access to the full spectrum of materials we have in our classroom, I found it difficult to provide children with as much choice as they typically have, but they could still decide which works (from a narrower range of options) they wanted to complete and when.*

***Real-Life and Manipulative Materials***

The use of hands-on didactic materials is one of the hallmarks of the Montessori Method; Montessorians have long eschewed digital resources in favor of analog materials. The experience of distance learning in spring 2020 seems to reflect this preference. When asked how they were using Montessori materials in distance learning, the most common response was that they were providing instructions and templates for families to replicate Montessori materials at home. More than three-quarters of EC respondents (i.e., 77%) and almost two-thirds of El respondents (i.e., 65%) indicated they had done this. Nonetheless, a substantial proportion of respondents reported they used digital versions of Montessori materials for children to manipulate electronically. Not surprisingly, this response was more common among El participants (60%) than EC participants (49%). Less than a quarter of respondents at either level reported allowing children to borrow materials from school to use at home (17% for EC, 20% for El).

Some teachers reported using online apps to organize lessons and schedules, including Google Classroom, Microsoft Teams, ClassDojo, Seesaw, WhatsApp, Skype, and brightwheel. However, teachers reported that these programs sometimes presented challenges for families because they required access to printers and ink, as well as sufficient Internet speed at home for staff and families. Survey respondents indicated some sensitivity to families' limited capacity to prepare manipulative materials, with one participant noting, "We had many activities using materials they would have around the house, but tried to avoid work that required parent preparation or cost."

Overall, this experience does not seem to have had much of an impact on participants' attitudes toward technology; more than half of participants at both levels reported that their feelings about the use of technology in Montessori classrooms remained about the same as before the pandemic (58% EC, 53% El). Other EC educators were fairly evenly split: 24% were less favorable toward technology and 18% were more favorable as a result of distance learning. Conversely, almost a third (31%) of El educators reported developing a more favorable attitude toward technology, with just about half as many (16%) describing their attitudes toward technology as less favorable as a result of distance learning. These results seem consistent with differences in views on technology evident before the pandemic when comparing EC and El levels.

***Collaboration and Peer Teaching***

As Table 12 shows, teachers at both the EC and El levels were highly likely to report that they provided virtual social time, like having lunch together with children over Zoom, as a way for children to interact with their classmates; almost two-thirds of EC participants and more than three-quarters of El participants reported utilizing this strategy. The majority of respondents also held circle time virtually, though this was a little more common at the EC level. About one-third of El participants said they provided group projects; not surprisingly, this was less common at the EC level. Online discussion boards were not widely used at either level. El teachers also reported holding book groups and readers theater, which involves reading a script adapted from a book. One El teacher had group meetings in Minecraft. Teachers at both levels reported using Flipgrid and encouraging parents and caregivers to have virtual playdates.

Distance learning created obstacles to the Montessori traditions of collaboration and peer teaching, which may be why so much emphasis was placed on social connections rather than academic collaboration. As one survey participant put it, "They have no peers to work with!" Another stated, "One of my biggest frustrations in remote learning was that classroom norms around peer teaching and helping disappeared, so students came to me, their teacher, with problems, rather than seeking out a peer first."

**Table 12**
*Opportunities Provided for Children to Collaborate*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Circle time | 69 | 54 |
| Virtual social time (e.g., having lunch together over Zoom) | 64 | 79 |
| Group projects | 16 | 36 |
| Discussion boards | 9 | 16 |
| Other (please specify) | 17 | 31 |
| None of these | 11 | 11 |

***Conflict Resolution***

Teachers reported that support for conflict resolution was not widespread during distance learning. Less than one-fifth of respondents at either level (14% EC, 19% El) reported providing access to a virtual Peace table or other designated venue for students to resolve conflicts. Almost one-third of EC respondents (31%) indicated that this support was not needed because children were not gathering; only 16% of El respondents indicated the same.

***Artistic Self-Expression***

Generally, the experience of distance learning appears not to have had a tremendous impact on children's access to artistic self-expression. A little more than half of survey respondents at both levels (51% EC, 56% El) indicated that children had about the same number of opportunities to express themselves artistically as they did before the pandemic. The remaining respondents were fairly evenly split about whether the situation created more or less opportunity for artistic self-expression than when students were in school (19% EC and 21% El said more; 21% EC and 24% El said less).

***Freedom of Movement in Classroom***

Although freedom of movement is an important activity in Montessori classrooms, distance-learning arrangements were not conducive to teachers facilitating it. Thus, for the purposes of this survey, as previously noted, the concept was expanded to the broader notion of independence when inquiring about the degree to which families supported such activities. Many teachers of older children intentionally planned for work that children could accomplish independently; one said, "Everything I assigned as work was intended to be independent work, and did not rely on adults for the work to be understood and completed."

Clearly, variety exists across teachers' experiences and children's age levels. One teacher commented that "it was really us trying to convince parents to let the children be independent." Many comments related to strategies for helping parents and caregivers encourage independence in their children, with one saying, "My goal is to give every parent a mini Montessori training to empower them in their homes." Teachers believed that families needed to be reminded to "allow for mistakes and self-correction" and only "provide guidance when needed."

***Maintaining the Environment***

Generally, teachers seemed to feel that children had fewer opportunities to participate in caring for their learning environment during distance learning than they had when physically attending school. This trend was especially pronounced at the EC level. When asked if children had more, fewer, or about the same number of opportunities to maintain the environment at home during distance learning as they had at school, more than half of EC participants said children had fewer opportunities to maintain the environment (18% said more, 28% said the same, 54% said less). Conversely, El participants were about evenly split among the three choices (32% more, 31% same, 37% less). Although we did not explore the reasons for limited involvement of children in maintaining the environment in detail, one possible explanation suggested by the qualitative analysis that follows may be that caregivers were less equipped to provide real opportunities for the younger children to have responsibilities around the home during distance learning. Creating such opportunities requires significant patience, as well as appropriate tools, both of which may have been in short supply while families sheltered at home.

Nonetheless, qualitative survey data indicate that many teachers believed they did what they could to provide support for families in this area: "In my weekly emails to parents I tried to suggest ways the students could help around the house. I included 'chores/helping'

in their weekly planning grid, so they had a space to check each day." It is worth noting that survey responses reflect only educators' perceptions of what was or was not happening at home and may or may not provide an accurate picture of what families were doing with regard to care of the environment. EC teachers reported providing support for parents and caregivers in setting up their homes; one participant said, "I had sent out suggested physical setup at home of a number of Practical Life works to be rotated. I also would email helpful articles to assist parents, as they worked through this unusual time." Others expressed understanding for parent and caregiver stress.

**Goals**

Based on the children's actions when given appropriate resources, the Montessori logic model outlines anticipated outcomes of Montessori education. Overall, teachers' feelings about their ability to uphold Montessori principles during distance learning were mixed. The largest group (47% for EC, 44% for El) felt they had done so moderately well, but the next-largest group (32% for EC, 28% for El) felt they had done only slightly well. A relatively small proportion (14% for EC, 22% for El) said they had done very well or extremely well upholding Montessori principles.

In terms of specific goals, participants rated their perceived effectiveness in working toward each outcome on a scale of 1 (*not effective at all*) to 5 (*very effective*; see Table 13). They reported feeling moderately effective in working toward the seven Montessori outcomes identified in the logic model: self-discipline, purposeful activity, sustained focus, compassion for others, positive attitude toward school, confidence and initiative, and becoming a contributing member of society. For teachers in both age groups, participants appeared to feel that, of these seven Montessori outcomes, fostering a positive learning environment was where they were most successful, while fostering sustained focus was most challenging. According to the ratings provided, these results suggest that, overall, survey participants felt moderately effective in achieving the goals of Montessori education via distance learning. In their open-ended responses throughout the survey, participants provided further insights into their feelings about their effectiveness in achieving expected goals. We provide perspectives related to the top four goals in the sections that follow.

***Positive Attitude Toward School***

While educators felt most positive about their ability to foster their students' positive attitude toward school, this was no easy task. One teacher reflected on how much parents and caregivers contribute to accomplishing the desired outcomes of Montessori education during distance learning: "They have to oversee the moment-to-moment learning, help students maintain focus, make appropriate choices, help with work, and maintain a positive attitude. [That is] a lot."

***Purposeful Activity***

Qualitative survey data regarding purposeful activity, the second strongest outcome, revolved around children having meaningful opportunities to contribute to home life. Teachers provided parents with suggestions for ways to help around the house and for setting up a dedicated workspace. Children were encouraged to help in the kitchen, to water plants, and to be responsible for their own self-care as needed—in other words, to engage in activities of daily life. One participant reported that "many of the children would cook meals for the family, independently."

**Table 13**
*Perceived Effectiveness on Child Outcomes, by Level Taught*

| | Early Childhood | | Elementary | |
|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* |
| Positive attitude toward school | 3.62 | 0.86 | 3.44 | 0.82 |
| Purposeful activity | 3.23 | 0.84 | 3.37 | 0.73 |
| Confidence and initiative | 3.09 | 0.89 | 3.21 | 0.72 |
| Compassion for others | 3.09 | 1.02 | 3.16 | 0.97 |
| Contributing member of society | 2.96 | 0.89 | 3.03 | 0.95 |
| Self-discipline and knowledge | 2.86 | 0.86 | 2.96 | 0.80 |
| Sustained focus | 2.73 | 0.92 | 2.75 | 0.84 |

***Confidence and Initiative***

In the area of confidence and initiative, teachers emphasized talking about positive choices with children, developed and suggested lessons that were self-correcting, and talked with families about the connection between confidence and independence. One teacher reported fostering confidence by giving children opportunities to share their work with their peers on Zoom: "This gives a sense of pride when they are able to say 'I did this by myself.'" Another teacher focused on initiative, "encouraging self-made projects, asking them how they could solve the problems of online learning, scaffolding to their independence level when needed." Many of the responses to the survey's open-ended question about independence connected to the idea of confidence and initiative and described strategies teachers employed in this regard. To set children up for success, teachers helped students in "making plans for getting work done and different strategies." As one teacher described it, "We offered ideas for the child to wrestle with and figure out on their own, ex: exploration of six feet social distance: [children were to] make a line of objects six feet long and send teacher a picture." One teacher even explained that they were "at times sending home work that erred on the side of below level so students could build independence and confidence," and another teacher was sometimes "reminding [students] of their skills and abilities."

***Self-Discipline***

Teachers expressed that they needed to maintain flexibility and empathy in their commitment to promoting self-discipline for children during distance learning. Responses to open-ended survey questions reflected a balancing act between providing support for families in this area and recognizing that expectations at home might have to be different from expectations at school. Many teachers reported providing parents and caregivers with emails, videos, or Zoom training on how to support independence and self-discipline. Teachers would encourage parents and caregivers to remind children that "parents had their own work to do." Nonetheless, in many cases, the social-emotional needs of the family took precedence:

> *We found that we needed to be more understanding of the parents' need to maintain their household in the way that their emotions (as impacted by the pandemic) would allow them. We observed many parents doing things for the children that the children were totally capable of doing, but we realized it was the parent's need to maintain some control and order over this situation, so we usually had to let it be.*

As another teacher put it, "We learned quickly that school at home could never be a one-size-fits-all experience in terms of independence."

***Perceived Parent Impact on Self-Discipline, Initiative, and Confidence***

Several teachers commented on how families influenced their children's self-discipline, initiative, and confidence, often unintentionally interfering with these goals. One said she "reminded parents of the independent nature of Montessori and that children should be able to independently do all these lessons as well as choose the work they were interested in." In providing examples of the challenges, one teacher commented that "other parents were less inclined with independence." Another said,

> *Fostering [independence] in a remote-learning format, however, was challenging, because some parents felt they needed to "take charge" and tell children exactly what to do when. In addition, I think it was hard for some children to get into "work mode" when they were not in an environment specifically prepared to engage them in developmentally appropriate work. Not having the positive support of peer learners was also a challenge for some children.*

***Teacher Perspectives on Parent and Caregiver Successes and Challenges***

Because caregivers were an integral part of the distance-learning process as children learned from home, we explored teachers' perspectives about parents' and caregivers' successes and struggles with 13 Montessori resources and actions included in the logic model. Table 14 breaks down the percentage of teachers who listed each of these items as one of the top three elements families were most successful in implementing at home during distance learning, while Table 15 shows the percentage of teachers who listed each of these items as one of the top three elements families needed the most support with during distance learning. Teachers believed the top successes for both the EC and El parents and caregivers included experiences with nature, use of

**Table 14**

*Top Three Elements of Montessori Education in Which Families Were Most Successful, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Experiences with nature | 61 | 45 |
| Artistic self-expression | 45 | 29 |
| Use of real-life and hands-on materials | 42 | 37 |
| Positive emotional climate | 39 | 32 |
| Choice | 27 | 34 |
| Delivering individualized instruction | 18 | 32 |
| Adaptation for atypical development | 16 | 13 |
| Care of the learning environment | 13 | 8 |
| Independence | 12 | 31 |
| Clear expectations/freedom within limits | 9 | 15 |
| Sustained focus | 4 | 8 |
| Ordered environments | 3 | 5 |
| Collaboration with peers | 3 | 6 |
| Conflict resolution | 0 | 0 |
| None of these | 1 | 9 |

**Table 15**

*Top Three Elements of Montessori Education for Which Families Required the Most Support, by Level Taught*

| | Early Childhood (%) | Elementary (%) |
|---|---|---|
| Clear expectations/freedom within limits | 49 | 55 |
| Sustained focus | 46 | 52 |
| Independence | 38 | 34 |
| Delivering individualized instruction | 28 | 28 |
| Ordered environments | 27 | 27 |
| Use of real-life and hands-on materials | 26 | 22 |
| Positive emotional climate | 19 | 18 |
| Collaboration with peers | 14 | 22 |
| Adaptation for atypical development | 12 | 21 |
| Conflict resolution | 9 | 0 |
| Care of the learning environment | 9 | 4 |
| Experiences with nature | 8 | 1 |
| Choice | 8 | 10 |
| Artistic self-expression | 4 | 3 |
| None of these | 0 | 1 |

real-life and hands-on materials, and positive emotional climate. EC teachers also included artistic self-expression as a successful element for parents and caregivers, while El teachers considered offering choice and engaging in individualized instruction as top parent and caregiver successes. In terms of challenges, teachers at both age levels responded similarly; the largest proportion of both groups indicated parents and caregivers needed the most support with establishing clear expectations and freedom within limits, enabling sustained focus, and fostering independence.

## Discussion

This study provides insight into many aspects of the experience of Montessori educators during the pandemic, including their teaching situations, their interpretation and application of Montessori principles, their assessment of their own effectiveness in achieving the desired outcomes of Montessori education, and their perceptions of the successes and challenges of families and children. While much of the shift to distance learning focused on technology, these results reinforce

the importance of human connections for teachers in maintaining relationships with families, sustaining vibrant classroom communities, and connecting with school leaders. Teachers' implementation of hands-on activities surpassed digital ones, despite the emphasis on Zoom and video content. Teachers found ways to add personalization and individualization, even though the use of grade-level or whole-class lessons was necessary more often than teachers desired. Teachers connected with students and students to one another through one-on-one meetings, virtual circle time, and social time. Teachers connected with parents and caregivers to help them create and maintain an effective learning environment for their children, albeit with reportedly mixed results caused by the realities of families' day-to-day circumstances. Nature became a widely embraced balm, according to teachers, providing an outlet for families to spend time together outside and for children to enjoy outdoor activities on their own. Without much support from their schools, teachers tried to incorporate as much of the Montessori experience as possible. Still, they felt that they were able to uphold Montessori principles to only a moderate degree under the circumstances. Clearly, the experience of distance learning resulted in challenges, frustrations, and compromises for teachers, families, and students.

This study suggests implications for Montessori educators and school leaders as they prepare for all children to return to face-to-face instruction. First, parents and caregivers have forged new relationships with educators during the pandemic. While returning to a clearer delineation between school and home may be welcome for many families, parents' and caregivers' responses to the shift may range from a desire to continue to feel more connected to their children's educational experiences to a desire to reduce the responsibility they have shouldered on top of their own commitments during this time. Anticipating and accommodating these varying attitudes can lay the groundwork for continued strong relationships between teachers and parents or caregivers.

Second, children are likely to present unique challenges for educators when returning to the classroom after such an extended absence. As they worked from home, children's distance-learning experiences often allowed less choice and independence than they enjoyed in their classrooms at school, so students' responses to regaining these opportunities will likely require patience and understanding. Some children may embrace a return to independent work; others, to be able to thrive with less adult involvement, may need to gradually relearn to trust their own choices within the Montessori structure. In addition, with families relying so much on technology and having access to fewer opportunities for activity outside of the home during the pandemic, teachers may find that their students' physical capabilities and stamina have suffered, making it more difficult for them to sustain the energy necessary to complete a full work cycle and outdoor play. Children also have lacked access to the specially designed Montessori materials while they have been away from the classroom, so the careful handling that is an integral part of the Montessori experience may need to be relearned, even among older children. Given the varying degree of engagement reported by teachers, it is also likely that children will return to the classroom with a wide range of readiness to progress academically, requiring educators to incorporate an even greater degree of accommodation for variability in their classrooms which, fortunately, are well equipped for these differences.

Finally, teachers will understandably find that the distance-learning experience affects them directly as they return to the classroom. Limited opportunities for direct, extended observation and individualization while children were learning from home may leave them feeling less attuned to the unique needs of the children in their classrooms. Assessing the developmental progress of each child when they come back to school will require teachers to renew their observation skills and be patient as they rebuild rapport with their students. As many teachers felt less able to implement limits on student freedom during distance learning, they may have to consider additional strategies for reestablishing the highly functioning classroom dynamic as students adjust. Understandably, the challenges of teaching children who are learning from home might have taken a toll on teacher morale and energy, even as teachers face yet another challenging transition returning to the classroom. In the end, as human connections have suffered for many people during distance learning, Montessori educators will likely hunger for support, professional connections, and a return to the rich classroom experiences that drew them to the field of Montessori education in the first place. School leaders will need to employ tangible strategies to support teachers transitioning back to the classroom and to demonstrate how much teachers are valued in order to retain experienced educators after they have endured the hardships of the COVID-19 pandemic.

**Limitations**

Although resource constraints and the urgency of the topic dictated the scope of this study, it would have been more robust with a larger and more diverse survey sample. Even so, these study results provide unique insights into Montessori educators' response to the unprecedented distance-learning experience in the spring of 2020 and suggest potential considerations as schools prepare for all children to return to face-to-face learning.

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## Appendix
## Survey Instrument

### Montessori Education's Response to COVID-19 Distance Learning

Q1 Thank you for helping the National Center for Montessori in the Public Sector and the University of Kansas Center for Montessori Research by participating in a research study to understand how Montessori educators have been interpreting and applying Montessori principles to serve children and families during the pandemic. We are using this unique time to understand Montessori adaptation and implementation during distance learning. Use the link below to participate in an anonymous online survey and share it with colleagues who may wish to participate.

You can contact akmurray@ku.edu for more information. This study should take 15 minutes to complete and should not produce any risk or discomforts beyond those encountered in everyday life. This study provides no direct benefit to participants. The next page will outline basic information about the study so that you can make an informed decision about participating. Please review the information statement and click "NEXT" if you consent to participate.

Q2 Montessori Education's Response to COVID-19 Distance-Learning Requirements

### Teacher Survey Information Statement

**KEY INFORMATION** This project is studying how Montessori educators are interpreting and applying Montessori principles to serve children and families. Your participation in this research project is completely voluntary. Your participation will take approximately 15 minutes. You will be asked to complete an online survey. Detailed information on procedures can be found below. This study should not produce any risk or discomforts beyond those encountered in everyday life. We hope that this study will provide insight on Montessori practices as they are translated to a distance-learning environment. This study provides no direct benefit to participants. Your alternative to participating in this research study is not to participate.

**INTRODUCTION**

The Center for Montessori Research at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to better understand how Montessori educators are interpreting and applying Montessori principles to serve children and families. This will entail your completion of an online survey. Your participation is expected to take approximately 15 minutes to complete. The content of the survey should cause no more discomfort than you would experience in your everyday life.

Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of Montessori practices as they are translated to a distance-learning environment. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. Since this is an anonymous online survey hosted by Qualtrics, your identifiable information will not be associated with your responses. It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response.

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail.

Completion of the survey indicates your willingness to take part in this study and that you are at least 18 years old. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429 or write the Human Research Protection Program (HRPP), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email irb@ku.edu.

Sincerely,
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Q3 What was your role in the spring of 2020?

- ○ Teacher (1)
- ○ School leader (2)
- ○ Classroom assistant (3)
- ○ Support staff (4)
- ○ Para educator (5)
- ○ Other (please specify): (6) _____

Q4 What age level of children did you work with in the spring of 2020?

- ○ Primary (ages 2 1/2–6) (1)
- ○ Elementary (ages 6–12) (2)
- ○ Other (4) - Terminate

Q5 [If not Primary or Elementary] Thank you for your interest in this survey. At this time, we are only asking teachers of children ages 2 1/2 through adolescence to provide input. [Go to end of survey]

Q6 Montessori teachers and schools have responded in a variety of ways to the unprecedented challenges of distance learning presented by COVID-19. We need to understand the realities of your world and assure you that there are absolutely no right or wrong answers. We appreciate your open and honest responses and remind you that your name will not be associated in any way with the research findings. Since this is an anonymous online survey hosted by Qualtrics, your identifiable information will not be associated with your responses.

For the remainder of the survey please think about the spring of 2020 when asked about your approach to distance learning.

Q7 To the best of your ability, please focus on distance-learning activities in your school overall across classrooms.

Q8 In the spring of 2020, did you use any distance-learning strategies with your students?

- ○ Yes (1)
- ○ No (2) - Terminate

Q9 Please let us know about your situation and how COVID-19 impacted your Montessori program in the spring of 2020.

Open End

Q10 How much **guidance**, if any, did you get from your school's administration regarding what strategies you were expected to employ for distance learning?

- ○ A great deal (5)
- ○ A moderate amount (4)
- ○ Some (3)
- ○ A little (2)
- ○ None (1)
- ○ Not applicable

Q11 How much **support**, if any, did you get from your school's administration in developing strategies for distance learning?

- ○ A great deal (5)
- ○ A moderate amount (4)
- ○ Some (3)
- ○ A little (2)
- ○ None (1)
- ○ Not applicable

Q12 Which of the following strategies, if any, did you employ for distance learning? Select all that apply:

- ▫ Zoom/video interactions with students (1)
- ▫ Zoom/video interactions with families (2)
- ▫ Read aloud livestream (3)
- ▫ Physical materials/packets for families (4)
- ▫ Electronic learning management systems (i.e., Google Classroom, etc.) (5)
- ▫ Digital devices/other technology provided to families (6)
- ▫ Other (please specify) (7) _____

Q13 What proportion of your students' work time was spent on... (Please slide the indicator to the appropriate percentage.)

Screen-based activities (Zoom meetings, iPad apps, etc) ()

Hands-on activities (Practical Life, reading physical books, working with manipulatives, etc.) ()

Q14 How has this experience of distance learning impacted your attitude toward the use of technology in Montessori classrooms? Would you say that your feelings about technology in Montessori classrooms is now...

- ○ More favorable (1)
- ○ About the same (2)
- ○ Less favorable (3)

Q15 In distance learning, what does it mean to you to "prepare the environment"?

Open End

Q16 What percentage of teaching time during distance learning was devoted to each of the following areas of the curriculum? (Please enter values so that the total will sum to 100%)

Language : _____ (1)
Math : _____ (2)
Sensorial : _____ (3)
Cultural (music, movement, and art) : _____ (4)
Science and social studies : _____ (5)
Practical Life : _____ (6)
Other : _____ (7)
Total : _____

Q17 What was the role of classroom assistant(s) during distance learning, if applicable? Select all that apply.

- ▫ Created video content. (1)
- ▫ Hosted live video interactions (e.g., Zoom). (7)
- ▫ Prepared materials for live video, packets or online programs (e.g., Seesaw). (2)
- ▫ Participated in communication with families or children. (3)
- ▫ Conducted 1:1 check-ins with children. (4)
- ▫ Other (please specify): (5) _____
- ▫ Not applicable (6)

Q18 Which of these instructional approaches, if any, did you employ with students in distance learning? Select all that apply.

- ▫ Each child received personalized assignments, materials, and lesson plans (1)
- ▫ Children received assignments, materials, and lesson plans according to their grade level (e.g, one plan for 1st grade, one plan for 2nd grade, etc.) (2)
- ▫ All the children in my class received the same lessons, materials, and assignments (3)
- ▫ I met one-on-one with each child regularly (4)
- ▫ Other (please specify): (5) _____
- ▫ None of these (6)

Q19 How well do you feel you were able to create a positive emotional climate for learning in a distance-learning environment?

- ○ Extremely well (5)
- ○ Very well (4)
- ○ Moderately well (3)
- ○ Slightly well (2)
- ○ Not well at all (1)
- ○ Not applicable

Q20 Freedom within limits is a key element of Montessori education. How, if at all, did you set limits for children when you were not physically with them?

Open End

Q21 How, if at all, did you facilitate experiences with nature? Select all that apply:

- ▫ Provided electronic resources about the natural world (e.g., National Geographic videos, websites, etc.) (1)
- ▫ Designed outdoor activities for children (2)
- ▫ Encouraged parents to spend time with children outside (3)
- ▫ Other (please specify): (5) _____
- ▫ Did not facilitate experiences with nature (4)

Q22 If applicable, how did you adapt lessons and activities for children with disabilities? Select all that apply:

- ▫ Revisions to learner's IFSP (individualized family service plan), IEP (individualized education plan), or BIP (behavior intervention plan) (1)
- ▫ Provided additional one-on-one contacts via phone or web meetings (more than other students) (2)
- ▫ Additional support for family members who were caring for learner (3)

- ▫ Consulted with special educators to provide appropriate learning services online (4)
- ▫ Consulted with service providers (eg, occupational therapists, speech language pathologists, or physical therapists) to help carry over specific goals into academic lessons online (5)
- ▫ Provided physical materials (6)
- ▫ Other (please specify): (7) _____
- ▫ Not applicable (8)

Q23 How, if at all, did the experience of distance learning change your understanding of the role of a teacher?

Open End

Q24 How, if at all, did you provide children with choice during distance learning?

Open End

Q25 How, if at all, did you use Montessori materials in distance learning? Select all that apply:

- ▫ Children borrowed materials from school to use at home (1)
- ▫ We provided digital versions of Montessori materials for children to manipulate electronically (eg, through an app or website) (2)
- ▫ We provided instructions and templates for parents to replicate Montessori materials at home using common household objects and materials (3)
- ▫ Other (please specify): (5) _____
- ▫ Did not use Montessori materials (4)

Q26 How, if at all, did you provide opportunities for children to collaborate? Select all that apply:

- ▫ Group projects (1)
- ▫ Discussion boards (2)
- ▫ Circle time (3)
- ▫ Virtual social time (eg, having lunch together over Zoom) (4)
- ▫ Other (please specify): (6)
- ▫ Did not provide opportunities for collaboration (5)

Q27 Did you continue to provide support for conflict resolution between students in your distance-learning environment (e.g., with a virtual peace table)?

- ○ Yes (1)
- ○ No (2)
- ○ Children are not gathering (3)

Q28 How, if at all, did you approach observation during distance learning? Select all that apply:

- ▫ Analyzed students' work product (1)
- ▫ Observed students working via videoconference (2)
- ▫ Used parent-reported data, including narrative, photos, etc. (3)
- ▫ Other (please specify): (5) _____
- ▫ Did not engage in observation (4)

Q29 To what extent did you provide opportunities for children to express themselves artistically?

- ○ More than when children were physically at school (1)
- ○ About the same as when children were physically at school (2)
- ○ Less than when children were physically at school (3)

Q30 In your estimation, how much opportunity did children have to help maintain the environment at home during distance learning?

- ○ More than when children were physically at school (1)
- ○ About the same as when children were physically at school (2)
- ○ Less than when children were physically at school (3)

Q31 How, if at all, did you try to foster independence in distance learning?

Open End

Q32 How well do you feel you were able to uphold Montessori principles and values during distance learning?

- ○ Extremely well (5)
- ○ Very well (4)
- ○ Moderately well (3)
- ○ Slightly well (2)
- ○ Not well at all (1)
- ○ Not applicable (6)

Q33 To what extent do you feel you were able to effectively work toward these outcomes for children in a distance-learning environment?

| | Extremely effective (5) | Very effective (4) | Moderately effective (3) | Slightly effective (2) | Not effective at all (1) |
|---|---|---|---|---|---|
| Self-discipline and knowledge (1) | | | | | |
| Purposeful activity (2) | | | | | |
| Sustained focus (3) | | | | | |

Compassion for others (4)
Positive attitude toward school (5)
Confidence and initiative (6)
Contributing member of society (7)

Q34 About what percentage of your families are... (Please slide the indicator to the appropriate percentage.)

0 10 20 30 40 50 60 70 80 90 100

Engaged in distance learning ()

Q35 How, if at all, did you support families in preparing the environment at home for learning?

Open End

Q36 Of these key elements of Montessori education, which are the top 3 that families were most successful in implementing at home during distance learning? (Please select three items)

- Ordered environments (1)
- Delivering individualized instruction (2)
- Positive emotional climate (3)
- Clear expectations/freedom within limits (4)
- Experiences with nature (5)
- Adaptation for atypical development (6)
- Choice (7)
- Use of real-life and hands-on materials (8)
- Collaboration with peers (9)
- Conflict resolution (10)
- Artistic self-expression (11)
- Care of the learning environment (12)
- Independence (13)
- Sustained focus (14)
- None of these (15)

Q37 Of these key elements of Montessori, which are the top 3 where families needed the most support during distance learning? (Please select three items)

- Ordered environments (1)
- Delivering individualized instruction (2)
- Positive emotional climate (3)
- Clear expectations/freedom within limits (4)
- Experiences with nature (5)
- Adaptation for atypical development (6)
- Choice (7)
- Use of real-life and hands-on materials (8)
- Collaboration with peers (9)
- Conflict resolution (10)
- Artistic self-expression (11)

- Care of the learning environment (12)
- Independence (13)
- Sustained focus (14)
- None of these (15)

Q38 In your view, what is the role of families in Montessori distance learning if any?

Open End

Q39 How, if at all, has your approach to family engagement changed as a result of distance learning?

- I am interested in engaging families more in the future (1)
- In the future, I plan to engage families at about same level as I did before the pandemic (3)
- I am interested in engaging families less in the future (2)

Q40 **The next few questions are for classification purposes only. Remember that your name will not be associated with any of your responses. We only use this information to group responses of similar individuals together.**

Q41 Which of the following best describes your Montessori training, if any?

- I do not have any formal Montessori training (1)
- I am currently taking my Montessori training (2)
- I completed an AMS-affiliated training program (3)
- I completed an AMI-affiliated training program (4)
- I completed a MACTE-accredited training program not affiliated with AMS or AMI (5)
- I completed a training program not affiliated with MACTE, AMS or AMI (6)

Q42 Is your school:

- Public (1)
- Independent (2)
- My school is a public school, but I work in a tuition-based primary or infant/toddler program (3)
- Something else (please specify) (4) _____

Q43 Approximately what percentage of your school's students... (Please slide the indicator to the appropriate percentage.)

| | 0 10 20 30 40 50 60 70 80 90 100 |
|---|---|
| Would qualify for free and reduced lunch () |  |

Q44 Approximately what percentage of your school's students... (Please slide the indicator to the appropriate percentage.)

| | 0 10 20 30 40 50 60 70 80 90 100 |
|---|---|
| Are eligible for tuition assistance? () |  |

Q45 Is your school Montessori accredited or recognized?

- ○ Yes (1)
- ○ No (2)

Q46 Please identity your school's affiliation:

- ○ AMS (1)
- ○ AMI (2)
- ○ MEPI (3)
- ○ Other (4) _____

Q47 In which country is your school located?

Q48 In which state is your school located?

Q49 Is your school located...

- ○ In a large city (1)
- ○ In a midsize city (2)
- ○ In a small city (3)
- ○ In a suburb of a city (4)
- ○ In a rural area (5)

Q50 Which of the following ranges includes your age?

- ○ 18–24 (1)
- ○ 25–34 (2)
- ○ 35–44 (3)
- ○ 45–54 (4)
- ○ 55–64 (5)
- ○ 65 or older (6)
- ○ Prefer not to say (7)

Q51 Are you Spanish, Hispanic, or Latino or none of these?

- ○ Yes (1)
- ○ None of these (2)
- ○ Prefer not to say (3)

Q52 With which one or more of the following racial categories do you identify?

- ▫ White (1)
- ▫ Black or African American (2)
- ▫ American Indian or Alaska Native (3)
- ▫ Asian (4)
- ▫ Native Hawaiian or Pacific Islander (5)
- ▫ Other (6) _____
- ▫ Prefer not to say (7)

# Montessori Education at a Distance, Part 2: A Mixed-Methods Examination of Montessori Educators' Response to a Global Pandemic

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***Keywords**: Montessori, distance learning, COVID-19, pandemic, mixed-methods*

**Abstract**: This study offers a contextualized understanding of the distance-learning experiences of Montessori educators and students in the spring of 2020 in the wake of the COVID-19 global pandemic. In this article, we build on results reported in a separate article published in this issue of the *Journal of Montessori Research.* First, we analyzed qualitative data from social media and national virtual gatherings designed to support teachers as they faced the challenges created by the abrupt shift to distance learning. Second, we employed a convergent mixed-methods design to integrate these qualitative findings with the survey results reported in the previous article to provide a richer and more complete perspective on the situation. In our results, we found substantial evidence to support the resilience and durability of the Montessori Method, even in the face of adverse conditions created by a global pandemic. Despite the challenges of adaptation, Montessori educators demonstrated a commitment to the key tenets of Montessori philosophy, such as following the child and employing a holistic perspective on learning and development. While serving the whole child's growth and development remained front and center, Montessori teachers' approach to academics looked very different under distance learning. Still, the ongoing attention to children's social-emotional needs will benefit both teachers and children when they return to the classroom, undoubtedly with lasting effects from pandemic-related isolation and hardship.

Montessori education is a unique approach involving the use of specially designed hands-on learning materials, child-directed work, peer learning, and a carefully prepared classroom environment (Culclasure et al., 2019). Montessori schools were affected by the COVID-19 pandemic, as all schools were in spring 2020. Schools and students around the world faced the requirement to pivot abruptly to distance learning, but this shift left Montessori teachers and children without some of the fundamental tools that comprise the foundation of the Method. This study offers a contextualized understanding of the distance-learning experiences of Montessori educators and students in the spring of 2020 in the wake of the COVID-19 global pandemic.

## Montessori Context

### Foundations of the Montessori Method

Lillard and McHugh (2019a, 2019b) meticulously documented the foundation of Montessori education, stating that "in Montessori theory, the essential elements of education for human development comprise setting *children* free in a prepared *environment* with a specially trained *teacher*; these three features constitute a Montessori trinity" (p. 3; emphasis added). Three aspects making up the Montessori environment aspect of the triad are (a) physical environment, composed of classroom space and contents, including hands-on materials within which the Montessori curriculum for younger students is embedded and which enable children substantial freedom in their activities; (b) temporal environment, which ideally provides children with uninterrupted, 3-hour work periods daily; and (c) social environment, in which children create a classroom community where they interact and rely on their peers as much as, or more than, their teachers (Lillard & McHugh, 2019a). Attempting to replicate these aspects of the Montessori environment in a distance-learning format, presented an understandable challenge for teachers as well as families and caregivers during the rush to abide by stay-at-home orders in the spring of 2020.

### Digital Tools in Montessori Education

Before the pandemic, the Montessori community was just beginning to imagine how digital tools might play a role in the approach, given the historical emphasis on hands-on and real-world activities (Lillard & McHugh, 2019a). Montessori educators tend to discourage the use of screens for the youngest children (under 6) and limit their use for elementary-aged children to research that supplements real-world materials as a way of extending learning beyond classroom resources (MacDonald, 2016). A tendency also exists to equate "classic" Montessori education to classrooms where only those materials originally designed by Maria Montessori are available, which would clearly preclude digital devices (Lillard, 2012, p. 382). Even so, some Montessorians suggest that Dr. Montessori would have welcomed innovative technology and incorporated it into her Method. Virginia McHugh, former executive director of the organization originally established by Dr. Montessori herself (i.e., Association Montessori Internationale), is quoted by Buckleitner (2015) in a chapter entitled "What Would Maria Montessori Say About the iPad?" saying, "[Dr.] Montessori would appreciate the deep, intuitive connection the iPad fosters between content and user, taking working knowledge to another level" (p. 64). In fact, Buckleitner (2015) described Dr. Montessori as "a bit of a geek" when it came to adopting the new technology of her day (p. 64). Some researchers have begun exploring digital versions of Montessori manipulatives to understand the impact of physical manipulatives versus virtual representations. Results suggest that independent work with an app is less effective than when an app is paired with in-person social interaction, but this work is in very early stages (Eisen & Lillard, 2020). Virtual Montessori programs began emerging over the course of the pandemic (Guidepost Montessori, n.d.). However, as the pandemic closed classrooms across the country with little notice, parents and caregivers engaged in face-to-face learning in the spring of 2020 had no clear way of recreating at home the classroom community or the wide array of high-quality materials that enable the extended concentration required for the uninterrupted work cycle.

### Challenges for the Entire Field of Education

Montessori schools were certainly not alone in the rapid shift to a distance-learning format during the COVID-19 pandemic in the spring of 2020. The Learning Policy Institute published a report acknowledging the "daunting challenges" and "huge disruptions" caused by the pandemic for education across the United States (Darling-Hammond et al., 2020, p. v). Many authors in the practitioner literature reported on challenges faced by families and educators in responding to this abrupt shift to distance learning, including mental-health challenges for students and teachers, issues of equity, best practices for distance learning, and resources to support families

(Collins, 2020; Robles, 2020; Schwartz, 2020). A large-scale study of the impact of the shift to distance learning in Switzerland showed that older students (i.e., grades 7–9) were largely unaffected by the school closures in terms of academic learning gains, but younger children (i.e., grades 3–6) demonstrated a slowing of academic growth and an increase in the variability among students. The study suggested that "distance learning arrangements seem an effective means to substitute for in-person learning, at least in an emergency situation, but not all pupils benefit to the same degree" (Tomasik et al., 2021, p. 1). Hoffman and Miller (2020) examined the impacts of school closures on children's physical and mental well-being, noting that "prolonged school closures have been one of the most disruptive forces in the COVID-19 era" (p. 307). As a result, they acknowledge that "students will return to school with even greater needs than before" (p. 307).

### Need for This Study

The challenges reported by the entire field of education affected Montessori schools to an even greater degree because of the unique features of the approach. Montessori education has weathered many storms over its 100-plus-year history, but it is hard to imagine a scenario that would strain the 2,700 U.S. Montessori schools (including roughly 500 publicly funded schools) as much as the distance-learning requirements resulting from a global pandemic (National Center for Montessori in the Public Sector [NCMPS], n.d.). As researchers who study Montessori environments and who have spent a substantial amount of time in Montessori schools, we set out to understand how Montessori educators approached distance learning and consider how it may have affected the educational experiences of Montessori children. The complexity of the issues we examined demanded a mixed-methods approach to provide a more complete understanding of the situation facing educators in the spring of 2020. Thus, we designed a project with three components: a teacher survey that included both qualitative and quantitative data, a qualitative examination of social-media posts in forums created to support Montessori educators, and a qualitative exploration of the discussions among Montessori professionals in national gatherings designed to address distance-learning challenges. Results from the first component, a survey of Montessori educators' response to the global pandemic, are discussed in detail in another article in this issue of the *Journal of Montessori Research* (Murray et al., 2021). Our overarching research question framing this mixed-methods study was: How did Montessori educators interpret and apply Montessori principles to serve children and families in these highly unusual circumstances, given that key elements—primarily, hands-on learning with Montessori materials and learning in a community—were missing?

## Theoretical and Philosophical Foundations

Pragmatism provided the worldview for our approach to this study because it focuses on the consequences of the research in real-world terms (Creswell & Plano Clark, 2018). This problem- and practice-centered orientation is particularly important in light of the very real challenges teachers faced in the spring of 2020, with consequences that will be felt for years. We structured the theoretical framework of this mixed-methods study around the Montessori logic model, which documents the inputs, programming, and outcomes that comprise the Montessori educational process (Culclasure et al., 2019). We focused on the core of the logic model, or the program implementation portion, which helps to "consider and prioritize" the most critical program aspects (W. K. Kellogg Foundation, 2004, p. 5). Figure 1 outlines the resources, actions, and goals that comprise the programming component of the logic model. The logic model provided a framework for designing the survey, for coding and analyzing the qualitative data, and ultimately for the merging of the data in the mixed-methods analysis. The goal of this three-part study was to obtain a more complete picture of Montessori distance education from teachers' own perspectives. Theoretical underpinnings that uniquely apply to the qualitative and mixed-methods components are discussed in the sections that follow.

***Figure 1.***
*Excerpt From Montessori Logic Model (Culclasure et al., 2019)*

| Programming Across Levels | | |
|---|---|---|
| **Resources** | **Actions** | **Goals** |
| Ordered environments | Choose activities of interest | Purposeful activity |
| Broad, interrelated curriculum | Use real-life and manipulative materials | Sustained focus |
| Individualized instruction | Assist and collaborate with peers | Self-discipline and knowledge |
| Positive emotional climate | Resolve disagreements | Compassion for others |
| Clear expectations | Express self artistically | Positive attitude toward school |
| Experiences with nature | Move freely in classroom | Confidence and initiative |
| Adaptation for atypical development | Help maintain the environment | Contributing member of society |

## Theoretical Foundation for Qualitative Analysis

The qualitative data played an important role in addressing the overarching research question for this study. Exploring the qualitative components of this mixed-methods study should answer two research subquestions: (a) What were the issues, concerns, and challenges most often raised by Montessori educators within forums designed to support their transition to distance learning? and (b) How can the Montessori logic model be used as a conceptual framework to organize these issues, concerns, and challenges? Before examining our research methods in more detail, we first outline the theoretical justification for using our two chosen qualitative data sources.

### *National Virtual Gatherings*

Many national organizations for educators supported practitioners by providing resources to facilitate collaboration and information sharing while they made the transition to distance learning (Association for Supervision and Curriculum Development, n.d.; National Association for the Education of Young Children, n.d.; National Education Association, n.d.). One of the authors of this article is on staff at NCMPS, which provided resources, including virtual events, as part of its program supporting the field. NCMPS staff transcribed notes during these gatherings to document the challenges teachers were facing, and these notes became a valuable data source for this study. Because secondary analysis of qualitative data involves the use of data that already exist rather than gathering new information from participants, the process is relatively efficient with no additional burden on participants. Chatfield (2020) also identified challenges in analyzing data collected for purposes beyond what had been intended when the data were originally collected and outlined recommendations for researchers who use secondary data. These recommendations include having a clear focus and being ready to refine it; using a thoughtful sampling process when dealing with large amounts of data; considering issues of quality, credibility, and risk of unintentional harm that vary by data type; and carefully choosing analysis strategies while keeping an open mind (Chatfield, 2020). We approached this aspect of the project with a very clear focus and did not have to implement sampling procedures because the volume of data was manageable. Even though the data had already been disclosed in public forums and presented little risk to participants, concerns related to informed consent sometimes exist with this type of data. Therefore, we considered potential issues of unintentional harm, which we addressed by ensuring data were de-identified. Finally, we followed Chatfield's (2020) recommendation regarding analysis strategies by integrating these data with other data sources to provide a more complete picture.

### *Data from Social Media*

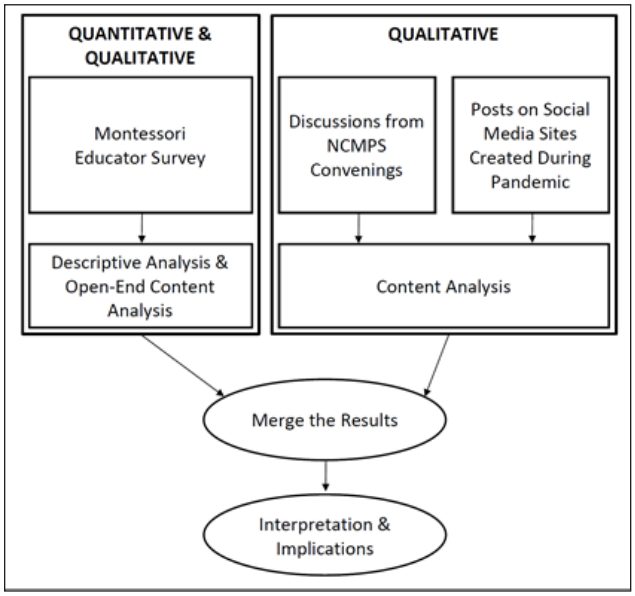
Communities of educators around the world built social-media forums to share support and resources as they rushed to continue serving the needs of their students while pivoting to distance learning (Digital Resources for Distance Learning, n.d.; Global Montessori Network [GMN], n.d.; Higher Ed Learning Collective, n.d.). For the purposes of our study, collecting data in an online discussion forum devoted to Montessori teachers allowed for efficiency, as well as a nonintrusive opportunity for gathering qualitative data through nonparticipant observations of dialogue and reflection by group members (Creswell & Poth, 2017). Social-media data have been used by researchers for many years; one literature review identified 229 qualitative studies of social-media data published from 2007 to 2013 and a subset of 55 studies involving a mixed-methods approach (Snelson, 2016). While these studies are not particularly new, what emerges is a kind of formalization of the field that is evidenced by the recent release of *The SAGE Handbook of Social Media Research Methods* (Sloan & Quan-Haase, 2016). Authors of one chapter in the book admitted that social-media research is not yet a defined discipline but suggested that it is an exciting topic, with much room to use these data to explore novel research questions (Mayr & Weller, 2016). They also recommended recognition of the potential limitations of social media as a data-collection approach, which is why we have chosen to use it as one component of a larger study.

## Theoretical Foundation for Merging Mixed-Methods Analysis

We employed a convergent mixed-methods design to integrate these qualitative findings and separately reported survey results to take advantage of the practical value of combining multiple perspectives to address the overarching research question (Creswell & Plano Clark, 2018). Figure 2 provides a conceptual map of the various components of this mixed-methods project and how they were integrated. Using a mixed-methods approach to compare and combine the databases allowed us to

develop more "complete and corroborated" conclusions (Creswell & Plano Clark, 2018, p. 293).

***Figure 2.***
*Conceptual Map of Mixed-Methods Approach*




## Methods

### Data Sources

As mentioned previously, data for this project came from three distinct sources. The first data source was a teacher survey conducted in the summer of 2020, which captured the experience of Early Childhood (EC) and Elementary (El) Montessori educators as they transitioned to distance learning. Details of the survey research are documented in a separate article. The results from that survey were ultimately merged with the two qualitative data sources described here.

#### *National Virtual Gatherings*

NCMPS hosted several virtual events for Montessori school leaders and educators to discuss challenges in the sudden pivot to distance learning, providing a venue for practitioners to share how they were addressing the situation. NCMPS staff documented challenges, frustrations, and solutions that were expressed by participants during the virtual gatherings, webinars, and workshops NCMPS hosted. These events ranged from webinars and gatherings (termed "convenings") with audiences of more than 100 people to small-group workshops of seven to 10 educators:

- Public convenings—March 25, 2020, and May 5, 2020
- Webinar—April 1, 2020
- Workshops—April 9, 16, 23, and 30, 2020, and May 7 and 15, 2020

For each event, NCMPS staff managed the virtual meeting space, facilitated discussion, and took notes. We analyzed these notes for recurring themes.

#### *Social-Media Data*

The GMN, a private Facebook group attracting over 3,300 members, was formed early in the COVID-19 crisis and had a mission to provide "a platform to offer Montessori to the children of our Montessori schools, support for families and collaboration with Montessori leaders and guides. . . ." (GMN, n.d.). With permission from the group's administrator, we collected posts and comments from the Facebook group's inception on March 18, 2020, through June 13, 2020 to glean emerging information regarding challenges, frustrations, and solutions.

### Analysis

The 1,715 social-media posts and virtual gathering responses were collected and analyzed, including 1,440 items from the Facebook group and 275 items from the NCMPS virtual events. We combined these two qualitative data sources into one database and followed the framework outlined by Andreotta et al. (2019) for harvesting and analyzing data from social media. We started with compiling a body of data, compressing the database along a dimension of relevance (that was the logic model for our purposes), extracting the most relevant subset, and performing qualitative analysis on the subset of data. Initial posts and responses were copied into an Excel file and imported into NVivo software (R1). Initial coding used provisional coding (Saldaña, 2009) based on the Programming Across Levels section of the logic model presented by Culclasure et al. (2019). Additional codes emerged that related specifically to the pandemic situation, including shared resources, administrative topics, community, technology, sharing and locating resources, and teacher emotions. To understand the prevalence of each code within the database, we converted the item counts to percentages of the total number of coded items. Therefore, when reporting percentages, these numbers indicate the percentage of all coded items (i.e., 1,715) that reflected a given code.

In merging the qualitative results with the results of the survey of Montessori educators, we pursued the parallel-databases variant to the convergent mixed-methods design. In the parallel-databases variant, the two research strands occurred simultaneously but were analyzed separately. After analyzing the two strands separately, we merged them in the mixed-methods analysis to leverage the practical value of combining multiple perspectives to address the research questions at hand (Creswell & Plano Clark, 2018).

## Results

### Qualitative Results

While there was substantial overlap with items from the Montessori logic model, the qualitative data revealed important concerns for teachers that were a direct result of distance-learning challenges and that should be highlighted outside of the context of the logic-model framework. The pandemic-related themes that emerged among the coded items primarily dealt with sharing resources, building community, leveraging technology, looking for resources, and navigating teacher emotions (see Table 1). Only teacher emotions require a separate discussion here because these issues could not be addressed within the discussion organized around the logic model.

**Table 1**

*Emerging Overall Themes*

| Overall theme as % of all coded items | % |
|---|---|
| Shared resources | 48 |
| Administrative | 18 |
| Community | 14 |
| Technology | 11 |
| Looking for resources | 8 |
| Teacher emotions | 7 |

#### *Teacher Emotions*

Teachers seemed to have confidence in Montessori education but struggled with translating it through available tools and without the support structure of colleagues in schools. One teacher reported that "what we found was the biggest components of this experiment had already been proven: the Montessori Method. Our guides are experts at the Montessori Method. We found it was only the use of technology that had to be perfected." Perhaps because of this climate within schools, teachers expressed on social media the need for social connections and increased cohesion within schools. Many teachers in the Facebook group described the strain to meet the needs of children and families as schools closed, using terms like "overwhelmed," "whirlwind," "wiped-out," "emotionally and physically drained," "struggle," "fatigue" and "anxiety." One Facebook post summed it up.

> *The struggle is real! We have also provided packets, weekly schedules with lessons for each area (video instruction by teachers) do daily Zooms and weekly one-on-one video calls. . . , but if you have parents that are struggling and kids struggling, it's hard to know what to do when you feel you are doing everything possible. Sometimes you must realize that not every family will participate and be ok with that.*

In response to the expressed frustration, group members made specific suggestions for their peers, such as meditation, online resources, and workshops to manage stress. Several Facebook posts likened the process to an experiment when framing the conversation. One teacher said,

> *You also have to remind yourself and your team, this is an experiment. It will work for some of your children and not others. You will make adaptations. Some plans that you have will not work, and others that you make up in the moment will have the most success.*

During these difficult times, teachers also expressed the need for social connections and increased collaboration within schools. Beyond exploring teacher emotions during this unprecedented time, the logic model provided the framework for understanding the key components of Montessori education as implemented in distance learning, including necessary resources for students, actions taken by children in the class, and goals to be achieved.

#### *Resources*

The top resource theme that emerged in the data from social media and the NCMPS events was "broad, interrelated curriculum" (see Table 2). Spontaneous discussion also included the topics of individualized instruction and positive emotional climate. While it is important to gauge the representation of the logic-model structure within the qualitative data, the real value is in the richness of the discussion itself. The sections that follow provide contextualized responses related to each of the resources in the model.

**Table 2**
*Prevalence of Resource-Related Themes*

| Resource-related theme as % of all coded items | % |
|---|---|
| Broad, interrelated curriculum | 14 |
| Individualized instruction | 7 |
| Positive emotional climate | 5 |
| Experiences with nature | 3 |
| Clear expectations | 2 |
| Ordered environment | 2 |
| Adaptation for atypical development | 1 |

**Broad, Interrelated Curriculum.** Teachers on Facebook shared resources, videos, and links for lesson ideas in Math, Language, Cultural Subjects, and Science. More than half of the files and videos shared on Facebook were Math lessons, followed by Language lessons (~30%). Teachers at NCMPS events reported working on addressing each child's needs, with some teachers creating differentiated lesson plans and packets for each child that covered Practical Life, Sensorial, Language, Math, Cultural Subjects, and Science, as well as art and music.

**Individualized Instruction.** Teachers came to the Facebook group looking for resources on sharing lessons with children. Many offered instructions for creating materials at home to facilitate individualized lessons. Teachers felt comfortable with children reviewing lessons presented in the classroom but struggled with whether or how to present new lessons virtually. One teacher commented:

> *Unfortunately, in this new distance-learning platform, it is impossible to deliver one-on-one, individual quality lessons with no materials for the students to use at home to practice once the lesson has been demonstrated. There are not enough hours in the day when you have a class of 25 kids. We have been prerecording lessons and sending those out, but it takes a lot of prep time and videotaping, along with ensuring the child has what they need to practice at home.*

**Positive Emotional Climate.** On Facebook, teachers shared links for yoga, meditations, journals, social stories on wearing masks, and other activities to support social-emotional development. One teacher expressed the interest in social-emotional learning, explaining "it should be the main focus on your children's academic journey, especially now as they are learning through distance." Another teacher expounded, "Reason 2,457,391 why I love Montessori. The social and emotional development of the child will have the largest impact on a child's potential; human development and academic too." Participants in the NCMPS events also discussed the importance and the challenges to social-emotional development at that time.

**Experiences With Nature.** While many teachers discussed simply encouraging parents and caregivers to get children outside, others shared resources on connecting with nature. These resources included videos of beehives at one school and gardening ideas from another. Teachers also shared resources for virtual field trips. From an EC teacher:

> *Most [of] my morning connection videos were outdoors, and demonstrated activities or explorations they could try at home (while trying to be sensitive and accommodating to the extra challenge that all parks were closed, and many families had limited outdoor access).*

Some Elementary (El) teachers scheduled recess as a part of their virtual day; they "talked about what it was like outside and encouraged/expected each child to go out at least once a day." Similarly, teachers participating in the NCMPS events suggested that parents and caregivers take children outside as much as possible.

**Clear Expectations.** On Facebook, teachers focused on communicating clear expectations of online interactions. One group member said:

> *In the initial emails that went out for the first Zooms that went out, I wrote out a few basic expectations that really helped—to be in a quiet room, to remind the child that there will be other times for socializing (we made other times), to help them practice muting and unmuting themselves. . . . When needed, I reached out privately to parents I needed to sort other expectations that came up. Mostly it is working to tell the kids on the actual video any expectations we ask of them, like to keep themselves on mute and raise their hand in the screen to talk.*

Other teachers tried to provide parents and caregivers with expectations for participation but found it was challenging. While teachers felt they could provide clear expectations, they relied on parents and caregivers

to follow through on these expectations because the children were in their homes. Teachers provided a Google Doc or email home about expectations and shared homeschooling recommendations. In the NCMPS event notes, teachers discussed providing El children with clear expectations about participation and attendance. They provided families with suggestions, such as consistent wake-up times and creating an ordered environment.

**Ordered Environment.** Teachers in the Facebook group considered ways to help families set up materials or shelves at home to establish routines and a learning space for the child. One teacher commented, "We took ideas from many other [teachers] and formulated what we thought would work best, while also trying to replicate the classroom. We asked the parents to provide a work shelf where the children could keep their materials." Teachers suggested ways to set up a dedicated work space; one teacher said, "Home is going to be an extension of the classroom."

Technology was an important component of creating the home learning environment. One teacher commented on the potential disparities in technological resources:

> *We tried to be cognizant of the fact that not all homes are equal in terms of technology. We have seen from the response/feedback of parents that children are using tablets, laptops, desktops, phones. I believe almost all homes have at least a cell phone—not all but most. Printers are helpful. For those families without immediate access to a printer, we have printed the weekly workbook and left it and other resources in a giving basket near our front door.*

Some NCMPS event attendees provided parents and caregivers with images or videos on how to create a clear, ordered workspace in the home environment. Teachers seemed to recognize the challenges parents and caregivers faced; one participant lamented,

> *Ugh! We didn't have time to do any training, and it was always a work in progress. In the few days we had to get School at Home up and running, we had to focus on preparing the digital environment. We did check with each family about their technology and supported some with loans of computers from school, and always provided tech support. But we did very little to help families know how to set up their spaces.*

**Adaptations for Atypical Development.** The Facebook groups did not engage in any direct discussion about adaptations for atypical development, but some participants in the NCMPS events mentioned support from social workers, reading interventionists, and other specialists. Several teachers reported no guidance or support in this area from schools and districts.

***Actions***

The typical actions of Montessori children outlined in the logic model were also evident in the qualitative data from the NCMPS events and the Facebook group. Of the 1,715 items coded, the largest theme that emerged under the heading of actions related to children using real-life manipulatives (see Table 3). Other actions were present in much smaller numbers within the data (i.e., choosing activities of interest, maintaining environment, expressing self artistically, moving freely in the classroom) or were practically nonexistent (i.e., collaborating with peers, resolving disagreements). Discussion of the contextualized data is provided here for each action.

**Table 3**
*Prevalence of Action-Related Themes*

| Action-related theme as % of all coded items | % |
|---|---|
| Use real-life and manipulative materials | 27 |
| Choose activities of interest | 3 |
| Express self artistically | 1 |
| Help maintain environment | 1 |
| Move freely in classroom | 1 |
| Assist and collaborate with peers | <1 |
| Resolve disagreements | <1 |

**Real-Life and Manipulative Materials.** Teachers on Facebook shared links to videos and to PDFs of manipulatives. They also shared lists of supplies for parents and caregivers and suggestions for lesson extensions to build on the basic curriculum while engaged in distance learning. In addition to digital recommendations, teachers in the Facebook group also shared paper packets and emailed PDFs of activities. They provided suggestions on how to make materials from pony beads, pipe cleaners, cardboard, toothpicks, popcorn kernels, embroidery looms, and muffin tins. One group member said:

> *We made some videos where we showed a material and then gave ideas on how to closely replicate it at home. We post these videos on Saturday before the week the lessons are presented so the children will have the material if*

*their parent made it. We also include a link to examples of homemade materials.*

Early in the pandemic, teachers in the NCMPS events framed the challenge: "What materials would you bring to a desert island?" or "How many ways can the stamp game be used?" Some participants discussed making packets and materials themselves, while others considered loaning Montessori materials or providing instructions for parents and caregivers to make replicas of Montessori materials from items at home.

**Choice.** Teachers said that children had some choices throughout the day. For example, they could opt in or out of participating in activities, choose when to take breaks, and decide when to work during the day. Similar to the classroom, children could choose their work; however, in distance learning, this choice was often facilitated by choice boards, work plans, menus, bingo cards, voting, or picking a book to read. One teacher said, "We talk about our choices for the day and say every time, 'This is school, you are in charge of your choices, you can follow me, or make your own choices. Let's come up with ideas for the day. . . .'" Teachers looked for opportunities to provide children with choices in their connections with school and work options. One teacher said,

*When we finish a segment presentation, we use the same type of wording we do after we present in the classroom. "I am done now, you can keep working on this work for as long as you want. . . . When you are finished, remember to think of what you want to do next. Will it be counting? Will it be polishing? Will you write your friend a letter? You will think and decide. Remember, only one work out at a time."*

Teachers in the NCMPS events discussed providing students with options for daily work through online classrooms. However, some teachers acknowledged the limitations of the range of possible choices to provide to children learning at home.

**Artistic Self-Expression.** Artistic self-expression is another topic that was not discussed much in the Facebook group, but some teachers shared resources and videos of art activities focused on specific artists or materials. Participants in the NCMPS events did not discuss specific plans for art experiences.

**Maintaining the Environment.** Social-media data suggested that engaging children in maintaining the environment was a challenge for teachers to support from afar, but teachers did not discuss this topic much. Establishing an ordered environment, as discussed previously in the Resources section, received much more attention. Maintaining the environment fell to families, who faced other competing demands and stresses placed upon them during school closures. A few teachers provided videos and pictures, and some teachers held virtual meetings on the subject. During the NCMPS events, teachers described plans for maintaining the in-person environment after they returned to the classroom, including new Grace and Courtesy lessons and extra sanitizing.

**Collaboration, Peer Teaching, Conflict Resolution, and Movement in the Classroom.** Interactions among peers during distance learning seemed to be focused more on helping children feel connected to one another and their teachers and on fostering a positive attitude about school, rather than on collaborative academic work. Although distance learning resulted in limited spontaneous conversation on peer teaching, collaboration, and conflict resolution on social media or in NCMPS events, some El teachers reported holding book groups or readers theaters. One El teacher had group meetings in Minecraft. Teachers at both EC and El levels reported using Flipgrid and encouraging parents and caregivers to have virtual playdates. A small number of teachers mentioned missing peer learning and support, and none cited helping to resolve disagreements. Because children's homes became the classroom, freedom of movement was not a topic of discussion.

### *Goals*

Qualitative data did include some discussion of the goals of Montessori education, as outlined in the logic model. Table 4 shows the prevalence of each goal: the top two goals were purposeful activity and self-discipline and knowledge. The other goals were discussed less frequently

**Table 4**
*Prevalence of Goal-Related Themes*

| Goal-related theme as % of all coded items | % |
|---|---|
| Purposeful activity | 5 |
| Self-discipline and knowledge | 3 |
| Positive attitude toward school | 2 |
| Compassion for others | 2 |
| Contributing member of society | 2 |
| Confidence and initiative | 2 |
| Sustained focus | 2 |

on social media and at NCMPS events. The nature of the items related to Montessori education goals is discussed in the sections that follow.

**Purposeful Activity.** In the Facebook group, teachers discussed options for using purposeful activity to encourage parents and caregivers to allow children independence at home, which often meant helping with cooking and other household tasks. One teacher commented, "I am not doing online sessions nor sending work home. But I am suggesting real-life experiences (laundry, writing a letter to a friend, helping in the kitchen) for parents to focus on." Similarly, teachers in the NCMPS events suggested families involve children in meal preparation and activities of daily life at home.

**Self-Discipline.** Some teachers on Facebook expressed concerns about overreliance on adults during distance learning; other teachers took issue with their peers' language:

> *I see the Montessori disappearing from these conversations in terms of "parents want them to _____" and "I tell parents to have them do _____." In our environments, children have an array of activities to choose from, independent of an adult. We need to find a way forward with following the child, or we can't call this Montessori. It might be educational or valuable in some way, but it's not supporting development the way we were trained to do.*

Some teachers recognized that being independent and self-disciplined in this time was an essential part of stay-at-home life and that previous experience with independence at school was helpful. One teacher described the realization some parents and caregivers had in this regard:

> *[The children] had to have independence [because we have] a lot of working parents, and I didn't ask for or expect any parent help. I explained as much when I was contacted by parents, some of whom were frustrated by their children's inabilities. (It was a good chance for them to understand their children.) Choice and time and experience were explained, but at a level appropriate for each child.*

However, teachers also expressed the need for parent or caregiver communication and support to help the children develop self-discipline. Many teachers reported providing families with emails, videos, or Zoom training on how to support independence and self-discipline. One teacher commented,

> *Because of these developmental differences, we learned quickly that School at Home could never be a one-size-fits-all experience in terms of independence. We tried to partner with parents, to add more choices, to build in more projects, and to engage with students one-on-one more often in order to help them conceptualize how they want to use their time.*

Teachers in the NCMPS events and on Facebook discussed ways to encourage self-discipline, such as setting up office hours to discuss how to encourage independence or arranging virtual classrooms so children could log in independently, with assignments posted at the same time each week. Some teachers provided a great deal of technology support, and older siblings often supported younger children in this regard.

**Positive Attitude Toward School.** Much of the discussion in the Facebook group about fostering a positive attitude toward school revolved around maintaining connections among students. Teachers discussed tools for engaging with children as a group to maintain community and they shared ideas for virtual group time to help children feel connected with each other (e.g., songs, games, virtual field trips, read-alouds). They also encouraged allowing children to express feelings in virtual class meetings. One teacher listed her goals to help build a positive climate: "Help kids understand that everyone is struggling. Address trauma/anxiety about illness. Normalize a wide range of experiences." Teachers also used regular Zoom meetings to continue routines and traditions, such as birthday and graduation rituals. As one teacher noted, "I am sure my students got a sense of security seeing me and their classmates on a daily basis. The routine is important for them, especially in their crazy times." Similarly, teachers in the NCMPS events prioritized relationships with children to encourage positive attitudes toward school through communicating with them on Zoom, planning smaller group meetings, or encouraging the use of journals to share feelings.

Teachers also recognized the importance of families' maintaining a positive connection to school. They engaged parents and caregivers in ongoing communication through emails, Zoom happy hours, newsletters, videos, and calls. They also shared articles, memes, and videos on how to support children in

challenging times, including stories about why school is closed or why people wear masks. One teacher described the results of these efforts:

> *We have really seen the value of connection and support our families and our guides have experienced during this uncertain and troubling time. We may make some additional modifications; however, what we have created is a good alternative—not a preferred alternative, but a good alternative.*

**Compassion.** While some teachers shared resources, links to videos, and articles for parent supports, teachers did not specifically discuss compassion much. In fact, limited opportunities for peer interaction reduced teachers' focus on this particular outcome.

**Contributing Member of Society.** Although the number of items in this area was relatively small, most of the Facebook posts with a focus on broader societal needs were related to Earth Day resources because of timing. A few teachers asked for help in how to support health-care workers. Some teachers also encouraged children to help with chores at home or assist in younger children's classrooms.

> *Teachers of younger children—infant/toddler communities through Children's House age—have said that having [Elementary and older] children join their Zoom circle time to read stories or to show their latest projects has been a big hit. . . . Perhaps there are ways of expanding on this idea, like having groups working on/creating a play or presentation for the younger children or to take the show on the road and do virtual visits to nursing homes.*

The only mention of this topic in NCMPS events was related to an adolescent class working on passion projects and community service.

**Confidence and Initiative.** While this goal was not the focus of a great deal of discussion, a few teachers shared experiences with children: "My students are creating their own videos, too. . . . They want them embedded in our class website. (I'm still trying to figure the logistics of that one out. . . .)" Teachers emphasized support and independence, talked about positive choices with children, developed and suggested self-correcting lessons, and educated parents and caregivers on the connection between confidence and independence. Confidence resulting from independence was also discussed.

**Sustained Focus.** While the topic was not discussed as often as other goals, teachers expressed that supporting sustained focus for children, especially young children, was difficult:

> *I guess my biggest problem is that they don't want to sit down and do any "seat work." I've sent home a variety of options, including cards to match (less "paper" work); however, the parents/children are just having a difficult time with sitting down and doing focused work. I think they are looking for more hands-on ideas that wouldn't be included in a packet from school. So I guess I am looking for things they can do with what they have on hand. . . .*

Teachers suggested using Zoom to "Zoom in and Zoom out," to briefly check in with a student and then give them space to work, similar to the dynamic in the classroom during work time:

> *Follow basic Montessori principles of what the child needs, provide balance, and repeat that routine over and over. All humans do well with a routine; it feels safe and right. We also try our best to balance presentations so we are focused, moving, exploring, and creating all in one Zoom.*

Having analyzed the qualitative data from the NCMPS events and the social-media comments, we now turn our attention to synthesizing the results and discussing implications.

**Integrating Survey and Qualitative Results**

The joint display tables provided in Appendices A through D illustrate the degree of convergence between the survey results and the qualitative data. As we merged these two data sources, we saw approximately half of the elements fully converging, about one-fourth diverging only in terms of the element's prevalence, and the remaining one-fourth of the elements partially converging in other nuanced ways. No fully divergent evidence emerged. The differences we found in prevalence were not surprising considering that the survey responses were prompted according to topics of interest, and the qualitative data focused on the types of issues teachers looked to their peers to address. With so much consistency in the findings, we gain confidence in incorporating the rich, qualitative insights into the survey results.

In terms of the overall distance-learning experience, all examined elements converged fully (see Appendix A). Both data sources supported broad participation in distance learning and highlighted the unprecedented use of technology by Montessori teachers. Another converging finding was that high levels of stress, combined with low levels of school-based support, required teachers to seek assistance from one another to cope with the extraordinary challenges they faced. We now examine the merged results in more detail.

***Resources***

In terms of the resources necessary for effective Montessori educational environments, the qualitative and quantitative results emphasized teachers' efforts to create a positive emotional climate and provide experiences with nature (see Appendix B). Somewhat diverging results emerged when, despite the energy teachers invested in establishing a positive emotional climate, survey results indicated that teachers felt only a moderate level of success. Teachers' feelings of limited success were not evident in the NCMPS events and social-media comments. The findings about facilitating experiences with nature also diverged somewhat. Survey results suggested families excelled in this area, but only a relatively small number of nature-related comments appeared in the qualitative data. Perhaps this is an indication that teachers were not seeking support in this area because parents and caregivers were particularly successful.

Clear expectations and the resources of a broad, interrelated Montessori curriculum seemed to be the foundation of the distance-learning experience. Both qualitative and quantitative data converged, indicating that Math and Language comprised the bulk of distance learning, with some attention to creating connections with Science, Cultural Subjects, and Practical Life. Teachers strived to established clear expectations as they facilitated students' experiences with the curriculum, but close collaboration with families was necessary. Teachers worked to set expectations for the virtual learning environment but relied on parents and caregivers to set expectations for the physical learning environment when the children were working on their own and not engaged in virtual activities with their teachers. Teachers keenly felt the limits of their power in this area but shared these concerns more in the survey than in the qualitative forums.

In both qualitative and quantitative data, two resources emerged as the greatest challenges in distance learning: ordered environments and individualized instruction. Ordered environments, in particular, required partnerships with families, and teachers did not always feel successful in providing this support because they were limited in what they could do from a distance. Again, these distance-learning challenges were more prevalent in the prompted survey responses than in the open forums. Regarding individualized instruction, data converged to suggest that teachers at first struggled to figure out how to deliver new content when they were significantly limited in their ability to directly observe children and respond to their needs. Furthermore, families' abilities to monitor progress and support individualization varied greatly. As a result, information teachers gathered about children's development was heavily mediated by parents and caregivers. Such a scenario may have made teachers less confident in matching children with the right lesson at the right time.

Adaptations for atypical development produced varied results. On one hand, accommodations during a pandemic represented uncharted territory, and teachers were largely on their own to figure them out. On the other hand, however, teachers seemed to feel somewhat prepared to do this by virtue of their training to follow the child. Some reliance on special-education professionals and service providers, as well as some additional family supports, was evident from both the survey and qualitative data; however, the issue was more prevalent in the survey data.

***Actions***

Regarding the actions that children were expected to engage in while learning in a Montessori classroom, Appendix C illustrates the finding that distance learning provided opportunities for choice, real-life and manipulative materials, and artistic self-expression. Children had opportunities to exercise choice in their learning; however, these choices may not have been as varied as in the classroom, and there were no physical materials to beckon to the children from the shelves. Issues of choice were consistent between data sources but were more prevalent in the survey data. As evident in both the survey and qualitative data, teachers asked parents and caregivers for help creating physical replicas of Montessori materials and assisting students in using digital representations of Montessori manipulatives. However, families varied widely in their capacity to help teachers implement these alternatives to the classroom materials. Social-media conversations revolved mostly around creating physical replicas of Montessori materials.

Teachers believed that children's opportunities for artistic self-expression were sustained in distance learning and that families had some success in supporting children's artistic efforts. Possibly as a result, artistic expression was not discussed as prevalently as other subjects in social media or virtual NCMPS events.

Although both data sources suggested that distance learning allowed children to engage in some activities similar to those at school while learning from home, challenges emerged for activities like maintaining the environment, collaboration and peer teaching, and conflict resolution. In a conclusion supported by both survey and qualitative data, distance learning generally resulted in decreased opportunities for maintaining the environment, with teachers being sensitive to families' limited preparation and energy for supporting these efforts. Not surprisingly, the physical isolation of distance learning limited opportunities for collaboration and peer teaching and resulted in little to no need for supporting children in resolving conflicts with their peers. Teachers emphasized social interaction through shared lunch or circle time more than through academic collaboration, although some collaboration occurred at the elementary level via digital platforms. According to both data sources, neither teachers nor children participated much in conflict resolution. It is unclear if there were fewer conflicts, if the conflicts were less disruptive and therefore ignored, or if teachers lacked the resources to provide this support virtually.

The element of freedom of movement in the classroom yielded divergent results, primarily because the concept was expanded in the survey to incorporate the broader concept of independence as classroom spaces were not being used. While qualitative data showed very little discussion of freedom of movement, teachers reported that parents and caregivers did need teachers' assistance to support their children's independence.

***Goals***

Appendix D shows a diverging picture of the experience of teachers' attaining goals related to students' engaging in purposeful activity, having a positive attitude toward school, and demonstrating confidence and initiative. Survey data indicate teachers felt they effectively supported children in engaging in purposeful activity, but qualitative data focused less on effectiveness and more on helping teachers develop specific activities for children to do at home. In terms of fostering a positive attitude toward school, survey data suggested teachers felt positive about their effectiveness, but only in the qualitative data did we see the degree to which fostering a positive attitude toward school was related to efforts at maintaining connections to the classroom community. Fostering a positive attitude toward school was clearly a priority and was a relatively successful area for teachers. Significant conversation emerged about fostering a feeling of connection to school and peers and supporting students in processing emotions. Further, although teachers in the survey reported feeling moderately successful at helping to develop confidence and initiative, relatively little discussion about these topics occurred in the social-media or NCMPS-event data.

Results from both data sources for the outcomes of developing compassion for others and becoming a contributing member of society were neither particularly positive nor negative. Neither topic was a major source of conversation on social media. Teachers did not appear to feel they were very successful in helping students become contributing members of society during the pandemic, but some limited evidence emerged related to making connections to broader social events and issues, like Earth Day, as well as to supporting younger students via virtual read-alouds and similar activities.

According to data from both sources, the biggest challenges in accomplishing the expected goals of Montessori educational experiences during distance learning were in students developing sustained focus and self-discipline. Because success in sustaining focus depended heavily on conditions in the home, teachers felt particularly challenged in this area, although the context for these challenges in the home was more evident in the survey's open-ended comments than in the NCMPS-event and social-media data. A key theme, which became evident through the analysis, was an ambivalence about the reliance on adults necessitated by distance learning. Tempered with compassion and empathy for families' social-emotional challenges of isolation and working and learning from home, teachers still struggled with encouraging self-discipline and independent learning among their students.

## Discussion

In our results, we found substantial evidence to support the resilience and durability of the Montessori Method, even in the face of adverse conditions created by a global pandemic. Despite the challenges of adaptation, Montessori educators demonstrated a commitment to the key philosophical tenets of Montessori education, such as following the child and employing a holistic

perspective on learning and development. This durability is perhaps not surprising for a pedagogy that is already more than a century old and that has endured two world wars as well as the Spanish flu pandemic more than 100 years ago. Although a Montessori approach to academics looked very different under distance learning, educators' commitment to serving the whole child's growth and development remained front and center. Data collected in this study highlighted focused and persistent attention to the social-emotional needs of children and families during an extremely difficult and turbulent time in American life. These data also reflect the Montessori perspective on considering the child within the family. This ongoing attention to children's social-emotional needs will serve both teachers and children well when they return to the classroom, undoubtedly with many feelings to process after pandemic-related isolation and hardship that will likely result in complex responses to these stressors. We now conclude with acknowledging the limitations of the present study and the implications for the field as we consider a postpandemic educational world.

**Limitations**

While the varied data sources allowed for a rich understanding of the experience of distance learning, the study would have been more robust with a larger and more diverse survey sample, along with a broader range of social-media and qualitative data sources. Even so, these results provide unique insights into the experience of Montessori educators, children, and families during the distance-learning experience thrust upon them in the spring of 2020.

**Implications for the Field**

Although this study did not include any direct measures of student learning, our findings do suggest some considerations for Montessori educators when children return for face-to-face learning. Survey responses and qualitative data clearly indicate that distance learning placed limits on what teachers could accomplish academically, so educators should be prepared for children to return to school with significant academic needs. Our data also suggest that, for many children, distance learning may have interfered with what Montessorians refer to as "normalization": the process of developing the focus, initiative, and executive functions necessary to engage in extended, self-chosen work (Lillard & McHugh, 2019b, p. 9). Montessorians at all levels should be prepared to support children in rediscovering these capacities upon their return to the classroom.

This study also carries some implications for the Montessori teacher workforce. Distance learning prompted Montessori teachers to embrace technology on an unprecedented scale; Montessori schools and teachers may bring some of these digital tools back to the classroom when they return for face-to-face instruction. The long-term influence of this experience on Montessori pedagogy remains to be seen and should be a focus of future research. Similarly, there may be increased attention to family engagement in the Montessori community in the coming months and years. Though parent education has long been a component of Montessori schools, Montessorians may now be interested in approaching families more as partners and collaborators than as outsiders who need to be educated. Lastly, it is clear from our data that the protracted experience of distance learning has been difficult for educators who were initially drawn to a hands-on, highly relational approach to teaching and learning. At the time of this writing, it is unclear when face-to-face instruction will resume on a national scale. The field may see widespread teacher attrition if distance learning continues without significant support to continue operating under these difficult circumstances. And, in fact, teachers will likely continue to need support to deal with the challenges they will face as they and the children they work with return to the classroom after such an extended absence from their high-functioning communities.

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## Appendix A

Joint Display Table: Overall Distance Learning Experience

| Topic | Survey | Qualitative | Convergence |
|---|---|---|---|
| Participation | Majority of families participated in distance learning (66% EC, 78% EL) | Widespread distance learning resulted in rapid growth of national virtual convenings and social media groups to support teachers | YES |
| Searching for support | Schools provided little guidance or support for teachers on how to address distance learning [Great deal or moderate guidance on expectations (22% EC, 21% EL); Support developing strategies (27% EC, 16% EL)] | Majority of items related to sharing resources (48%); followed by administrative topics (18%); looking for resources (8%) | YES |
| Stress / Challenges of distance learning for teachers | Teachers felt only moderate (47% EC, 44% EL) success at upholding Montessori practices (4% EC, 0% EL Extremely well) | Teacher emotions well-represented in the items coded (7%); Teachers confident in Montessori but expressed frustration translating it to this format | YES |
| Technology | Split between hands-on (average 55% EC, 54% EL) and screens (38% EC, 42% EL); slightly more hands-on; Video conferencing with students (88% EC, 97% EL) and families (65% EC, 66% EL) was popular and half did read aloud livestreams (53% EC, 51% EL); More EL used LMS (42% EC, 79% EL) and some loaned technology (23% EC, 46% EL); Physical resources still popular (60% EC, 74% EL) | Technology (14%) was the tool for sustaining classroom communities but did not totally replace offline activities; Technology issues and ideas reflected in items coded (11%) | YES |

## Appendix B

Joint Display Table: Resources

| Topic | Survey | Qualitative | Convergence |
|---|---|---|---|
| Ordered environments | Required family involvement and they needed support [Success (3% EC, 5% EL); Needed support (27% EC, 27% EL)] | Few mentions (2%) although many of those addressed supporting families | SOMEWHAT (prevalence differed) |
| Broad, interrelated curriculum | Language (27% EC, 25% EL) and math (19% EC, 27% EL) most often; followed by science & social studies (16% EC, 21% EL) and cultural subjects (14% EC, 14% EL); less time on practical life (12% EC, 8% EL)or Sensorial (10% EC, N/A EL) | Sizable mentions of curriculum (14%); Mentions related to Math (50%) and Language (30%); shared files and videos | YES |
| Individualized instruction | Mixed results from families [Success (18% EC, 32% EL); Needed support (19% EC, 18% EL)]; Half gave individualized lessons but also some by grade level and whole class; Individualization more at EL | Represented sizable number of mentions (7%) and also part of resources shared | YES |
| Positive emotional climate | One of top 4 elements for parents [Success (39% EC, 32% EL); Needed support (28% EC, 28% EL)]; Teachers only felt moderate success [Extremely well (6% EC, 7% EL), Very well (35% EC, 38% EL), Moderately well (38% EC, 38% EL), Slightly well (19% EC, 15% EL), Not at all (1% EC, 1% EL)] | Evident in 5% of items; Social-Emotional learning resources shared and discussion of this as a priority | SOMEWHAT (Importance converges; success level only clear in survey) |
| Clear expectations | One of top areas of parent struggle [Success (9% EC, 15% EL); Needed support (49% EC, 55% EL)]; Teachers could only guide parents, not enforce; Easier to accomplish in live meetings than asynchronous work | Comments often connected to ordered environment, but only 2% of mentions; Related to Zoom behavior, separating social time, designated space for learning, and attendance | SOMEWHAT (prevalence differed) |
| Experiences with nature | One of top parent successes [Success (61% EC, 45% EL); Needed support (8% EC, 1% EL)]; multiple strategies employed [Encouraged parents outside (90% EC, 85% EL), Designed outdoor activities (76% EC, 83% EL), Electronic resources (69% EC, 86% EL)] | Reflected in only 3% of comments seemed parents not viewed as needing much help, just resources; Discussed alternatives when parks were closed or when families had limited access to outdoors | SOMEWHAT (prevalence differed) |
| Adaptation for atypical development | Mixed results for parents [Success (16% EC, 13% EL); Needed support (12% EC, 21% EL)]; strategies mostly around supporting parents with resources or meetings; Also consulted SPED professionals | Not discussed much (1%); Interfacing with other professionals mentioned | SOMEWHAT (prevalence differed) |

## Appendix C

Joint Display Table: Actions

| Topic | Survey | Qualitative | Convergence |
|---|---|---|---|
| Choose activities of interest | Parents successful especially for EL [Success (27% EC, 34% EL); Needed support (8% EC, 10% EL)]; Teachers struggled to allow as much as in classroom; Often a narrower range of options; Strategies: opt out, tools like choice boards or BINGO cards, taking breaks when needed | Mentioned in 3% of items coded; discussion about choices in lesson follow ups, work choices; Often related to discussions about independence | SOMEWHAT (prevalence differed) |
| Use real-life and manipulative materials | Mixed results [Success (42% EC, 37% EL); Needed support (26% EC, 22% EL)]; Most commonly provided instructions for replicating materials to make at home; Some digital versions but little borrowing materials | Second most common code (27%); Shared videos, PDFs, lists of supplies for parents to make materials, work "packets"; Discussion of challenges | YES |
| Assist and collaborate with peers | Families struggled in supporting especially for EL [Success (3% EC, 6% EL); Needed support (14% EC, 22% EL)]; Offered more virtual social time, book groups and/or circle time; A third of EL involved group projects but fewer EC | Connecting more socially and emotionally and not academically; Only 7 (<1%) people mentioned peer collaboration | YES |
| Resolve disagreements | Not included in survey because largely viewed as irrelevant | Only one comment out of 1,715 related to this | YES |
| Express self artistically | Parents successful especially EC [Success (45% EC, 29% EL); Needed support (4% EC, 3% EL)]; Support really not needed; Similar opportunities for art as in person [Same as in person (51% EC, 56% EL), More (19% EC, 21% EL), Less (29% EC, 24% EL) | Not much discussion (1%) but a few shared resources such as videos and activities related to specific artists or materials | SOMEWHAT (prevalence differed) |
| Move freely in classroom | Expanded to cover "independence"; Mixed results with parents [Success (12% EC, 31% EL); Needed support (38% EC, 34% EL)] | Very few mentions (1%) since classrooms not in use | SOMEWHAT (concept broadened) |
| Help maintain environment | Few said families did well but not an area of needed support [Success (13% EC, 8% EL); Needed support (9% EC, 4% EL)]; Fewer opportunities especially for EC; Not area of focus outside the classroom but some suggested chores and helping family | Challenging to encourage at a distance but little discussion (1%); Often connected to the orderliness of the environment; Hard for families with competing demands and stress; More focus on future face-to-face plans regarding grace and courtesy and sanitizing classrooms | YES |

## Appendix D

Joint Display Table: Goals

| Topic | Survey | Qualitative | Convergence |
|---|---|---|---|
| Purposeful activity | Teachers felt 2nd most effective (Teacher Effectiveness M=3.23 EC; M=3.37 EL); Focused on helping around the house, cooking, doing "chores" | Topic in 5% of items; Making meals; Engaging in household tasks and involved in real life experiences | SOMEWHAT (evaluation differed) |
| Self-discipline and knowledge | Teachers felt 2nd least effective (Teacher Effectiveness M=2.86 EC; M=2.96 EL); Required flexibility and empathy and balanced expectations for families; No one size fits all | Topic of some discussion (3%); Concern about too much reliance on adults but had to partner with parents; School experiences prepared them but parents not always supportive | YES |
| Positive attitude toward school | Parents most successful here (Teacher Effectiveness M=3.62 EC; M=3.44 EL) | Connected to positive emotional environment, but only mentioned by 2%; Closely connected to maintaining community using social tools and games, songs, read aloud; Ensuring students "see" each other and teacher; Families need to feel connected too; Tried to sustain rituals and routines | SOMEWHAT (more connection to community in qual) |
| Compassion for others | Teachers felt moderately successful (Teacher Effectiveness M=3.09 EC; M=3.16 EL) | Isolation of distance learning limited relevance (2%) | YES |
| Contributing member of society | Teachers felt moderately successful (Teacher Effectiveness M=2.96 EC; M=3.03 EL); | Not a lot of discussion (2%) but some examples of projects | YES |
| Confidence and initiative | Teachers felt moderately successful (Teacher Effectiveness M=3.09 EC; M=3.21 EL); Supported by encouraging independence and positive choices; Relied on self-correcting materials and students solving their own problems | Not a lot of discussion (2%) | SOMEWHAT (more context in survey qual) |
| Sustained focus | Most difficult for parents to support (Teacher Effectiveness M=2.73 EC; M=2.75 EL) | Difficult for teachers to monitor and encourage; Not large number of mentions (2%) | SOMEWHAT (prevalence differed) |

# Leading Reflective Practices in Montessori Schools

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***Keywords**: instructional supervision, Montessori leadership, educational leadership, school administration*

**Abstract**: In this paper, we report the results of a qualitative study examining the development of leadership competencies as Montessori school leaders gain experience using a coaching protocol with their teachers. Extending previous work, the emphasis is on the school leaders' specific roles as instructional supervisors leading reflective practices. National standards, both traditional and Montessori, are a foundation to investigate a group of Montessori school leaders' development in reference to articulated competencies, specifically for the school leader to tend to their own learning and effectiveness through reflection, study, and improvement, and to empower teachers to the highest levels of professional practice and to continuous learning and improvement. After the use of a prescribed coaching protocol, 12 Montessori school leaders from 6 schools across the United States were interviewed using a set of semistructured questions. The study results support that reflective practices lead to both improvement of practice with this group of Montessori school leaders and their respective teachers. We conclude that self-reflection is critical to a Montessori leader's success, empowering them to model and influence reflective practices, with direct impacts on teacher reflection and school improvement. This conclusion becomes relevant as we observe our Montessori school leaders assuming numerous and complicated administrative roles, from management and teacher evaluation to instructional supervision, mentoring, and coaching teachers.

The role of the school leader is complex, with multiple duties and assignments (Bouchamma & Basque, 2012; Hallinger & Heck, 2011), as outlined in the national professional standards for educational leaders (National Policy Board for Educational Administration [NPBEA], 2015). Comprehensive and covering critical learning and applications for principals and other school leaders, the professional standards for educational leaders (PSEL; NPBEA, 2015) emphasize the delivery of a school vision, the role of instructional leadership, and the relationship between educational leadership and student learning. These national standards are a foundation for investigating a group of Montessori school leaders' development in relation to the standards' articulated competencies, more specifically for school leaders (a) to tend to their own learning and effectiveness through reflection, study, and improvement and (b) to empower and motivate teachers and staff to the highest levels of professional practice and to continuous learning and improvement (NPBEA, 2015, p. 20). A qualitative inquiry process examined the development of these competencies in Montessori school leaders using a coaching protocol with their teachers. This study extends previous work (Damore & Rieckhoff, 2019;

Rieckhoff & Damore, 2017) by continuing to study school leaders in their roles as instructional supervisors. We conclude that self-reflection is critical to a Montessori school leader's success, a process that empowers them to model and influence reflective practices, with direct effects on teacher reflection and school improvement. This conclusion becomes relevant as we observe our Montessori school leaders assuming numerous and complicated administrative roles from management, and teacher evaluation to instructional supervision and guiding teachers. As our previous work used the term "coaching," we have aligned coaching to "guiding," which is more recognizable in Montessori teacher education.

## Research Questions and Terminology

Two research questions guided this study: How can a Montessori school leader's self-reflection be facilitated through the use of a prescribed coaching protocol? How does the use of a prescribed coaching protocol impact the Montessori school leader's ability to lead teachers in reflective practices?

Numerous authors distinguished between roles of coaching, mentoring, and supervision (Brockbank & McGill, 2012; Nolan & Hoover, 2008), but Brockbank and McGill (2012) described processes of reflective practice across all three roles. Nolan and Hoover (2008) differentiated between teacher evaluation and supervision, emphasizing the latter as the setting in which leaders support growth in their teachers. Depending on the Montessori school, coaching responsibilities were assigned to all school leaders: administrators; program directors; and instructional supervisors, mentors, or coaches. For the purpose of this study, these terms were used interchangeably because, regardless of title, all of these school leaders were delegated the task of instructional supervision of teachers. Within many of our Montessori schools, we found these roles ambiguous and intertwined, which may result in challenges in teacher improvement. Our intention was not to include the coaching protocol within the context of a teacher-performance evaluation system, but to examine improvement of reflective practices with the participants and their teachers. In the context of this discussion, "student" and "child" are used interchangeably.

## Literature Review

Our questions focused on Montessori school leaders' reflective practice, individually and with teachers, and how these school leaders might acquire these competencies and incorporate them into their roles as instructional coaches. Much of the contemporary, mainstream educational coaching and mentoring literature examines teachers' engagement in reflective practices, how those phenomena are structured and delivered, and the effects on teaching and learning. National and state professional standards articulate the inclusion of this skill set and expertise in school-leader preparation (NPBEA, 2015). National Montessori accreditation standards (American Montessori Society [AMS], 2018) include expectations of similar competencies of the school leader through the delivery of a shared philosophy that guides the school's culture, including instructional decisions, and the development of the teacher (AMS, 2018, Standard 1, Standard 5, pp. 2–10).

*Reflective practice*, which can be traced to Maria Montessori's work in 1907 (Saylor et al., 2018), represents a cyclical process of deep reflection describing one's professional thinking as a pathway to improved teaching practices (Saylor et al., 2018). Dewey (1933) espoused its importance and posited reflective thinking as distinct from other forms of thought. A connection exists between experiential learning and reflection: the process of "reflective action" (Bouchamma & Basque, 2012, p. 627), which builds new knowledge and decision-making for the school leader. Dr. Montessori's view of leadership emanates from a nontraditional lens, with leadership development embedded in practice and in children as an "investment in human capital" (Bagby & Sulak, 2013, p. 6). She described leadership development through self-awareness, self-regulation, and self-motivation. As students develop leadership skills through orienting and valuing themselves, they are in turn able to explore their place in a larger society. Dr. Montessori's view of leadership was authentic, with transferable skills applied to the student, teacher, and school leader: "Anyone who wants to follow my method must understand that he should not honor me, but follow the child as his leader" (Montessori, 1970, para. 33). Dr. Montessori's writings include leadership concepts of transformation,

adaptation, service, humility, contextual elements, and spirituality. While these ideas align with elements of transformational, moral, and servant leadership theories and models, Dr. Montessori's leadership framework was distinct. Her view of leadership was a bottom-up approach, in contrast to many top-down approaches; the actions of the leader are similarly situated from the ground up, from student to teacher to leader.

**Leader Self-Reflection**

Dr. Montessori suggested that a vital component of the leadership role is self-reflection: "Those who direct others must themselves be transformed. No one can ever be a leader or a guide who has not prepared for that work" (Montessori, 1949/1984 as cited in Bennetts & Bone, 2020, p. 5). A leader's self-reflection signals a readiness to guide the work and to change, and a willingness to challenge current practices and beliefs (Senge et al., 2012). Professional reflective practice, described by Meier and Henderson (2007), can be viewed as educators' exhaustive study of themselves (Saylor et al., 2018). Reflective leaders can improve their own effectiveness and influence the reflective practices of other adults in their school communities (York-Barr et al., 2016, p. 152). Argyris and Schön (1974) differentiated single- and double-loop learning in relation to reflective practice. *Single-loop learning* involves observing previous action, reflecting on what has been done in order to change the next action (Senge et al., 2012, p. 151). Senge et al. (2012) described *double-loop learning*, which occurs during reflection and forces leaders to think outside of their usual sources of information. Applying double-loop learning to a school setting, the principal amplifies the reflection to include analysis of choices and decisions regarding classroom improvement. Houchens and Keedy (2009) further espoused the framework of *theories of practice*, a process emphasizing the need for self-reflection in order to consider other perspectives as principals lead communities of reflective practice in their schools. Houchens et al. (2017) further extended the research, suggesting school leaders' effectiveness requires subsequent willingness to alter their assumptions, values, and beliefs as they address complex problems and issues. Within the context of theories of practice, the individual contemplates alternative perspectives, which results in new action or direction. If the leader can practice and model this double-looping with teachers, then the process can be expanded to the school-improvement process, thus creating a reflective professional learning community that begins with the leader.

**Leading Reflective Practice**

Dr. Montessori described leading others in reflective practice in much the same way that the teacher leads the child, acknowledging the importance of charisma, enticing others into the activity: "Leadership . . . is enacted through the goal of supporting the free, independent development of the human personality" (Bennetts & Bone, 2020, p. 5). The leader guides others, who are in turn responsible for their own skills. Professional reflection is a starting point for teachers to take charge of their own learning (Saylor et al., 2018). The impact of school leaders on their school communities cannot be underestimated. Reflective learning is a frequent component of professional development (Saylor et al., 2018). The instructional leader must embrace, practice, and refine reflection skills to guide the reflective practices of teachers: "Awareness of one's own intuitive thinking usually grows out of practice in articulating it to others" (Schön, 1983, p. 243). Feelings of isolation can be minimized, relationships can be strengthened, and these thinking partnerships can "increase a sense of belonging and connectedness in our work" (York-Barr et al., 2016). Coaching and its role in a school leader's work is particularly germane in the Montessori context (Saylor et al., 2018). The success of coaching depends upon recognizing and honoring a teacher's autonomy (Knight, 2019). As with their students, teachers have little motivation to learn, change, and grow if they do not have autonomy or choices. Montessori practices support autonomy for students, teachers, and leaders. Aguilar (2013) suggested coaching as an essential component of professional development by "creating a relationship in which a client feels cared for . . . and able to access new knowledge" (p. 8), which is central to a Montessori classroom.

**Adult Learning Principles for Leading Reflective Practice**

Dr. Montessori viewed training as "a natural process which spontaneously develops in the human being" (Montessori, as cited in Bennetts & Bone, 2020, p. 5). The teacher is not an imitator, but rather a thinking teacher,

one on a moral quest. Montessori training becomes more than the knowledge of curriculum; it is participation in a way of life, where the soul of learning is rooted in the development of the child. More importantly, the teacher's preparation must be a self-transformation, so that the teacher is not the obstacle to the process (Bennetts & Bone, 2020, p. 6). As these Montessori principles are modeled from teacher to child to school leader to teacher, they align with adult learning principles and are a critical subset of leading reflective practice. Steiner (2016) suggested the importance of giving teachers the time and space to reflect upon their practice, affording them "the freedom to learn" (p. 422). Caffarella and Daffron (2013) connected adult learning and reflective practices, concluding that recognition and respect for adults is essential in planning professional development. In this study, we label the coaching protocol as a form of professional development, with deep consideration of adult learning principles that parallel Montessori principles of auto-education, spiritual freedom, and respect for the individual's autonomy.

Dialogue and trust are important cornerstones for lasting adult learning (Drago-Severson et al., 2013; Tschannen-Moran & Gaereis, 2015). Defined by Drago-Severson et al. (2013), *dialogue* is creating a mutual feeling of shared purpose and direction, acknowledging and appreciating feedback, rather than viewing it as a threat to participants. *Thinking together* means moving forward beyond an initial position of resistance or lack of objectivity, encouraging openness to possibilities (York-Barr et al., 2016). It is essential to provide teachers coaching environments and conversations deemed safe. Trust is described as an indispensable condition needed to foster reflective practice. Tschannen-Moran and Gaereis (2015) believed trust requires constant attention; learning increases when trust is present. Reflective leadership is modeled and practiced, and it invites teachers to join the process. Dr. Montessori's views, which underscore the teacher's role in preparing future leaders, are echoed in Montessori schools' standards (AMS, 2019). Teachers serve as guides and mentors rather than dispensers of knowledge. Dr. Montessori's writings underscore the trust the teacher must have in children to reveal themselves in their work (Montessori, 1984). The school leader needs to apply that level of trust to the teacher. Leaders provide a trusting collegial relationship that honors adult learning and corresponding teacher needs and interests. These processes, when embedded in a school's culture, allow openness to school improvement, individual responsibility, and accountability, with the potential for real and lasting change in schools.

**Reflective Practice for School Improvement**

Moving school leaders and teachers through self-reflection, as partners, is a first step in using the power of reflective practice to improve schools. As a culture of trust and openness emerges for all stakeholders, the possibilities of school change are available to all. According to Senge et al. (2012), communities of reflective practice are a powerful model for schools to achieve high levels of student learning: "School quality manifests itself in the quality of conversations in the school" (York-Barr et al., 2016, p. 33). With school-improvement efforts, reflective practices emerge as critical behaviors as defined by educational preparation standards, such as the National Board Teaching Standards, National Leadership Standards (NPBEA, 2015), and in Danielson's teaching rubric (Saylor et al., p. 13). The AMS standards require the school to document and use results for learner outcomes: "The quality Montessori school enacts an ongoing assessment system that monitors and documents learner outcomes, and uses these results to improve educational effectiveness" (AMS, 2018, p. 9). However, Dr. Montessori suggested that improving schools is not a top-down, hierarchical process but rather a bottom-up process starting with the child. Instead of focusing on improving test scores or other external measures of the school's success, the Montessori view focuses on each human being, with the leader's role one of responsibility and not authority (Bennetts & Bone, 2020, p. 9). Dr. Montessori visualized a bigger, global perspective to improve the social order, taking care of our civilization and our world (Montessori, 1984). Challenges facing school leaders increase and deepen, often mirroring those faced in society. Elliot and Shiff (2001) emphasized the importance of providing educators with opportunities to speak about equity issues, ranging from curricular to organizational concerns. Cultural diversity and equity are primary considerations in school-improvement efforts as leaders are faced with addressing racial disparity and inequities.

## Methods

The study followed a naturalistic, holistic, multicase-study research design (Bogdan & Biklin, 2007; Glesne, 2011; Zainal, 2007). Results were clarified and strengthened through explanatory building, and we determined data appropriateness for the research question and theoretical connections (Zainal, 2007). With this study, we continued the examination of the experiences and perceptions of school leaders who used a coaching protocol (Damore & Rieckhoff, 2019) but specifically focusing on individual self-reflection and leading reflective practices with this group of Montessori school leaders. The theoretical underpinning for this study is grounded in a phenomenological approach of research (Bogdan & Biklin, 2007; Glesne, 2011).

This interpretive, ethnographic approach led to explanation of interactions and to learning about a social phenomenon when variables are complex, interwoven, and difficult to measure (Glesne, 2011). As in previous research, our approach brought the perspective of university-based faculty working within school communities founded on principles of critical, collaborative inquiry (Clark, 1999). Contextualized in earlier work (Damore & Rieckhoff, 2019; Kapustka & Damore, 2012; Rieckhoff & Damore, 2017) that originated in the examination of the use of a coaching protocol with student teachers, analysis transitioned to studying the coaching protocol with practicing school leaders, including Montessorians.

We are university-based teacher educators, previous administrators of both public and private schools, who coach principals and instructional leaders locally and nationally. One of us is also a Montessori educator with more than 30 years of experience. The transition to study Montessori school leaders occurred when the researcher was asked to assist in developing systems of teacher supervision and feedback in Montessori schools. Classroom observations had been routine, but the administrators struggled to facilitate constructive feedback with their teachers in a timely, meaningful way. For this study, we did not focus on formal teacher evaluation but on strategies of teacher supervision, including building trust and reflective practices with the teachers.

### Selection of Participants

Convenience sampling was used for participant selection to provide rich cases to study the phenomenon of reflective practice in schools (Glesne, 2011). We presented the research opportunity at several regional and national Montessori conferences in the United States. The school administrators who contacted us were invited to participate after we felt confident that the participant was committed to the project. Referencing Hallinger & Heck (2011), school leadership commitment and capacity are paramount to improvement of academic achievement. We interviewed 12 Montessori school leaders. The first cohort participated during the 2017–2018 academic year and the second cohort in 2018–2019. Participants were provided informed consent, and written teacher consent was obtained. For data analysis, the two cohorts were combined, using standardized training and data-collection procedures. The demographics of the school leaders and respective schools are reported in Table 1. The sample was not intended to be representative of the populations of schools in which the research was conducted. All participants, regardless of titles, were responsible for the instructional supervision of teachers. While Montessori fidelity and quality of implementation are not part of this study, their schools' accreditations, or other information about their adherence to Montessori standards, are reported in Table 1.

### Coaching Protocol—Design and Development

The coaching protocol is a semistructured set of eight questions used by an instructional supervisor to facilitate feedback to the teacher after a classroom observation. The questions, which use evidence-based components of good teaching and learning, along with solicitation of critical, inquiry-based teacher responses, are designed to enable the supervisor–coach to guide teachers to self-reflect and improve their classroom practices (Yendol-Hoppey & Dana, 2007). Originally designed and used (Kapustka & Damore, 2012) with student teachers at a large, urban university, the protocol was developed in response to our participatory experiences in a university-based professional-development school model (Teitel, 2003), as well as a review of the literature that denounced teacher education programs' ineffectiveness. The protocol was designed with the intention of improving the supervisory relationship and teacher efficacy. As with Nolan and Hoover's (2008) perspective on the need to differentiate

**Table 1**
*Demographics of School-Leader Participants*

| Pseudonym | School leadership title or role | Experience in administration or supervision | Credentials | School demographics (all in U.S.) | Fidelity / Montessori implementation description |
|---|---|---|---|---|---|
| Diane | Lower Elementary program director (grades 1–3) | < 3 years | State and Montessori credentials | Public charter, 200 students, EC–grade 8, Western state | Adheres to state requirement that all teachers are credentialed at level of teaching; professes to adhere to authentic Montessori standards |
| Georgina | Upper Elementary program director (grades 4–6) | > 10 years | State and Montessori credentials | Public charter, 200 students, EC– grade 8, Western state | Same as above |
| Carol | Instructional coach | < 2 years | M.Ed. | Public charter, 200 students, EC– grade 8, Western state | Same as above |
| Hillary | Elementary coordinator | < 2 years | State and Montessori credentials | Public charter, 200 students, EC– grade 8, Western state | Same as above |
| Jackie | Administrator | < 2 years | M.F.A., Montessori credential | Public charter, 200 students, EC– grade 8, Western state | Same as above |
| Louise | Principal | > 5 years | State and Montessori credentials | Private, Catholic, 150+ students, EC–grade 3, Midwestern state | School on Step 6 of AMS Pathway Program (AMS, 2021) |
| Wilma | Associate HoS | < 4 years | Montessori credential | Private, 200+ students, EC–grade 8, Southern state | AMS-accredited school |
| Queenie | Associate HoS | > 3 years | Montessori credential | Private, 200+ students, EC–grade 8, Southern state | AMS-accredited school |
| Kenneth | Middle school coordinator | < 8 years | M.Ed. | Private, 250+ students, EC–grade 12, Western state | IMC-accredited school |
| Sam | Middle school coordinator | > 5 years | M.A., liberal arts, Montessori credential | Private, 250+ students, EC–grade 8, Western state | AMS-accredited school |
| Denise | EC coordinator | < 3 years | B.S., Montessori credential | Private, 250+ students, EC–grade 8, Western state | AMS-accredited school |
| Kelly | EC coordinator | < 3 years | B.S., Liberal arts | Private, 250+ students, EC–grade 8, Eastern state | AMS-accredited school |

*Note.* EC = Early Childhood; HoS = Head of School; M.Ed. = Master of Education; M.F.A. = Master of Fine Arts; M.A. = Master of Arts; AMS = American Montessori Society; IMC = International Montessori Council.

between teacher evaluation and supervision, the protocol was designed not for formal teacher evaluation, but to increase reflective practice for the instructional supervisor and the teacher. The original name of the coaching protocol was the Reflective Interview Protocol, but it was retitled the Coaching Protocol as it was used by school administrators.

The questions on the protocol address teaching and learning topics of curriculum planning and delivery of instruction, differentiation of instruction, evidence of student learning, adult communication and collaboration, and professionalism and reflective practices. Because of the essentiality of initially training administrators to use the protocol, we intentionally do not share the protocol questions in their entirety. To illustrate the use of the protocol questions presented by the instructional supervisor to the teacher and to facilitate readers' basic understanding of the design and contents of the questions, we highlight an example for readers' rudimentary understanding. One question on the protocol—"What did your students learn today, and how do you know?"—was guided by earlier research of how teachers (preservice and in-service) articulated their understanding of student learning and how the protocol facilitated responses about the efficacy of teaching and learning (Damore & Rieckhoff, 2019; Kapustka & Damore, 2012).

Among participants, reflection as a practice emerged as an overarching theme. With other questions on the protocol, we experienced similar patterns with teachers thinking about, articulating, and engaging in self-inquiry and reflection on the topics of curriculum delivery, differentiation, communication and collaboration, and professionalism and reflective practice. The protocol questions, although originally designed for traditional teachers, were not altered for this study with the Montessori school leaders. However, during our interviews with the leaders, several of them requested clarification to better translate the protocol questions for Montessori classroom practices. A protocol question that focused on curriculum delivery (i.e., "Tell me what you planned for your classroom today and what actually happened") evolved into a discussion between researcher and school leader about Montessori teachers not always using the term "planning." Montessori training may not use planning per se, but parallels are found with an emphasis on following the child, the prepared adult, and the prepared environment for the child's success (Bennetts & Bone, 2020). Rather, Montessori teachers do plan lessons according to their observations of the child's choice, use, and mastery of instructional materials. Therefore, we experienced not an alteration of the protocol questions, but rather discussion and further clarification about alignment to Montessori principles.

**Data Collection**

We trained the school leaders to use the coaching protocol, conducting on-site visits at the participants' respective schools. Each researcher and participant jointly observed a classroom, which was followed by a teacher conference during which the researcher asked the teacher the interview questions while the school leader observed. The school leader was asked to repeat the process three more times during the academic year with the same teacher or teachers but without the researcher. During the course of the research study, we interviewed the participants via Zoom at midterm and at the end of the academic year. Using a semistructured interview set of questions (see Appendix A), questions for the school leaders focused on strengths, value, areas for improvement, and ease of use of the coaching protocol and process.

**Data Analysis**

Eighteen interviews were recorded and transcribed, representing the 12 participants. Because of scheduling and availability, not all participants were available for both midterm and final interviews, thereby limiting the total number of interviews available for data analysis. Four initial codes—based on the research questions, our previous research on the coaching protocol, and a contemporary literature review on reflective practice—were used to analyze the interview data. The codes included school improvement, adult learning principles, individual self-reflection, and leading reflecting practice, and they aligned with concepts found in mainstream leadership theories.

The transcribed interviews were initially analyzed manually through open coding, where segments of data were assigned initial codes, that is, a word or term that attributes meaning to the data (Creswell, 2013). *Coding* is defined as a "progressive process of sorting and defining . . . scraps of collected data . . . that are applicable to your research purpose" (Glesne, 2011, p. 194).

The sequence of analysis continued with our creating more-focused and more-selective coding, which involved

the condensing of initial codes into categories that were further clustered until patterns suggested emergent themes across the data. This process was ongoing until data saturation was achieved and new themes no longer surfaced. We also determined we were double-coding in several instances, with many of the participants' responses overlapping across the themes. We concluded that the themes were not mutually exclusive. The final debriefing confirmed three major themes: (a) individual reflection by the leader themselves, (b) leading reflective practice with an application of the principles of adult learning, and (c) reflection for school improvement. These themes are grounded in the literature and the ongoing, collaborative debriefing between the two researchers that provided an organizational road map for the Findings and Discussion section.

**Trustworthiness and Limitations**

Glesne (2011) presented trustworthiness as a means to increase the credibility of data and findings: "trust the culture and check out your hunches" (p. 49). We debriefed continually, and attempted member checking on the interviews. One researcher's Montessori background, knowledge, and experience proved helpful in adapting the protocol from use in a traditional educational setting to a Montessori one. Limitations occurred with participants' self-reporting as well as our interpretations as we present the data (Glesne, 2011). The study included a small sample and limited generalizability. Other limitations include differences among public, charter, and private schools; school size; supervisory qualifications and training; Montessori teacher training; and existing systems that support leaders' professional growth and capacity. Variance in roles of the school leaders, their authority, expertise, and experience, as well as the experience of the participating teachers, should also be considered. Additionally, the coaching protocol was not originally developed and piloted in Montessori schools. Further, we were participatory researchers, with one of us a Montessori educational leader for over 30 years, which can present additional bias. We kept these limitations in mind as we shared our findings with each other.

## Findings and Discussion

Writing the analysis, we chose Golden-Biddle and Locke's (2006) approach, in which respondents' quotations and comments are integrated with connections to the literature and researchers' interpretations. The next sections provide narrative on and elaboration of the three identified themes, with illustrative quotes from the school-leader participants. Pseudonyms were used to ensure anonymity of the participants. Not all participants are represented in the quotes because of space limitations, but the majority of voices are expressed. Analysis of multiple cases suggests the Montessori school leaders found the coaching protocol a useful tool for facilitating their own professional reflection, improving their supervisory practice, and positively influencing teacher reflection. The participants articulated that the process created a new space for converting postobservation teacher feedback from one-way discussion into a more reflective, informative, and inquiry-based dialogue with their teachers (York-Barr et al., 2016). Just as Houchens et al. (2017) used theories of practice to describe how principals could improve their instructional leadership and practice through double-looping, these participants also began to reflect on and question their own assumptions, beliefs, and previous behaviors, and to articulate potential changes in their actions with their teachers.

**Leader Self-Reflection**

***Research Question 1: How can a Montessori school leader's self-reflection be facilitated through the use of a prescribed coaching protocol?***

Throughout their interviews, the school leaders described changes in their beliefs, assumptions, and practices regarding supervisory approaches. Several participants reported increased confidence in creating an environment where all could be successful. School leaders tend to their own learning and effectiveness through reflection, study, and improvement (NPBEA, 2015). In keeping with Bouchamma and Basque (2012), leaders' experiential learning allows them to hone and refine supervisory skills, and it becomes part of their self-development. "Wilma" commented on her leadership growth:

> *I've been growing in my own leadership. It's easy for me to ask questions, but my question is a little bit more closed and doesn't invite [conversation with the teacher] . . . . It was a bit of a learning curve. So, I've been trying to learn how I approach different questions.*

"Diane" explored her self-development as an instructional coach using the protocol: "I do find that I do too much talking. And I do too much external problem solving. And so, what I'm learning is that not everyone is looking for my answer."

At times, the school leaders viewed self-reflection competencies from a traditional lens. Other times, they appeared to analyze the process in light of their Montessori teacher training and experience. "Sam" described the transition from a Montessori classroom teacher working with students to a leader of adults with the Montessori lens of observing, guiding, and coaching, not managing:

> *My focus going forward [is] trying to make sure I'm doing more . . . mentoring versus managing. I'm trying to shift that mindset a little bit more because that's what we do with the students. We try and give them this opportunity to grow, but normally with adults you tend to go into management mode, which I'm trying to make sure I keep in check.*

Some participants were questioning their formal roles of management and teacher evaluator, trying to shift to a mindset for a different role—instructional supervisor, helping teachers to trust them, and encouraging them to engage in reflective conversation. Several concluded that it is difficult to serve in the same role as evaluator and supervisor, to establish a trusting relationship with teachers. Formal teacher-performance evaluation differs from supervision, with the latter focusing on the development of the individual, not management of personnel (Nolan & Hoover, 2008). Dr. Montessori (1984) advocated for the development of the human being, which aligns with Nolan and Hoover's (2008) supervisory perspectives focused on the individual's professional growth. Our participants were double-looping, reflecting, and presenting a new paradigm that may shift their approach to coaching teachers (Houchens et al., 2017). Diane echoed the value of lifelong learning for a school leader: "It does really open up [my thinking] for conversation. And it does maintain the idea that, not only are we striving to create lifelong learners, but that we are lifelong learners." Dr. Montessori described the transformation of the Montessori teacher through a lifetime of deep reflection and commitment (Bhata, 2019). Diane's thoughts about lifelong learning for the leader may have been influenced by her Montessori teacher training and her experience as a Montessori teacher.

**Leading Reflective Practice**

***Research Question 2: How does the use of a prescribed coaching protocol impact the Montessori school leader's ability to lead teachers in reflective practices?***

This study examined a school leader's reflection as the leader empowers and motivates teachers and staff to the highest levels of professional practice and to continuous learning and improvement through meaningful post-observation discussions (NPBEA, 2015, p. 20). Similarly, AMS School Accreditation Standard 2.7 requires that the administrative leader promote a culture of participation, responsibility, and ownership (AMS, 2018, p. 3). Analysis of the participants' transcripts provided insights into how the protocol's questions facilitated leading teachers in reflective practice and thinking about improvement of their classrooms. The school leaders' responses illustrated connections to the literature, specifically with practices of adult learning, highlighting the significance of establishment of trust, collegiality, dialogue, and partnerships to guide teacher reflection (Drago-Severson et al., 2013; Tschannen-Moran & Gaereis, 2015). "Louise" described her experience in leading the Montessori teachers to use the protocol for self-reflection.

> *What it is I'm looking for [is the] opportunity to have a conversation with them afterwards that lends itself to a collegial conversation [regarding their teaching] And to set them at ease [and provide an] opportunity to observe and to give feedback in a really positive way and to help them to become more self-aware of their practice.*

Kelley also commented on her experience.

> *The success was them thinking about it. And having that reflective piece, I think—again with a veteran Montessori teacher — [provided a new lens]. They have a set way of doing things, but I think adding the layer of them questioning why they are doing what they are doing [fostered new ways of thinking].*

The school leaders appeared to value and connect to the principles of adult learning and Montessori concepts as they used the protocol. Several participants

acknowledged the benefit of this constructivist approach in a Montessori community, comparing it to Dr. Montessori's leadership in a classroom environment. Possibly the school leaders' own Montessori teaching experience generalized to an understanding of how to lead adults (Bhata, 2019). The school leader, trained as a Montessorian and trying to successfully transition to leading adults, used the protocol to prepare an environment to study and discuss the teacher's work in the classroom. The leader uses observation and listening to nurture and guide the adult, much like the Montessori teacher guides the child (Bhata, 2019). Building upon relationships and mutual trust, leaders can facilitate professional growth and improvement, helping the teachers question their practices and beliefs (York-Barr et al., 2016). School leader Louise talked about building relationships and getting teachers to open up with the coaching protocol's inquiry-based questions: "It's all about relationships, and if that's not there, then forget it . . . . It enabled [the teachers] to open up and to be able to explain and articulate [their practice]." "Queenie" described what she perceived as a teacher's delight at the inquiry-based questions, as well as the conversation and trust the protocol yielded:

> *I was able to say, you know, so, what did you think? You know, how did it go? What did you think was going to happen . . . and what did happen and so, the teacher who was starting [Montessori] training this week was blown away by [this protocol]. She said it was eye-opening, it was awesome, I loved it. So it was fun for me because I'm excited for her journey . . . .*

Epstein (2011) described the power of becoming a "joyous observer" in a Montessori environment (p. 2). The observational experience should connect with our behaviors and the "observer and observed participate together" (p. 2). The personal power of the leader is constructed as one method of developing relationships, thus influencing others with trust and empowerment. Queenie and other school-leader participants echoed the value of their own self-reflection and that of their teachers. They unpacked reflective practice through new lenses and reframed previously learned principles representing double-looping as posited by Houchens et al. (2017).

**Connections to Adult Learning**

Lillard (2017) stated that people do better when they have choice in their decisions and environments, not when others attempt to control them. Montessori teacher preparation emphasizes the concepts of transformation, humility, respect, individual autonomy, self-awareness, adaptation, and encouragement of inquiry (Bennetts & Bone, 2020; Montessori, 1984; Steiner, 2016). Principles of adult learning parallel this thinking, allowing the leader to begin a dialogue with the teacher, to listen, and to facilitate reflective thinking. School-leader participants talked about building relationships with teachers and using the coaching-protocol questions as a framework that encouraged teachers to open up and explore their practice. Caffarella and Daffron (2013) connected adult learning and reflective practices, concluding that recognition and respect for adults is essential in planning professional development.

Concepts of teacher autonomy, relationship building, experiential learning, and opportunities for reflective practice are revealed in responses to the question "Do you think [the protocol] improves your capability to provide observations with feedback sessions?" "Kenneth" said,

> *I definitely think so . . . . The strengths are that I think it can be relationship building . . . . The person I worked with shared that she feels very comfortable with me and is happy to talk to me anytime.*

As with the child, the leader will have the opportunity, after trust is established, to guide the teacher (Lillard, 2017). "Georgina" talked about the protocol's support in creating space for conversation and the school leader listening to the teacher.

> *This is the strongest [protocol] that's the most effective because it lets the conversations happen in a way that both people are prepared [for], and [they are] open to the observations and change. There's no bracing oneself, there's no defiance, and it really lets the coach listen.*

With a degree of alignment to their previous Montessori teacher training, the leaders may have readily acclimated to principles of adult learning, such as respect for the autonomy of the individual. The participants reinforced that the leader must attempt to model productive and effective actions and be willing

to hear each other's voices and interpretations, without judgment, and with respect. Principles of adult learning, embedded in leading teacher reflection, must be considered for desired change to occur (York-Barr et al., 2016).

**Reflective Practice for School Improvement**

Interviews yielded insightful connections linking reflective practice to school improvement. Several of the represented schools are accredited by national Montessori membership organizations and adhere to professional standards for school improvement (AMS, 2018). As in the PSEL standards (NPBEA, 2015), school improvement is defined as improvement in teaching and learning as measured by outcomes. These school-leader participants generally defined school improvement as a change in their thinking and actions, perceived change in teacher practice, or potential for improvement in evaluation strategies school-wide. "Bella" talked about potential for school improvement: "It's going to be a benefit to [teachers] and to me, to build a better school. I'm really very delighted when I walk into the classroom that I see better [Montessori] instruction." Louise reflected on the coaching protocol's influence for school improvement: "And if I hadn't invested in this [research project], I wouldn't know that it's going to be a benefit to them and to me to build a better Montessori school."

Participants reflected on potential school-wide improvements with the coaching tool, with a few articulating limitations of leadership and time availability. Time and space must be created for professional conversations to improve teacher practice and thus student learning (Rieckhoff & Damore, 2017). "Denise" explained, "It did help us to synthesize something new. It's not necessarily something we can completely adopt school-wide, but it did cause us to reevaluate our process of when the assistant heads of schools go in and do formal evaluations." Wilma expressed hope for integrating into a practice throughout the school: "I'm wanting to use it throughout the remainder of this school year and see how we can shift how we're currently doing things school-wide." When the question was posed about comparison to the use of other tools, several school leaders expressed dissatisfaction with their schools' current supervisory approaches, citing uncomfortable, one-way feedback approaches and the use of rubrics without a script for conversation with the teacher. Kenneth said, "I think [the protocol] helps the teacher be the reflective one, instead of the person who's doing the critique that has to be reflective on how they scored [a rubric]." Sam talked about the protocol compared to other approaches:

> *I didn't know that [I was using my previous lens of observing to find areas for growth]. I went in with a mindset of "What do I see going well?" Because you are always thinking, okay, what are some things that need to be worked on? I need to find those. That's the feedback I need to give somebody. And it is easy to get lost in that. With the coaching protocol, it's just that you are coaching and you are supporting the person, regardless of whether the approaches or behaviors you saw in the classroom were positive or negative.*

Through the use of reflective practices, schools can critically assess current practices that move into action steps for change. Queenie talked about adopting concepts of reflective practices into the teacher evaluation process: "We implemented [the coaching protocol] into our annual review form. It made us think bigger as far as having it be more interactive and get[ting] more information [from teachers]." Georgina described the potential for longer term use of the protocol, emphasizing the conversations created, perceptions of minimized threat (Drago-Severson et al., 2013) and possibilities for change:

> *I think it's [the coaching protocol] going to be, long-term, the most effective [for our school]. There was no dreading it going into the conversation on either side. . . . All of the emotional energy was put into the discussion of joyful practices . . . , commiserating over the challenges . . . with colleagues.*

Reflection represents a key component in models of school improvement. Leadership in school improvement is expected of all school administrators, including those who lead Montessori schools (AMS, 2018; NPBEA, 2015).

## Conclusions and Implications

This study's results support the theory that reflective practices lead to improvement of practice with this group of Montessori school leaders and their respective teachers. The use of the coaching protocol yielded positive perceptions, and participants reported improved

individual reflection and teacher reflection. We assert that this coaching protocol is universal and affords improvement in instructional leadership through self-reflection, and leading teachers in self-reflection and improvement of practice. In her writings, Dr. Montessori did not commonly use the specific term "reflection." Yet Dr. Montessori was a model leader in her own right, a student of observation and human behavior. Thus, as researchers we equated these characteristics to leadership and reflective practices. The coaching protocol may be particularly relevant for Montessori school leadership, given the strong psychological orientation of Montessori pedagogy and its emphasis on guiding auto-education, respecting the autonomy of the individual, which parallels best practices in adult learning. The theories of practice (Houchens et al., 2017) also align with Montessori principles in its approach to supervision of teachers: study, learn, and consider other perspectives. The school-leader participants continued to study and reflect on their experiences as reported in their interviews with us.

Because of limited resources and decentralized organizational structures, our Montessori school leaders assume numerous, conflicting administrative and supervisory roles. The tensions of simultaneously serving as a teacher evaluator and an instructional coach may not be advantageous to building trust with teachers for reflective practices (Nolan & Hoover, 2008). This study focused on reflective practices, not teacher evaluation, although participants identified potential opportunities to incorporate reflective-practice strategies into their teacher-performance evaluation systems. Implications for future research suggest continued study of the coaching protocol, such as comparisons between traditional and Montessori school leaders and the use of existing surveys of reflective practice (Saylor et al., 2018). Although the protocol included questions about the diverse learners in teachers' classrooms, future studies may want to more directly address issues of diversity, racial equity, and inclusivity. Implications for practitioners should focus on content for Montessori professional development and schools' administration training programs, supporting that observation, reflection, and decision-making are central for school leadership, teacher efficacy, and school-improvement efforts.

The Montessori school leader may use observation, study, and listening to nurture and guide the adult, much like the Montessori teacher does (Bhata, 2019). Montessori pedagogy shifts the role of the school leader in the ways of guiding children to guiding adults, using choice and auto-education, and reflective practice. Post-classroom-observation feedback cannot be one-way and prescriptive but must be meaningful, mutual, and participatory and must afford opportunities for teachers to articulate, own, and improve teaching and learning.

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## Appendix A

*Interview Questions for Instructional Supervisors*

(Questions and topics include curriculum planning/delivery; diverse needs of students; evidence of learning; adult communication and professional growth; reflective practice/inquiry.)

1. Please share the strengths of the protocol.

2. Please share areas of improvement on the protocol.

Follow-up Questions (if answers are not shared in the above open-ended, broad questions)

1. How easy or difficult was the use of the protocol for you?
2. Did you see improvement in instructional practices among participating teachers?
3. What was the average meeting time for the post-observation conference and protocol questions and answers?
4. Did this improve your capability to provide observations with feedback sessions to teachers?
5. Did this improve your teachers' abilities to improve their own teaching practices?
6. Which questions/topics appeared to be the most valuable?
7. How does it compare to other observation tools you have used/experienced?
8. Would you continue to use the protocol? Why or why not? Other comments?

# Second Language Corner for Children's House: A Practitioner–Researcher Journey Into Bilingualism in Montessori Education

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***Keywords***: *TESOL, bilingualism, L2, Montessori, qualitative research, young learners*

**Abstract**: This work reports, from a qualitative research perspective, the development of an English Corner project for a preschool Children's House classroom in central Mexico over the course of a 3-year period. It shows the transition of a language specialist over six consecutive periods of work, from a traditional understanding and practice of teaching English as a second language to young learners into a more comprehensive one of the Montessori Method. The analysis of my own practice is used to recover insights through a reflective process with the intention to develop a second language (L2) Montessori program for 3- to 6-year-olds that aligns better with Montessori pedagogy. Variables such as instruction time, setting, group constitution, materials, and teaching and learning strategies allowed for certain aspects to arise as leading points of interest for the focus of the analysis and the methodological and pedagogical adaptations that followed each period. This paper is an attempt to fill the gap between the need to deliver a second language effectively in Montessori education and the lack of guidance for doing it the Montessori way; it is especially for practitioners who do not have a Montessori background but also for Montessori-trained teachers for whom more-specific preparation would aid their practice. I also hope to stimulate further research in the field of second language acquisition and multilingualism in Montessori education at every level of education.

Second language (L2) learning in Montessori education is not new; however, there is very little published literature about this aspect of the Montessori curriculum (Jendza, 2016; Rosanova, 1997; Winnefeld, 2012; Wysmulek, 2009). Despite the significant growth of research interest in Montessori education (Bagby et al., 2014), only one study about languages (Campbell, 1998) has been reported in literature reviews of Montessori education and practice (Bagby, 2007; Bagby & Jones, 2010; Bagby et al., 2014). More recently, the first stage of a participatory action research study examining foreign language in the Montessori environment was

published (Jendza, 2016), and another one investigating multilingual competence in Montessori education (Consalvo & Tomazzolli, 2019) is currently being carried out, also for the Elementary (ages 6–12) level. Only a few Montessori publications have reported on the matter of languages within Montessori education (Berger & Eßwein, 2016; Fafalios, 2007; Rosanova, 1998) and on Montessori-based experiences in the field of autonomous language learning (Berger, 2019a, 2019b; Winter, 2020). This scarcity of published research reflects the limited literature in this field of Montessori education and the nature of the knowledge available.

Currently, there is no official or established curriculum or model for second language acquisition (SLA) within Montessori education. Instead, in accordance with what Winnefeld (2012) and Consalvo and Tomazzoli (2019) have found, variety exists in Montessori approaches to language learning, although the approaches may share common features. The way in which certain trends are more likely to be found in certain regions may be, in part, a response to local governmental policies, as is the case in Germany (Winnefeld, 2012). This practice leaves every school with enough freedom to implement a variety of L2 programs as part of the Montessori education they offer.

**Second Language Acquisition**

Different SLA theories offer explanations and evidence for how language learning occurs. Menezes (2013) reviewed the main SLA theories and presented her own interpretation of SLA as a complex system in which the previous contributions of SLA theories are recognized. Behaviorism has shown us some important differences between acquisition of a first language and SLA. Acculturation has helped us understand the effectiveness of immersion programs. Universal grammar theory expanded our understanding of language acquisition, showing language as an expression of the individual's mind. Krashen's (1985) input hypothesis, based on the notion of comprehensible input and aided by providing adequate sheltering, offered a plausible explanation for the acquisition of grammatical structures. Interactionist SLA theories introduce the role of the social aspect of language and language learning that are conceived as social practices within these frameworks (Menezes, 2013).

Specific practices of language teaching and learning use one or more of these underlying language-learning theories, regardless of how conscious teachers are of these theories and their concepts. Language practitioners and the strategies they implement with their students may shift or become integrated into teachers' understandings of their discipline and, in turn, influence and modify their beliefs and practices in subtle or radical ways. Similar to how students reach the "edge of chaos," in other words, the narrow zone between order and chaos in which systems learn and evolve (Ockerman, 1997) for SLA (Menezes, 2013, p. 409), teachers, as active learners of their trade, are also influenced by more than what happens in their classrooms. This is especially true in contexts, such as Montessori environments, where a great deal of disturbance exists between what teachers learned in their training and the way the Montessori Method works, forcing teachers to abandon a zone of stability and leading to self-organization. Dealing with discrepancies and anomalies between what they learned and what they experience in this context, especially if it is new to them, sometimes provokes creative responses to overcome the clash between their belief system and what their practice demands, with the goal of reaching a coherent equilibrium in a particular classroom.

**Language Area in Montessori Education**

Language, which includes oral language, writing, and reading, is one of the four areas in which the Children's House Montessori curriculum is organized. There are materials and practices to support each child's language development, through individual work and interacting with others in relevant opportunities for language use. Maria Montessori observed the natural development of first language acquisition in the child and developed the language area of the Montessori Children's House curriculum following that sequence. She attempted to mimic the subconscious way in which children acquire their first language, moving forward to writing and then reading, while favoring self-expression and enhancing vocabulary enrichment and refinement. According to Dr. Montessori's pedagogy, children find nutrients for the development of their mind, body, and personality in their surroundings, and languages can be part of it.

> *The tiny child's absorbent mind finds all its nutriment in its surroundings. Here it has to locate itself, and build itself up from what it takes in. Especially at the beginning of life must we, therefore, make the environment as interesting and attractive as we can.* (Montessori, 2007a, p. 87)

The prepared environment in the Children's House is designed to allow learning to occur naturally. Children who are learning benefit from the absorbent mind that naturally assists them in learning from their environment. The sensitive period of language directs the child's attention to this particular aspect in the stimuli of their environment. The absorbent mind that Dr. Montessori observed in early childhood allows children to learn languages of any social context, regardless of number and presumable complexity (Montessori, 2007a).

> *A special mechanism exists for language. Not the possession of language itself, but the possession of this mechanism which enables men to make languages of their own, is what distinguishes the human species. Words (in any language), therefore, are a kind of fabrication, which the child produces, thanks to the machinery, which he finds at his disposal.* (Montessori, 2007a, p. 108)

**Second Language Learning in Montessori Education**

Dr. Montessori did not explicitly discuss in her work a specific approach to SLA, although she was well aware of the existence of "English medium schools" in India, which would now be called English-language immersion schools (Rosanova, 1997). She was also believed to be in favor of young children learning a foreign language and preferred the direct conversational method, using games, songs, pictures, and charts (Stevens, 1913, as cited in Bronsil, personal communication, June 22, 2020).

Nevertheless, the transferability of the strategies and materials of the Montessori language area was not specifically applied in SLA. The urge to include L2 programs in Montessori schools arrived a bit later, partly as a result of evolving societies and their contemporary needs. In our current globalized society, SLA is an even more essential part of education, including Montessori education.

Given the lack of literature on SLA in Montessori settings and few references to it in Dr. Montessori's writing, Rosanova's (1997) report on early childhood bilingualism in a Montessori Children's House is particularly relevant. Rosanova drew from language acquisition and bilingualism literature to develop a foreign-language-immersion Montessori program for 3- to 6-year-old children in a Montessori setting.

Based primarily on the stages of SLA proposed by Alvarez-Martina et al. (1984, as cited in Rosanova, 1997), Rosanova identified four typical developmental stages children in the Montessori environment go through while becoming bilingual: pre-production, early production, speech emergence, and intermediate fluency. He observed and recorded these stages both in individual children and in the classrooms, until both became bilingual. Assisted by the principles of Montessori pedagogy, children could communicate effectively in what was once a foreign language, and the classroom naturally supported this language acquisition (Rosanova, 1997). The absorbent mind that characterizes children in early childhood allows them to learn more languages when they are available in their social context; that is, if there is a second language in the environment, the child is perfectly capable of absorbing it naturally and effortlessly, as long as this happens during the first 6 years of life. It is necessary to incorporate whole-language strategies when developing L2 programs in Montessori settings as they provide useful clues that help children guess meaning from objects, daily routines, and their prior knowledge.

> *If the teacher's words cannot always be understood, then it is absolutely critical that the environment speak. The level of competence and commitment to Montessori principles needs to be higher than what one might expect in a monolingual Montessori program.* (Rosanova, 1997, pp. 13–14).

The child's natural motivation to learn is referred to as *normalization* in Montessori literature. It derives from children's ability to concentrate, assists their own development, and is especially critical for language learning because it entails a willingness to tolerate ambiguity and search for meaning (Rosanova, 1997). Following Krashen's (1985) comprehension hypothesis, Rosanova called these early attempts to guess the meaning of unknown words "guessability."

**Language and Literacy Acquisition in Early Childhood and Bilingualism**

Snow's (1983) findings on language and literacy acquisition guide the physical and historical context for children during infancy to rely less on highly contextualized interactions and to show increasing decontextualization in the development of these skills. This is related to the guessability that children gain when exposed to a language that was foreign in the beginning and later became understandable through context and their own attempts to find meaning.

Cummins's study (1996, as cited in Fafalios, 2007) on language and identity distinguished three ways to acquire and develop a second language: (a) *simultaneous bilingualism*, which applies to children who are exposed to and develop different languages at more or less the same time; (b) *successive bilingualism*, which applies to children whose home language is well established and who learn a second language when they come to school; and (c) *receptive bilingualism*, which refers to children who are able to understand two languages but express themselves in only one (Cummins, 1996). Cummins's findings were consistent with what Fafalios (2007) observed in bilingualism in Montessori contexts. The stages of a classroom becoming bilingual are similar to those of individuals. Rosanova found that, just as an individual in a group becomes bilingual, the social environment also becomes bilingual as it consolidates over time. The bilingual process for first and subsequent generations of children in that community can be differentiated, as there are more resources and exposure to the target language now.

> *The first children to reach the third year from within the children's community are pioneers. . . . But the second group of children to reach the third year within the children's community have seen their predecessors at work [in terms of a bilingual environment]. . . . This is an astonishing and important accomplishment because the younger children are now being exposed to episodes of full sentences and connected narrative which are neither directed by nor centered by the teacher.* (Rosanova, 1997, pp. 19–20).

The social aspect of the Montessori environment and its effect on the individual learner is key to the essential elements of Montessori education, also referred to as the *Montessori trinity*, which includes setting children free in a prepared environment with a specially trained teacher (Montessori, 2012).

**Constructive Alignment and the Importance of Materials in Montessori Education**

John Biggs's (2006) *constructive alignment theory* proposed to align the objectives of intended learning outcomes with teaching methods and learning and assessment tasks. The use of specially designed materials is part of effective implementation of the Montessori Method. Montessori materials create a gestalt for each area and classroom, balancing purpose, progression, and the redundancy and interweaving nature across them (Lillard, 2008).

In traditional Montessori classrooms, the only materials available to students are those created by Dr. Montessori herself (Lillard, 2008). Bringing other materials into the Montessori classrooms poses important concerns (Lillard, 2008, 2011, 2012; Lillard & Heise, 2016). However, because of the lack of Montessori materials for SLA, there is an urgent need to explore how alternative or supplemented materials can be used without damaging the integrity of the Method, perhaps eventually becoming Montessori materials that support the developmental SLA needs of children or assist in the process of becoming bilingual.

Montessori educators are encouraged to follow the child and use observation in the classroom to discover how to best support each child's development and to explore their own professional interests. Epstein (2012) proposed the observation CORE (Connect, Obtain, Reflect, Engage) as a way to accomplish this. The freedom to passionately explore how to implement English as a second language (ESL) in a Montessori Children's House was the starting point of my inquiry. Some general knowledge about the Montessori Method informed this study, particularly in relation to the four areas of the Montessori curriculum and materials designed specifically for those areas, rather than didactic materials or teaching resources and basic linguistic notions of SLA in early childhood.

**Different Models of Implementing Languages in Montessori Schools**

Over the years, schools have responded in an array of ways to the ever-increasing need to provide language education. The need for SLA strategies raises the question of how to implement language learning in Montessori schools in a way that better responds to the principles of the Montessori Method.

Based on the information provided by a number of practitioners directly involved in language learning in Montessori schools and other Montessorians knowledgeable on the topics of bilingualism, multilingualism and SLA, Table 1 shows the different models that have been identified (Rosales Chavarría, 2019).

**Table 1**
*Language-Learning Implementation Models in Montessori Schools* (Rosales Chavarría, 2019)

| Model | Main characteristics |
|---|---|
| Dual teacher language | One language per adult, so the child associates each language with one person |
| Times for L1 and L2 | Allocation of times and/or routines for each language |
| Immersion | Instruction takes place in the target language, which is usually not the dominant language of the community. |
| Target language classroom | Children come to a language classroom in set groups and/or allocated times or freely as they please. |
| L2 corner | Set within the classroom either with specific materials and shelving or using the classroom as it is |
| L2 lessons | Designated or flexible times for either small or whole group times in the classroom or elsewhere |
| Blended | Involves the use of technology for the provision and or practice of the target language |

*Note.* L1 = first language used for instruction; L2 = second language. For some students their first language might be a home language, in which case the language of instruction at school constitutes their L2 and the additional language can in turn be their third language.

The extent to which each model is distributed among Montessori schools is yet unknown. However, each model responds to particular social contexts and circumstances. The models depend on the needs and characteristics of the communities they serve, the knowledge and abilities of the teachers, and the possibilities that these and other variables, such as available resources and level of priority given to this aspect of the curricula, play in schools' decisions. It is the teachers and management teams in every school who decide the approach favored, or actually chosen, to deliver language education, and to what extent, in each classroom and in the school.

Nevertheless, we lack a strong theoretical and empirical foundation to align SLA theories and methodologies with Montessori education principles and practices to be able to further our understanding of this area of the curriculum that has grown and developed for decades without much formal attention. This study demonstrates how the Montessori trinity works for SLA using the results observed in the early stages of L2 lessons given outside the Montessori classroom, as well as after the Montessori classroom became a prepared environment for SLA.

## Methods

### Statement of the Problem

Individual teachers and communities have been developing their own practical approaches to teaching languages in Montessori education. However, this knowledge has been neither broadly disseminated nor formally developed to create a body of knowledge that could lead to a shared curriculum or standardized practices. Instead, there are a variety of ways, based on a somewhat trial-and-error approach, which may share common features (Consalvo & Tomazzoli, 2019), or a disconnect between the Montessori Method and the traditional methodologies employed for L2 in Montessori schools (Wysmulek, 2009). Regional efforts have been made to provide certified Montessori teachers with optional professional development in foreign language learning (Winnefeld, 2012). At the heart of this study, then, is the absence of appropriate programs that contribute both to the development of the Montessori methodology and language-learning theory and strategies.

This work is an attempt to contribute to the field of language learning within Montessori education, particularly for the first plane of development, that is, Early Childhood from 0–6 years of age. It is a practitioner–researcher account based on my own journey as a language specialist. It shows the transition from a traditional understanding and practice of teaching ESL to young learners to a more comprehensive one that relies on and is rooted in Montessori pedagogy. This study details the process, stages, and variables that arose in developing an L2 program for a Children's House classroom (i.e., preschool and kindergarten level) in a Montessori school in central Mexico, as it shifted from an L2 lessons model to an L2 Corner over the course of 3 school years (i.e., 2015-2018), eventually becoming an immersion program.

**Site of the Study**

The study school is a private Montessori school in central Mexico; there are no public Montessori schools in the country. It is one of several Montessori schools in Mexico that provide Montessori education at the preschool and kindergarten levels. During the course of the study, the school had a population of approximately 100 students across all levels. The Children's House class had between 28 and 32 preschool and kindergarten children between 3 and 6 years of age; the children shared one classroom in the 3 consecutive school years of this study.

**The Experiences of the Practitioner–Researcher as a Bilingual Educator**

I started my practice in mainstream settings, teaching ESL to adults and children in Mexico. I began my journey in the field of languages in Montessori education as an L2 assistant for an Infant/Toddler community classroom. I then served as an L2 assistant and language specialist in a Children's House classroom before coordinating the English program for the study school for 1 school year. The next year, I became the ESL teacher for the Children's House classroom and gave up my coordinator role when I started this research project.

I experienced successive bilingualism by attending bilingual schools since childhood, with Spanish as my first language and English as my L2, and I mostly came to the position of ESL teacher in Children's House from a practitioner–researcher stance; I also had some knowledge of SLA teaching and learning methods, experience raising two bilingual children enrolled in Montessori education, and general knowledge of the Montessori Method gained during my experience and preparation as an Association Montessori Internationale 3–6 assistant.

**Research Design**

The research methodology of this study falls within the framework of qualitative research, which entails an interpretive approach. This allows for the object of study to be flexible to the context and changing needs of the study. I faced some of the challenges that come with undertaking investigations in plurilingual educational contexts, such as the need for constant reflection on my own emerging ideologies in relation to language and language education and handling research data in different languages (Dooly & Moore, 2017). I am both the researcher and the teacher in the study, and I was seeking results that were beneficial to my educational practice. I also interacted with all stakeholders during the aspects of the research process that addressed specific issues or problems; therefore, this study can be considered participatory action research in the field of education (Jacobs, 2016). It is also a case study that adheres to the core notions of qualitative inquiry (Farrell, 1994), which has gained popularity as the main tool of investigation in ESL in some Asian countries. Finally, the study uses reflexivity to communicate what I have learned from the field by proposing logical transferability of the findings to the reader (Park & Lee, 2010).

**Participants**

This study involved second-year (Y2) and third-year (Y3) children of the Children's House class in 2015–2016 and the whole class (first-year [Y1], Y2, and Y3 students) of the Children's House in 2016–2017 and 2017–2018. Parents were informed that my work in Children's House was intended to develop an ESL program for the school, and I would provide ESL instruction for their children.

Most children were native speakers of Spanish, and English was their target language. English was chosen as the target language because we wanted the children to have the future opportunities knowledge of English could bring (Cummins, 1996). Three children were simultaneous bilinguals because of the bilingual constitution of their families; two of these children had mothers who were native speakers of English, and the mother of the other child was a native speaker of Portuguese. All three mothers spoke their native languages to their children. One child was a successive bilingual to whom English was spoken at home. At the beginning of the study, the three children who knew English from home presented themselves as receptive bilinguals; that is, they fully understood English but chose to express themselves in Spanish in social contexts with children who were predominantly from Spanish monolingual families. Although many parents were bilingual because of the socioeconomic backgrounds of the families in the school, most spoke Spanish at home, with some extracurricular exposure to the target language through trips, TV programs, English lessons, films, and music.

**Table 2**

*Phases in the Transition Process From an L2 Lessons Model to an L2 English Corner Model*

| Phase & date | Location | Modality | Time allocated | Group composition | Main features | Themes for analysis focus |
|---|---|---|---|---|---|---|
| 1: Sept.–Dec. 2015 | Studio | L2 lesson with fixed groups, times | 90 min., 2 days / week; 45 min. then 30 S per group | Y2–Y3 (2 groups: 12 S each, then 3 groups of 8 S each) | Wide scope of themes & activities; little recall of vast content. Limited semantic categories; need of materials | |
| 2: Jan.–June 2016 | Studio | L2 lesson with fixed groups, times | 90 min., 2 days / week; 30 / group | Y2–Y3 (2 older S groups, 1 nonleaver group) | Class structure: Opening/closing & middle variable activities. Production of L2 materials; level / age criteria | |
| 3: Sept.–Dec. 2016 | Library | L2 lesson with fixed groups, times | 90 min., 2 days / week; 30 / group | Y2–Y3 (1 group of younger S, 2 new S and older* S from previous year) | Role of nonleavers from previous year; materials alone in classroom shelves, L2 curricula for 2nd & 3rd yr; need for mediation with materials | |
| 4: Jan.–June 2017 | English Corner | L2 corner in classroom | 4 hr, 2 days / week | Y1–Y3 mixed (groups of 4–6 S) | Being in the Montessori classroom, Y1 satellite learners; Y3 busyness | |
| 5: Sept.–Dec. 2017 | English Corner | L2 corner in classroom | 4 hr, 3 days / week | Y1–Y3 mixed (groups of 4 S) | Fixed work session structure: opening, rhymes/songs/poems, book, memory, game. Attendance analysis; Y3 learning outcomes | |
| 6: Jan.–June 2018 | English Corner | L2 corner in classroom | 4 hr, 3 days / week | 2 older* S groups Y1–Y3 mixed (groups of 4 S) | Different session structure for leavers | Introduction of reading & writing in L2 for Y3 / leavers |

Note. S = students; Y1 = first-year students; Y2 = second-year students; Y3 = third-year students, 2nd & 3rd yr = second and third years of student's experience in Children's House classroom; English Corner = English Corner in Children's House classroom, part of the prepared environment. *Older students were students in their last year of Children's House and moving into the next level for the next school year.

There was a collaborative and supportive relationship among the Montessori teachers, the principal, and the parents that made this study possible. Some parents even helped make materials for the English Corner. The school community knew that I was undertaking a research project in addition to my practice as an ESL teacher for the Children's House classroom. (I ceased coordinating the school's language program when I took on the ESL teaching role.) Other adjustments during the course of the study included location changes, the cohort of children considered for ESL, and the amount of time allocated for English instruction (see Table 2 for a more detailed description of these changes). At the end of the research project, I presented the study findings to the school community.

**Data Collection and Analysis**

Data collection and analysis are interwoven in qualitative research, so a number of sources were used to collect information and guide the research process. I started as an L2 practitioner with a keen interest in reflecting upon my practice and an enormous desire to find a Montessori way for teaching and learning English in the Children's House. I started keeping detailed notes of what I did and recorded my insights from that experience, which influenced my decision-making in my own practice. These notes created a *thick description* (Geertz, 1973) from a grounded approach of data collection and analysis through an extended period of fieldwork that took place over the course of 3 consecutive school years. This process was informed by multiple data sources, many of which were directly related to my practice with the children in the classroom. These sources included day-to-day data input such as lesson plans, field diary entries, and a journal to exchange information with the rest of the class team or meetings notes; thematic writings on a specific topic to direct my analysis or the focus of my work on a particular aspect; and periodic reports that described my practice, prepared near the end of every semester of work. The semester reports organized the insights I had gained through reflection; they also proposed suggestions and alternatives to further the objective of developing an L2 program for preschoolers that aligned with Montessori principles. Before the start of the next term, I presented and discussed these reports with the classroom teachers and the school's principal for both informational and decision-making purposes.

## Research Findings: Six Phases of the Journey

The results for this study are presented in chronological order according to phase; each phase is approximately six months and corresponds to the first and second semesters of each school year. The phases emerged from the need to make adjustments that reflected the knowledge I gained during the previous phase, moving us forward in the development of an ESL program for Children's House.

Each phase in Table 2 includes (a) a description of the main characteristics considered during the period of time, (b) the focus of the analysis for that working period, and (c) a reflection on the outcomes that provided insight based on the experience with the children and that supported the decision-making process for the next stage in the implementation process.

Early in the study, I created a general vision for the L2 program for Children's House that I wanted to design:

> *That children progress in their competence to use the English language to communicate. The dream (vision) is that the L1 process in which they acquire the ability to read and write, through their work with the materials, would be similar to that of L2.*

When I read this statement now—after having made the journey of attempting to turn this vision into a practical approach to language learning—it strikes me how little I knew then of what it would take to transform not only my practice, but also my understanding of the intricate relationship involved in the Montessori trinity (i.e., the child, the prepared environment, the prepared adult), particularly related to a second language.

**Phase 1**

L2 lessons took place in the school's studio. Defining the groups' size and composition, as well as the timing of sessions, was a compromise within the established teaching framework. Children were initially divided into two groups (and later three) for consecutive L2 lessons outside the Montessori classroom. Only the Y2 and Y3 children took part in the ESL lessons. The Y1 children of this class were not considered for L2 provision beyond the opportunities the bilingual Montessori teacher provided for all in the time-allotted model scheme (see Table 1 for a description of this language-learning implementation model in Montessori schools).

A wide range of topics and vocabulary was introduced in Phase 1. Songs and stories from children's books were used for vocabulary and language structures. I intended to provide a variety of opportunities for children to listen to certain vocabulary, both isolated and in context. I used lesson plans that considered several aspects: date, number of students in each lesson, theme and vocabulary to be studied, materials, objective, activities, and reflection. I used the same format for all consecutive lessons. Soon, opening and closing songs marked the beginning and end of the lesson, while the other activities varied.

After evaluating children's learning near the end of the first period of the study, I was surprised to learn that children recalled very little of the vast vocabulary that had been presented. To achieve the desired learning outcomes, I knew I had to (a) be consistent in using the vocabulary I wanted them to learn throughout the sessions (I no longer thought of these sessions as traditional L2 classes), (b) continue the reading and singing they enjoyed and that offered language input in context, (c) provide more opportunities for language output, and (d) incorporate materials that would support my work for more than just a particular session.

The need for materials that I could continue to use with the children and whose limited semantic categories would allow more repetition to take place became a parallel endeavor to the work I did with the children in the classroom in the next phase.

**Phase 2**

Of the three groups working in the studio at designated times, two groups were composed of older children in their last year in Children's House and one of children who would continue for another school year, allowing some continuity in the latter group. The composition of these groups highlighted the need to create expected learning outcomes for Y1, Y2, and Y3.

The work during the L2 sessions continued with a similar structure to the previous period, which included several components.

- Nonvariable activities
  - Opening routine
    - Good morning song
    - Greeting
    - Counting
  - Goodbye routine
    - Goodbye song
    - Individual assessment task (the addition to my practice for this period)
- Variable activities
  - Presentation
  - Singing time
  - Reading time
  - Game

Each session also offered a brief individual assessment task to estimate students' learning and provide further use of the target language that had been the focus of the session.

A basic vocabulary syllabus was organized around selected semantic categories: body, food, actions (i.e., verbs), clothes, school objects, animals, and transportation. I discussed with the classroom teacher the chosen categories, the vocabulary selection, and the Montessori characteristics of the materials. Parents helped produce the materials.

The task of making materials to support children's L2-acquisition needs paralleled the implementation and development of specific procedures for their use with the children. I had to think about materials for L2 using the same steps Dr. Montessori had taken to develop the materials she proposed for the Montessori classrooms: identify the developmental need they align with, observe the children with the materials, revise and refine them, and have a clear purpose for each material separately and in relation to other materials (Lillard, 2008).

By the end of the school year, the objects and materials used during the L2 sessions were brought into the regular classroom. However, children were not independently using the materials. I then created a proposal for L2 materials—not just the objects used during the L2 session—to go into an English Corner inside the classroom the following school year. That set of materials comprised vocabulary cards, songs, rhymes, poems, books, and games.

**Phase 3**

The studio was no longer available, so the L2 sessions were relocated to a designated area in the school library. At the start of the school year, I adapted my lesson plans to consider aspects brought to my attention by a professional development opportunity. I planned each

session according to what had happened in the previous one and stayed on one topic as appropriate. Through their engagement in the activities and what they said, the children gave me cues about what did and did not work, which provided valuable information about their perceptions and understandings.

Working with mixed groups in a 5:3 ratio (i.e., five children who were already familiar with the L2 session structure and three newcomers to the school or previous students who were old enough to be part of the cohort considered for ESL services) helped the newcomers to adapt and settle promptly. Groups of mixed ages and abilities are a common feature of Montessori classrooms; for the L2 sessions, this mix meant that the children who already knew the routine were ready and willing to assist their peers in translating or communicating the expectations of the activities. Phrases like "*Yo no entiendo inglés*" ("I do not understand English"), "*No se qué está diciendo*" ("I don't know what she's saying"), and "*No se qué hacer*" ("I don't know what I should do") soon faded out. However, after the L2 session dynamics were clear to all, I failed to offer a new way for the more experienced learners to naturally progress in the target language. Motivation in the older children had clearly been present in the beginning of the school year but faded, in my view, because of a lack of progression in the materials and activities. This circumstance presented an opportunity to consider differentiated L2 curricula for Y2 and Y3 children and to start thinking about how the experience with the L2 could evolve from what they had learned in the first year of exposure to the target language. I also perceived that children were aware of their own knowledge of the L2. The children who had been in the English sessions the previous year were convinced they already knew English, although they were able to produce only simple words and short phrases. The other children said they did not know English yet, despite having linguistic resources at their disposal, such as a wider range of vocabulary.

The materials for the L2 lessons were stored in what we began calling the "English Corner" in the Montessori classroom and consisted of a couple of shelves where they were displayed. Before each lesson, each child was asked to take some materials from those shelves for our work in the L2 session and then to put them back after our L2 work outside the classroom. This activity gave them extra practice to meaningfully use the target language and was certainly better than keeping these non-Montessori objects in the Montessori classroom. However, this practice required that I take a different approach to presenting materials to the children in the prepared environment of the Montessori classroom: for children to continue to develop their learning of the target language, the materials had to be presented and available for independent practice.

The new circumstance of being in a shared space in the school library, but directing this work only to Y2 and Y3 children, allowed the shared environment to become the Children's House classroom instead. This development gave the Y1 children— not the other Elementary children in the library during the L2 sessions—the chance to be onlookers and made exposure to a second language available in a prepared environment. My presence in the Children's House classroom started making the environment bilingual, although this program was not, at that time, intended to be an immersion program.

**Phase 4**

Moving into the Children's House classroom was a significant change for the research project. The English Corner became a tangible part of the prepared environment. There was a period of adjustment for all—children and adults—within the now-common space of the classroom, and I was very respectful and observant of the natural flow that accompanied this new habitus.

The groups remained as they were before (i.e., only for Y2 and Y3 children), but this initial arrangement did not last long. Instead, small groups of four to six children were spontaneously formed by children who came to me in the English Corner to participate in an L2 session using the available L2 materials. As the number of interested children exceeded the number of possible group sessions, the time available for the English Corner was extended from 3 hours per week to 8 for the same 2 days. This new arrangement also considered Y1 children, who were particularly curious about my presence. They maintained a safe distance until they became acquainted with me and the work that the rest of the children in the class did in the English Corner; I called these Y1 children *satellite learners*. They approached the English Corner cautiously but with great interest, declining to participate until they were ready to join the L2 sessions. Y3 children, on the contrary, did not come very often.

Letting each child naturally approach the English Corner—or not—felt particularly important during this

period, as children seem to better know what they need and can manage; this was also true for me, especially in this stage of the process. The activities children chose freely also gave me relevant information about their interests and how I could explore those interests. I could observe the child in the natural environment provided by the small part of the Montessori classroom I focused on, in other words, the English Corner within the Children's House classroom.

Children in the study school were mainly successive bilinguals, that is, children whose home language was well established and who learned the L2 when they came to school; a few children came from bilingual families and exhibited receptive bilingualism at this point of the study. Without having the creation of an immersion bilingual environment in mind, the stages recalled by Fafalios (2007) served as a reference for my expectations of children's acquisition of the target language. These stages allowed me to measure progress within this framework. I expected to see these stages at a slower pace, because of the predominantly Spanish-speaking social context and because we were in the L2 classroom for a limited time each week.

**Phase 5**

From the beginning of the school year, the English Corner was set up as part of the classroom environment and comprised several components: a round mat for sitting; songs, rhymes, and poems; memory baskets; games; books; and an observation chair.

Expanding the children's exposure to the target language—especially because English was not the dominant language of the community—supported increasing my time in the classroom for the next school year to 3 subsequent days. Therefore, a third day for the English Corner was added, which extended the time for L2 provision from 8 hours per week to 12, over 3 consecutive days, and made it available to all children in the class (i.e., Y1, Y2, and Y3 students). The L2 sessions had a fixed sequence of activities, and groups were limited to the first four children who came to the English Corner.

My presence in the classroom became more regular than before, providing more opportunities for the children to engage with the target language. This new circumstance required me to interact with the other adults in the classroom more.

My earlier observation and adaptation period greatly contributed to the clarity that normalization comes first (i.e., having a harmonious environment comes before any other learning can happen effectively), so I shared with the other adults in the class my beliefs about the priorities of assisting children in their development. My understanding of the child in a mature Montessori classroom had increased, allowing me to concentrate on developing the target language. In practical terms, I was mostly able to speak only English with the children, while the rest of the teachers communicated with them in Spanish; the other adults supported my work by facilitating an eloquent environment. Normalizing the environment can be challenging in the early stages of Montessori immersion programs: it is harder for teachers to communicate effectively with children using a language they don't yet understand (Rosanova, 1997).

Children's confidence in using the L2 grew, and a lot of singing and private talk in English occurred. The teachers had reported this development before, and I now often witnessed it. Everyone in the class had become familiar with sharing a common space and using this other, increasingly comprehensible language, especially within the constraints of the English Corner. We were in what Rosanova (1998) defined as an *early production stage*, characterized by the mentoring and modeling that occurs among children of different ages and abilities and the spontaneous production of simple words and short phrases in response to comprehensible input, as well as the emergence of interpreting among the children.

During this phase, I analyzed the attendance distribution across year groups for that semester, which included low attendance (>30%), medium attendance (31%–60%), and high attendance (61%–80%) of the 25 sessions. I identified three categories of children from this analysis: very interested in the target language, averagely interested, and not interested. Most of the children in the high-attendance cohort, that is, those very interested in the target language, had a clear, self-driven interest in attending; they came to the English Corner sessions at least twice each week. Interestingly, this cohort included the three bilingual children in the class, who eventually came out of their receptive bilingualism to start communicating with me in English in the classroom. This development of the course gave the rest of the children more exposure to the target language and was an important factor in the English Corner's transition into a bilingual environment. Simultaneously, some of the children in the low-attendance cohort—those not interested in the target language— seemed to still be

getting to know their environment, absorbed by the work with other materials in the classroom, or struggling to become fully engaged in activities in general.

Making the English Corner part of the prepared environment of the Children's House classroom from the start of the school year created a significant shift in the development of a bilingual Montessori classroom. The collective and individual experiences in previous stages had contributed to this process. However, it was still not evident to me that the environment was bilingual; my focus was on the development of the children as bilingual, not on the environment. I was not then able to interpret this phenomenon as an immersion process that was happening simultaneously in both the children and the environment. I knew immersion existed as a model for delivering L2 instruction in Montessori schools, and it seemed very far from what I was trying to achieve; however, it was happening right before my eyes.

The attendance analysis raised the possibility of meeting a desired exit criterion for Y3 children, and the need to adjust the session for children who had already learned some English. These variables led me to revisit the idea of adding a group of older children to the next period of work. Including these children in their last year of Children's House would resemble Rosanova's (1997) pull-out recommendation for older children in language-immersion Montessori schools; the youngest children simply do not have the same interests as the older ones. Older children are transitioning to the second plane of development, so their interests and attention span, as well as other factors, can be clearly identified and considered in the activities that are proposed to them.

**Phase 6**

Y3 children were divided into two groups of seven children each. At the beginning of the day, the group of older children participated in a different session with more-challenging tasks before the English Corner became available for the rest of the children in the class, maintaining the same routine as in the previous phase. The session for the children in their last year of Children's House experienced slight structural variations that allowed for more language output.

Many new lines of inquiry started to emerge during the Y3 sessions: considerations of variation in the routine, materials that allowed a balance between repetition and new content, and even social and emotional considerations that seemed particularly relevant to this group.

An expansion of language started to occur as a result of increasing the use of the target language to engage in meaningful activities in which children had more opportunities to express their own ideas in the target language. We were entering Rosanova's (1997) *speech emergence* stage, characterized by the older children beginning to speak in longer phrases, often producing whole sentences.

I began to introduce writing and reading to this group. By the second half of the school year, most of the children knew how to read and write in their L1; some became spontaneously interested in doing so in English too. Vocabulary acquisition was expanded to the written names of classroom objects, which they could start to analyze phonetically.

Y3 children were becoming interested in the English Corner again and wanted to join the older group session, but I was again in a discovery and exploration phase of this new circumstance. It was then that I really started to notice a structural shift in what was happening with the environment in regard to SLA. I still did not consider the environment to be bilingual, but the reality of it was different: a larger number of children felt confident with the target language present in the classroom, could understand more of it, and tried to use it beyond the usual structure of the L2 sessions to communicate with me in English. However, I knew that a deeper knowledge of the Montessori Method, especially of the language area and of SLA, had to accompany my research methods and practice in the future.

I wanted to explore whether the results I had with English were replicable with a different target language. Personal circumstances led me to leave the school after this period of work and immigrate to the United Kingdom, where I continue my research with Spanish as the target language. A Montessori teacher continued the ESL work at the Children's House. I did my best to pass on the knowledge I had gained from my experience to her and encouraged her to note her findings so that we could continue to share the process.

## Discussion

Each phase of the implementation process brought insights and considerations that helped shape the next

stage. The knowledge I gained from this process can shed some light on ideas that may enable teachers to evolve from traditional understandings and practices of SLA in Montessori settings—to move from an individual understanding of SLA to a more social one, aligning better with the Montessori pedagogy.

**Consistency in the Use of Routines and Materials to Support SLA**

The early definition of a clear structure for the L2 sessions was marked by opening and closing elements like the welcome and goodbye songs, as well as other activities that became familiar to the children. This routine added constancy and continuity to the use of the L2, linking it to specific routines and activities and aiding language acquisition (Snow, 1983). Creating this familiarity between the target language and the associated activities and routines proved highly effective from the beginning.

Another early choice that improved constructive alignment (Biggs, 2006) between the desired outcomes and the methodology and activities leading to them was to create and use materials, among others, that supported limited vocabulary and language structures rather than topics and vocabulary that were broader and not used regularly.

Moving from highly contextualized interactions to those with increasing decontextualization must align with the development of language skills observed in the child. This is accomplished through interaction—slowly adapting the discourse and challenges, and providing aids for this process.

**Design of Development Materials to Support SLA and the Role of the Adult in the Process**

The relevance of developmental materials in the Montessori Method means that much thought and experimentation in developing and using them is required for them to effectively support the developmental needs of children in every stage of SLA. This process occurs directly through the interactions among adults, the specific materials, and the child; the materials must have a specific purpose both intrinsically and in relation to their sequence of use within a specific curricular area. They also need to align with the different developmental stages of the children in the classroom and support children's individual development and interests, as well as facilitate autonomous learning.

The effect of practice and concentrated effort leads children to learn how to use each material and acquire the skills and knowledge each material was designed to support. After they have reached a certain level of proficiency, they can continue to develop. They can then use this knowledge or share it with others. This result was evident with the L2 songs and vocabulary memory baskets.

**The Role of Peers in Assisting in the SLA Guessability Process**

Working with mixed groups in the L2, in both age and competence, creates the social conditions for the children who are already familiar with the target language and L2 session structure to assist those new to the target language to adapt and settle promptly. The more-capable children help their peers by translating or communicating the expectations of the proposed activities. They also provide scaffolding that supports the guessability process of children in the early stages, which assists their own language development (Rosanova, 1997). Through this process, children who assist more-novice children can also confirm their own guesses about meaning; guessing meaning is already a stage in the SLA process.

**Working With Heterogeneous Groups for SLA**

Montessori teachers are trained to use the social constitution of heterogeneous groups to further the educational objectives they enable. However, traditional teacher preparation makes distinctions, by age or level of competence or both, to plan and provide SLA. Bridging the differences between the Montessori Method and other methodologies is important in the transition from traditional SLA understandings and practices to the more comprehensive ones of the Montessori pedagogy.

**L2 Curriculum for Y1, Y2, and Y3 and the Role of the Social Environment in Supporting Bilingual Montessori Classrooms**

In Montessori classrooms, all materials for Y1, Y2, and Y3 are available simultaneously, and each child progresses through the areas following the sequence of the level of complexity. It is important to use children's prior knowledge of the target language children exhibit and create mechanisms to allow the L2 program for a Y1, Y2, and Y3 curriculum to be delivered cohesively until the classroom becomes bilingual. Therefore, it is not only the individual children but also the social environment itself

that evolves and changes, eventually becoming naturally bilingual when it is properly prepared.

## Conclusions

The transformation of the pedagogical practice followed a natural pace that considered both the self-evolving product of this effort and my own change as practitioner. Research tools and self-reflection were used to support the decision-making process that characterized each stage of this process. Negotiations for time and space allocations were required, as were commitment and trust in the project. English started gaining ground as an important aspect of the curricula, which was reflected in the decisions that directly affected the prepared environment. The interest in prioritizing teaching an L2 to the Children's House children grew, requiring a greater allocation of material and human resources.

This article is a personal account of a particular situation and process. However, it reflects some of the challenges a language specialist practitioner with little knowledge of Montessori pedagogy encountered when inserting herself into an educational model that differed considerably from mainstream language-teacher preparation. It may also assist Montessori teachers who think that more-specific preparation may be desirable for this aspect of Montessori education and who may still struggle to connect the Montessori Method with the field of language learning and the associated practical implications.

This study supports L2 implementation models for Montessori education that posit the target language as integral to the learning environment. The report also shares the hurdles and successes that make integral transition both possible and effective. In this sense, a distinction between limited-scope and wide-scope strategies to integrate languages into the Montessori learning environment becomes pertinent, while also considering the school's priorities and resources.

In terms of SLA attainment levels, the study indeed showed better results as the model became more integrated into the children's usual learning environment. However, the objective of this project was not to measure such differences.

### Limitations

This study was an initial exploration in developing an L2 program for Children's House that aligned with the Montessori principles. However, it was just the start of something that deserves further development and exploration.

Neither Montessori training, research methods, nor a deep knowledge of SLA theories alone suffices to add to knowledge in this area of the curriculum. We need to move forward toward better understanding and supporting a language-learning curriculum and its teachers. To reach this goal, we need to know all the intersecting aspects that allow us to create specific materials and strategies that reflect the necessary Montessori pedagogical principles.

### Suggestions for Future Research and Practice

I want to take this opportunity to call for other practitioners to share their experiences with teaching languages in Montessori education. I also want to acknowledge all the largely unrecognized individual and collective efforts of language specialists working in Montessori schools over the years, and Montessori teachers interested in language learning. The richness of their efforts has helped build an immense body of knowledge that furthers our understanding of language acquisition in Montessori education. Leading the way should be an openness to other fields of knowledge accompanied by a profound respect for and understanding of Montessori philosophy and principles; we also need to recognize that many different paths may lead to the same destination for language learning.

The relationship of language learning to the notions of cosmic education and peace is particularly relevant in today's world, and Montessori education can also help us bridge this relationship.

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