Experiences of Montessori Guides and Administrators Supporting Students with Developmental Delays or Disabilities

EVALUATING THE IMPACT OF THE AGES AND STAGES QUESTIONNAIRES TRAINING ON MONTESSORI GUIDES AND ADMINISTRATORS SUPPORTING STUDENTS WITH DEVELOPMENTAL DELAYS OR DISABILITIES

Final Evaluation Report: June 30, 2023

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Project Overview

Over the past several years, with support from key Association Montessori International – USA (AMI-USA) leaders, many Montessori schools have adopted the Ages and Stages Questionnaires (ASQ) as a tool to screen young children for developmental disabilities or delays, to have key conversations with parents, and to ensure children receive the support they may need. While research supports many positive benefits of using such a screener, it is less understood how Montessori guides and administrators of Montessori children perceive potential benefits or challenges of using such a tool. As such, the aims of the present evaluation study are threefold:

(1) To investigate the current realities and needs of Montessori community partners in supporting students with developmental disabilities or delays.
(2) To assess Montessori guide and administrator attitudes, beliefs, knowledge, skills, confidence, and self-efficacy around using universal screeners to support students with developmental disabilities or delays as well as the extent to which they believe they have requisite the tools and resources they need before and after completing an ASQ training.
(3) To highlight associated benefits or challenges of implementing the ASQ training and tool as an aid for Montessori guides and administrators in supporting students with developmental disabilities or delays.

Results & Findings

_EQ1:_ _What are the realities and needs of community members in Montessori schools who serve students with developmental disabilities or delays?_

The findings from qualitative analyses shed light on the realities and needs faced by Montessori guides and administrators when supporting students with developmental disabilities or delays. According to participants in the study, the increasing number of students with special needs requiring additional support has created a pressing demand for effective solutions. However, the available resources have not kept pace with these needs, resulting in a strain on policies, finances, and staff. Guides in the study reported often carrying the weight to support these students in under-resourced schools, leading to concerns about providing adequate assistance or having sufficient training. There can also be a pervasive fear of blame from all involved with supporting students with developmental disabilities or delays—a relic of historic challenges.

Despite these challenges, guides in the study demonstrated remarkable dedication and most reported taking personal initiative to seek additional resources, training, and support. They reported feeling a moral obligation to identify each student's unique needs and tailor the classroom experience accordingly. While the Montessori pedagogy and training were seen as valuable tools

for individualizing instruction, the adherence to strict standards and practices was sometimes perceived by participants in the study as a barrier to providing necessary support for students with special needs.

The study also identified specific needs expressed by guides and administrators. Additional specialized training and ongoing professional development were highlighted as crucial for supporting and managing students with special needs. Participants emphasized the importance of staying updated with evidence-based strategies. They also called for adaptable, flexible, and aligned systems within the Montessori framework to support all types of learners. Establishing trusting relationships with service providers and involving Montessori trainers in understanding present needs were seen as essential steps. A community-based approach that distributes the workload and involves all members was deemed crucial. Participants also stressed the importance of specialized staff dedicated to supporting students with special needs, as well as the need for support groups and opportunities for guides to connect and learn from one another.

EQ2: What are the perceptions and experiences of Montessori guides and administrators regarding the support they provide to students with developmental disabilities or delays before and after completing the ASQ in a Montessori Setting training?

Results from quantitative analyses indicated that completing the ASQ training positively impacted guides' and administrators' attitudes, beliefs, skills, knowledge, confidence, self-efficacy, as well as access to tools and resources related to detecting and supporting students with developmental delays or disabilities. In addition, sustained positive effects of the training over time were observed among participants who had completed the training earlier.

EQ3: What are the perceived benefits and challenges of the implementation and use of the ASQ by Montessori community members?

Findings from qualitative analyses revealed that Montessori guides and administrators in the study perceived the ASQ training and tool as beneficial, enabling early detection, and facilitating communication with parents. The ASQ was seen as a reliable and externally validated tool that normalized the screening process and provided valuable information and resources for guides, parents, and families. The training increased participants' confidence and self-efficacy, empowering them to support students more effectively.

However, implementing the ASQ also presented challenges, such as bandwidth and logistical concerns, resistance to change from families, and the need for buy-in and training among colleagues. Participants emphasized the importance of seamless support systems and collaboration within the school community to address these challenges and ensure successful implementation.

Conclusions

In conclusion, the ASQ training and tool were perceived by Montessori guides and administrators as valuable for detecting and supporting students with developmental delays or disabilities. The training positively influenced participants' attitudes, beliefs, skills, knowledge, confidence, self-efficacy, and access to resources. Addressing the challenges and needs identified in this study is crucial including the establishment of a culture of trust, provision of specialized training and support, alignment of systems and resources, integration of inclusive practices within the Montessori framework, and implementation of universal screening tools like the ASQ. By addressing these issues, schools and educators can better support students with developmental disabilities or delays and foster a more inclusive and supportive learning environment.

Recommendations

Montessori school leaders, administrators, policy makers, trainers, consultants, and guides/teachers should acknowledge and address the increased need and urgency to support students with developmental disabilities or delays. Based on the study findings and conclusions, the following sets of recommendations are provided for community members.

Montessori Guides

♦ Have conversations with school personnel and parents/families about students who may need special support early and often.
♦ Develop a plan of support for students with special needs with administration, specialized staff, parents, and available resources.
♦ Establish trusting relationships with service providers to ensure coordinated support for students with special needs.

Montessori Administrators

♦ Provide additional and ongoing specialized training and professional development opportunities for guides and administrators to effectively support and manage students with special needs.
♦ Sustain the positive effects of the ASQ training over time by providing ongoing support and reinforcement.
♦ Foster a culture of trust and collaboration among guides, administrators, and parents to promote transparent communication and collaboration.
♦ Work to align systems and resources to support all types of learners, including students with special needs.
♦ Establish specialized professional staff positions, such as directors of inclusion or school-wide occupational therapists, dedicated to supporting students with special needs; or

implement a community-based approach that distributes the workload and involves all members in supporting students with developmental disabilities or delays.

Montessori Trainers

♦ Ensure that training programs are responsive to the current needs and realities and include training on evidence-based strategies for supporting neurodivergent students and those with developmental disabilities or delays.

Montessori Leaders and Policy Makers

♦ Provide adaptable, flexible, and aligned systems within the Montessori framework, policies, and practice standards to support all types of learners, including students with special needs wherever possible.
♦ Work closely with accreditation organizations to promote inclusive practices (e.g., make universal screening a requirement or recommendation alongside accreditation). By aligning policies and practices, schools can enhance the credibility and consistency of their inclusive policies.
♦ Involve Montessori trainers in understanding the present needs of educators and aligning requirements and policies accordingly.
♦ Create specialized support groups and opportunities for guides and school personnel to connect and learn from each other.

Introduction

Early developmental and social-emotional milestones play a crucial role in shaping the optimal development and thriving of children. However, a significant number of developmental disabilities and delays go undetected, potentially hindering children from reaching their full potential (Weitzman et al., 2015). The current national estimate of school-aged children in the United States with at least one developmental disability is about 17% or one in every six children—a number that has been on the rise since it has been tracked (Centers for Disease Control and Prevention, 2022). By the time children reach the age of 16, the likelihood of being diagnosed with a behavioral or emotional disorder increases to approximately 37% to 39% (Weitzman et al., 2015) indicating that these issues are going undetected in earlier years. Moreover, these statistics are likely an underestimate since they come from older data sources (e.g., 2009-2017). In addition, the global pandemic left many children undiagnosed due to barriers to detection (Macy, 2022).

Extensive research highlights the benefits of universal early screening and intervention emphasizing the importance of timely identification and support, while also shedding light on the potential consequences of neglecting such measures (Hirai et al., 2018; National Center for Learning Disabilities, 2020). To address this critical issue, the Ages and Stages Questionnaires (ASQ) has emerged as a widely used research-based universal developmental screening tool (Bricker et al., 2010; Macy, 2012; McCrae & Brown, 2018). Specifically designed to identify developmental delays among children aged 0 to 6, the ASQ enables trained guides to detect delays, engage in vital and often challenging conversations with parents, and ensure that children receive the appropriate interventions, resources, and support they require. This study delves into the perceptions and experiences of Montessori guides, administrators, and parents to better understand the potential benefits and challenges associated with utilizing the ASQ within the Montessori education context. By exploring these aspects, we aim to enhance our understanding and ultimately enhance the support provided to children with developmental disabilities or delays in Montessori schools.

Evaluation Purpose

Over the past several years, with support from key Association Montessori International – USA (AMI-USA) leaders, many Montessori schools have adopted the ASQ as a tool to screen young children for developmental delays, engage in important conversations with parents, and ensure appropriate support is provided to children in need. Although research highlights the positive benefits of using such a screener (Bellman et al., 2013; Hirai et al., 2018), it remains unclear how Montessori guides and administrators perceive potential benefits and challenges associated with implementing the ASQ.

The present evaluation study had three primary aims. First, it aimed to investigate the current realities and needs of Montessori community members in supporting students with developmental disabilities or delays. Second, the study sought to assess the attitudes, beliefs, knowledge, skills, confidence, and self-efficacy of Montessori guides and administrators, as well as evaluate the extent to which Montessori educators believe they have the requisite tools and resources to support students with developmental disabilities or delays from before and after completing the ASQ training. Third, the study aimed to gauge the perceived benefits and challenges of implementing the ASQ as a training tool in aiding guides and administrators in supporting students with developmental disabilities or delays.

By examining these areas of focus, the evaluation sought to gain comprehensive insights into the perspectives and experiences of Montessori community members in relation to supporting students with developmental disabilities or delays. The findings and recommendations resulting from this evaluation provide valuable information for Montessori school leaders, administrators, policy makers, trainers, consultants, guides/teachers, and parents, with the ultimate goal of enhancing the support provided to students with developmental needs within the Montessori educational context.

Evaluation Questions

The following evaluation question were developed with input from AMI-USA leadership to address the study's research aims.

Evaluation Questions
EQ1: What are the realities and needs of guides and administrators in Montessori schools who serve students with developmental disabilities or delays?
EQ2: What are the perceptions and experiences of Montessori guides and administrators regarding the support they provide to students with developmental disabilities or delays before and after completing the ASQ training?
EQ 2A: What are the attitudes and beliefs of Montessori guides and administrators toward universal screeners before and after participating in the ASQ training?
EQ 2B: What are the knowledge and skills levels of Montessori guides and administrators who support students with developmental disabilities or delays before and after participating in the ASQ training?
EQ 2C: What are the confidence and self-efficacy levels of Montessori guides and administrators who support students with developmental disabilities or delays before and after participating in the ASQ training?
EQ 2D: To what extent do Montessori guides and administrators believe they have the necessary resources and supports to serve students with developmental disabilities or delays before and after participating in the ASQ training?
EQ3: What are the perceived benefits and challenges of the implementation and use of the ASQ by Montessori guides and administrators?

Evaluation Design & Methods

Evaluation Design

To address the evaluation questions, the study featured a mixed method, pre/post design. Mixed method study designs benefit from the strengths of both quantitative and qualitative methodologies and are useful for drawing rich, contextual findings and conclusions (Creswell & Plano Clark, 2018). Quantitative methods included Likert-style, self-report response items on a pre-survey, post-survey, and post-only survey, which provided numerical scores for guides' and administrators' attitudes, beliefs, confidence, and perceived skills around identifying and supporting young students with developmental delays or disabilities. Qualitative methods included open-ended survey questions and focus groups with Montessori guides and administrators. The qualitative data complemented and enriched the quantitative data by providing first-hand accounts of impacted community members. The pre/post evaluation was designed to assess Montessori teacher and administrator perceptions and experiences toward universal screenings as well as their experiences supporting students with developmental disabilities or delays from before and after completing a ASQ training.

The methods crosswalk in Table 1 indicates which methods were used to address each evaluation question.

Table 1. *Methods Crosswalk*

Evaluation Questions	*ASQ Training + Pre/post Survey*	*Post-Only Survey*	*Focus Groups*
EQ1: What are the realities and needs of guides and administrators in Montessori schools who serve students with developmental disabilities or delays?	✓	✓	✓
EQ 2A-D: What are the perceptions and experiences of Montessori guides and administrators regarding the support they provide to students with developmental disabilities or delays before and after completing the ASQ training?	✓	✓	
EQ3: What are the perceived benefits and challenges of the implementation and use of the ASQ by Montessori guides and administrators?	✓	✓	✓

Procedures

Two phases of data collection facilitated the pre/post design, which are depicted in Table 2 and described below.

Table 2. *Evaluation Timeline*

	Evaluation Activity	Timeline
Phase 1	Evaluation planning, measurement development, & training preparation	Sep-Nov
	Post-only survey data collection	Dec-Mar
	ASQ training participant recruitment	December
	ASQ assistant training	January
	ASQ pre-survey administration	January
	ASQ training	January
	4 to 6 weeks	Feb/Mar
Phase 2	ASQ post-survey administration	Mar/Apr
	Teacher & Administrator focus groups	Apr/May

Phase 1 of data collection was designed to assess Montessori teacher's and administrator's baseline attitudes, beliefs, confidence, and perceived skills around identifying and supporting young students with developmental delays or disabilities prior to completing an ASQ training adapted for the Montessori setting. Montessori guides and administrators were recruited via email to participate in the ASQ training. The ASQ pre-survey was administered to guides and administrators in phase 1 of the evaluation before the ASQ training took place. Additionally, in phase 1, a sample of participants who engaged in the ASQ training over the last several years (prior to the January training) were recruited via email to take a post-only survey. ASQ training alumni who had previously taken the training would have had several years of accumulated time and experience with using the ASQ resources, which they could report on.

The ASQ post-survey and focus groups occurred in phase 2 of the evaluation, approximately four to six weeks after the training. The delay of data collection in phase 2 was to ensure that participants in the training had time and opportunity to implement the learnings from their training in their respective school settings.

About the ASQ Training

The Ages and Stages Questionnaires (ASQ) is a widely used research-based universal developmental screening tool that is used to identify young children (ages 0 to 6) with physical and social-emotional developmental disabilities or delays. The training, the *Use and*

Implementation of the Ages and Stages Questionnaires in Montessori Setting by Dalia Avello, was tailored to the unique setting and needs of Montessori schools. The ASQ is an assessment tool that parents complete about their children's behaviors and abilities. Parents return completed protocols to the school for guides and/or administrators to score. Based on the child's set of scores, a student may be identified as benefiting from further diagnosis testing and support, which the guides or administrators discuss with the parents. Parents can use the information from the ASQ to have further conversations with their child's pediatrician. In addition to being a tool, the ASQ provides a set of resources and tools that guides or parents can use to help the child practice certain behaviors and skills. Moreover, guides and administrators can participate in an 8-hour training session to develop the knowledge and skills on how to implement and use the ASQ.

Recruitment

ASQ Training & Pre/Post Survey

The online training of the *Use and Implementation of the Ages and Stages Questionnaires in Montessori Setting* was scheduled across three Saturday mornings in January 2023 via Zoom. Montessori guides and administrators were invited to participate via email through the AMI-USA member listserv, which was distributed to approximately 10,000 individuals. The aim was to recruit 100 guides and administrators to participate in the training. To facilitate the large numbers of participants in this training and the online format, nine training assistants were recruited and trained. A total of 127 participants completed a consent form and registered for the training to account for attrition. A total of 67 guides and administrators attended the first day of training and were invited to take the ASQ pre-survey. Approximately 4-6 weeks after the completion of the training, participants who completed the ASQ pre-survey and the training were emailed and invited to complete the ASQ Post-Survey. Participants received a certificate of completion for professional development hours and a chance to win one of four $50 AMI-USA bookstore gift cards for completion of the training and ASQ pre and post surveys.

Post-Only Survey

Montessori guides and administrators were invited to participate in the post-only survey via email if they had completed the ASQ training prior to January 2023 and were on the ASQ alumni listserv. Approximately 80 guides and administrators received the invitation to participate in the post-only survey. Participants received a $5 gift card for completing the survey.

Focus Groups

There was a total of five focus groups with guides and administrators scheduled at varying days and times. Many participants had multiple roles at their school (e.g., teacher and administrator), therefore, focus groups were mixed. Guides and administrators who had completed the ASQ training and ASQ pre and post surveys or the post-only survey were sent an invitation to participate

in the focus groups via email. Participation in the original focus groups was low, therefore, an additional town-hall style focus group was scheduled for guides and administrators who may not have previously completed the ASQ training. The invitation to participate in this focus group was sent via email through an AMI-USA member listserv. Participants received a $5 gift card for participating in a focus group.

Measures

Several measures were developed for this evaluation including the ASQ pre-survey, the ASQ post survey, the post-only survey, and two focus group protocols for the ASQ participants and for the non-ASQ trained guides and administrators (Appendix A). The ASQ pre and post surveys and the post-only survey were developed to measure participants' attitudes, beliefs, knowledge, skills, confidence, and self-efficacy around using universal screeners to support students with developmental disabilities or delays as well as the extent to which they believed they had the requisite tools and resources. Items were presented randomly in a Likert-style format for participants to rate their level of agreement from (1) strongly disagree to (7) strongly agree. In addition, several open-ended items were included to assess the benefits and challenges of implementing the ASQ. The focus group protocols invited participants to reflect on their attitudes toward universal screeners, how their experiences supporting students with developmental disabilities or delays had changed since completing the ASQ training, and any benefits or challenges of implementing the ASQ in their respective school settings.

Sample

Description of ASQ Pre-Survey Participants

A total of 67 participants completed the ASQ pre-survey and training. A majority of the ASQ pre-survey participants were female (94%) and had an average age of 44.7 (*SD* = 10.4) ranging from 23 to 70. A majority of ASQ pre-survey participants were White/Caucasian (64%). A total of 19 U.S. states were represented by participants. Most ASQ pre-survey participants were guides (52%) followed by administrators (34%). The average number of years participants had been an educator was 18.7 (*SD* = 10.4). Most participants had previously completed a specialized course in developmental delays or disabilities (51%) while 34% had never completed any specialized coursework besides a child development course. Most participants worked at a private Montessori school (76%) and 42% of the schools were Montessori accredited schools. A table of ASQ pre-survey participant demographic and background variables is included in Table 7 in Appendix B.

Description of ASQ Post-Survey Participants

A total of 45 participants completed the ASQ post-survey. A majority of the ASQ post-survey participants were female (91%) and had an average age of 47.1 (*SD* = 7.78) ranging from 28 to 69. A majority of ASQ post-survey participants were White/Caucasian (64%). A total of 18 U.S. states

were represented by participants. Most ASQ post-survey participants were guides (58%) followed by administrators (42%). The average number of years participants had been an educator was 15.7 (*SD* = 9.28). Most participants had previously completed a specialized course in developmental delays or disabilities (63%) while 30% had never completed any specialized coursework besides a child development course. Most participants worked at a private Montessori school (86%) and 40% of the schools were Montessori accredited schools. A table of ASQ post-survey participant demographic and background variables is included in Table 7 in Appendix B.

Description of Post-Only Survey Participants

A total of 27 participants completed the post-only survey. A majority of the post-only survey participants were female (48%) and had an average age of 47.7 (*SD* = 10.2) ranging from 35 to 68. A majority of ASQ post-only survey participants were White/Caucasian (64%). All participants were residents of either Oregon or Washington state. Most ASQ post-only survey participants were administrators (59%) followed by guides (33%). The average number of years participants had been an educator was 18.6 (*SD* = 10.6). It was most common for participants to have never previously completed any specialized coursework besides a child development course (37%) while 22% had completed a specialized course in developmental delays or disabilities. Most participants worked at a private Montessori school (48%) and 4% of the schools were Montessori accredited schools. A table of ASQ post-only survey participant demographic and background variables is included in Table 7 in Appendix B.

Description of Focus Group Participants

A total of 20 guides and administrators participated in the focus groups. All participants (100%) were female and had an average age of 50.5 (*SD* = 9.95) ranging from 37 to 69. A majority of focus group participants were White/Caucasian (55%). A total of 13 U.S. states were represented by participants. The average number of years participants had been an educator was 18.7 (*SD* = 7.51). Most participants had previously completed a specialized course in developmental delays or disabilities (65%) while 35% had never completed any specialized coursework besides a child development course.

Analysis

To address EQ1, open-ended survey items from the post-only survey along with teacher, administrator, and parent focus group responses were combined and analyzed thematically. In addition, descriptive and inferential analyses were conducted with a single survey response item, "*My Montessori teacher training prepared me to support all my students with developmental delays*," from the ASQ pre and post surveys and the post-only survey.

To address EQs 2A-D, survey items on each of the surveys were grouped into a series of subscales that addressed the phenomena of interest for this study including guides' and administrators' attitudes and beliefs, perceived knowledge and skills, confidence and self-efficacy, and availability of resources and tools around universal screeners and identifying and supporting students with developmental delays or disabilities. Cronbach's Alpha tests of reliability were calculated for each subscale and demonstrated high reliability (see Table 8 in Appendix C). A series of repeated measures t-tests were then conducted to analyze differences between ASQ training participant pre and post survey scores for each subscale. Descriptive statistics were also calculated for the post-only survey participants. In addition, a series of independent samples t-tests were conducted to analyze differences between ASQ post-survey participants and post-only survey participants' scores on each subscale.

To address EQ3, open-ended survey items from the ASQ pre and post surveys and the post-only survey along with teacher and administrator focus group responses were combined and analyzed thematically.

Results & Findings

The quantitative results and qualitative findings are presented by the evaluation question they addressed.

EQ1: What are the realities and needs of community members in Montessori schools who serve students with developmental disabilities or delays?

Montessori guides and administrators reported on their experiences supporting students with developmental disabilities and delays. Findings from thematic content analysis uncovered the *realities* of Montessori guides and administrators, which are presented in Figure 1 and discussed below. In the figure, larger circles represent more frequently reported themes while smaller circles represent less frequently reported themes.

Figure 1. *Reported Realities of Montessori Guides and Administrators*
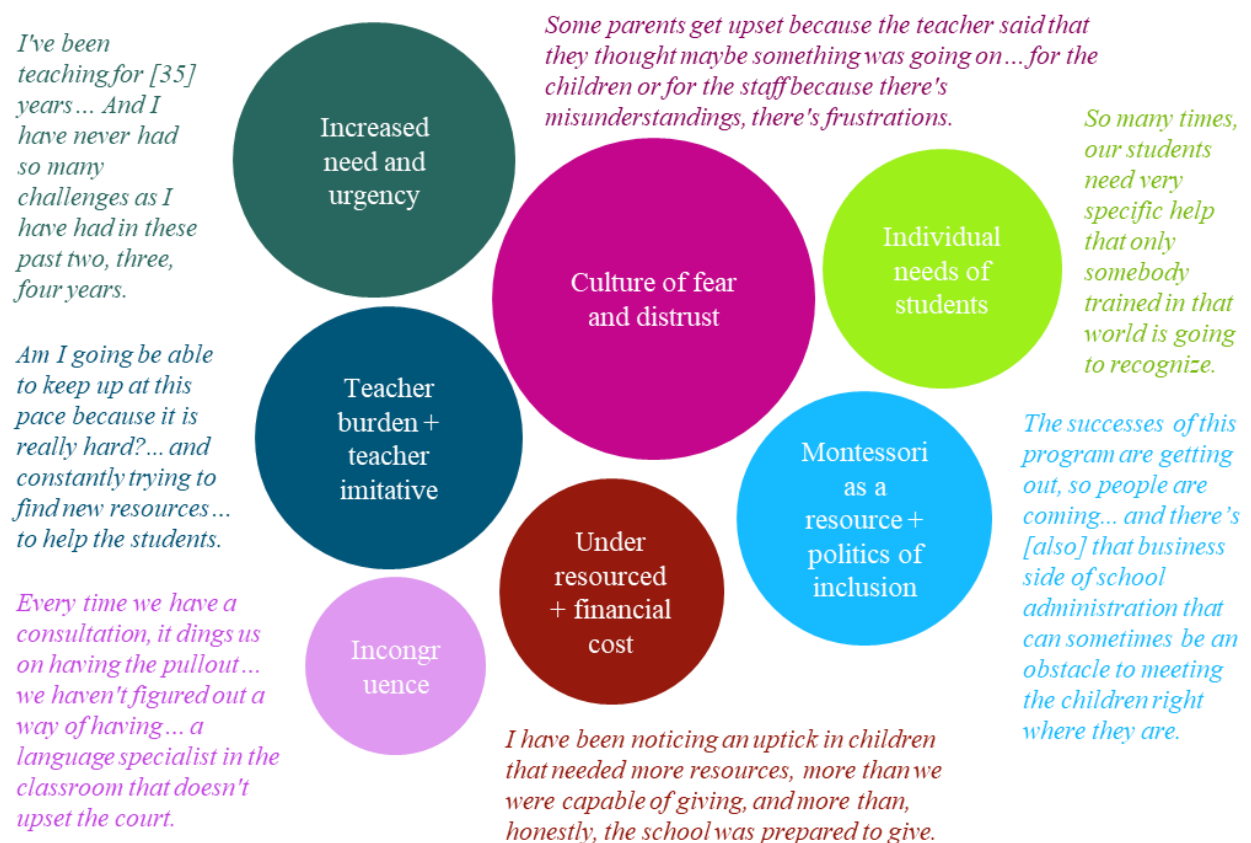
A thematic analysis uncovered an ***increased need and urgency*** felt by educators to find solutions to support the greater numbers of students enrolling in schools who require special support. The challenge guides face in supporting students with developmental disabilities or delays in not new, however, in recent years there appear to be significantly more students who may need additional support. In the focus groups, for example, guides and administrators frequently reported an increase in the number of students who fall within the range of needing additional supports: "*[We have] a higher saturation of our student population which have individual family service plans (IFSP) which indicates a variety of needs… [and] has caused [a] strain for our policies, finances, and our staff.*" Yet resources remain scarce and have not shifted to align with current needs and realities. As another teacher reported, "*We have a community that has grown in needs over the years, but the school kept the same structure that it has had nothing has been subtracted to give us teachers enough time for training, for research, for investigation.*"

Moreover, the ***burden of responsibility to support students is felt most acutely by guides***. Guides feel the ultimate responsibility to support students due to schools not having enough resources and supports built into the system. A teacher reported, "*So many schools do not have in-house people and people don't have training and you're just doing the best that you can, and you want to serve the children and the families.*" This coupled with being on the heels of the global pandemic, guides feel overworked and tired. For example, one teacher stated, "*Especially coming back from COVID where the classrooms are not normalized… they're starting from square one and there are new teachers that have never been in a classroom before, and they are just not prepared.*" Because of this, students who may have been able to get by before are needing more support due to additional stressors, and the students who were left undetected during the pandemic are now older and may have missed opportunities for early interventions.

Despite these realities, ***guides are demonstrating incredible resolve and perseverance***. Many of them have taken personal initiative to seek out resources, training, and supports they need to better serve their students. They report a moral obligation to identify each student's unique needs and tailor their classroom experience to support each child's individual thriving. As one teacher noted, for example, "*I have 24 [students] this year and all their difficulties, and I have to educate myself. It's only the right thing to do for them and for me because it's so frustrating when I see a child is struggling and I have no idea what to do or where that struggle came from.*"

In addition, while the idea that students have ***individual needs*** is not unique in education, it adds a layer of complexity for supporting students with special needs. Identifying and matching specific strategies, resources, and supports to each student can be difficult. However, guides also advised relying on the Montessori pedagogy and training to follow the child. One teacher, for example, noted, "*If we already know that all children are different, which is how the [Montessori] Method was created, we're able to do more inside of the classroom… it's actually meant to be individualized. So, if we remove our fear and remember that we innately know how to observe and understand children, then we can make the modifications needed based on our instincts and our*

observations, but also on the knowledge we're accruing from years of experience from ourselves or from our colleagues."

On the other hand, while in some instances, the Montessori pedagogy and practices were noted as being well-suited to supporting the individual needs of students, they were also sometimes noted as being **incongruent** to getting students the support they may need. For instance, one teacher reported, "*My AMI training did not prepare me for this. It did, however, equip me to understand how to create an environment and observe for typical development. This was helpful to the end that that I began to be able to identify when a child's path was deviating from what was typical.*" An administrator described other ways in which a tension existed between staying true to the Montessori method and providing the supports to students with special needs: "*I have heard people concerned about their accreditation status if they change how presentations are done or different things throughout the day… which I guess is another reason why some schools or administrations might be afraid of working with children who are more neurodiverse.*"

This tension, among others, segues into one of the more prevalent themes in this study. One entrenched issue is a **general fear and distrust** that flows in many directions—for all community members involved. One teacher who is also a parent of children with diagnosed disabilities described this: "*Teachers have a lot of fear about accepting children who are different than what the norm would be. They are afraid of… not being able to help the child. They are afraid of the parents not wanting to admit that something is going on with their child… they are afraid of a parent blaming the teacher for anything that is coming up.*" What is remarkable about this cultural phenomenon is that no involved party is excluded from potential fear and distrust. For instance, administrators can worry about a school's reputation, which may impact enrollment. Guides can be concerned with their support becoming diluted and ineffective from being overburdened. Guides can also be blamed by parents if previous guides/teachers did not identify any issues. Parents can also be fearful to make special requests because they think their child may be at risk of being rejected by the school. These are just several of the ways a culture of fear and distrust has permeated education and can constrain the honest, trusting, transparent communication that is needed to effectively support students with disabilities or developmental delays.

Finally, there is a natural (and sometimes artificial) flow of students with special needs and their **families moving to schools where resources and supports exist**. Sometimes Montessori schools are the stop gap for students with special needs because the pedagogy is more flexible and adaptable to supporting the individual needs of students. In some cases, students and families are counseled into or out of a Montessori school due to a mismatch of resources and needs. In other cases, students and families flock to schools with a track record and are known to be supportive of students with special needs. "*A few parents are into that whole Montessori ideal, but mostly they seek out our school, especially in elementary and on, because the public school is not working out for them.*" In any case, families tend to be directed wherever it is perceived that there are more resources and supports to help the child with special needs.

In addition to realities reported by guides and administrators, the thematic content analysis revealed specific **needs** identified by guides and administrators, which are presented in Figure 2 and discussed below. In the figure, larger circles represent more frequently reported themes while smaller circles represent less frequently reported themes.

Figure 2. *Reported Needs of Montessori Guides and Administrators*

We appreciate that we always have more to learn…. How we can… educate ourselves and understand the child better. So definitely more educating across the board.

Training & Professional Development

Adaptability + Alignment

I appreciate where AMI is coming from and there are certain core tenants that we have to stick to but also the world is changing and we have to have more tools to help us.

One of the big things I'm hoping for is that to create and be a part of more of a community that's sharing these things.

Community & Support Groups

Additional Resources & Support

We could always use more help… I think having somebody on staff who is dedicated to being that support person.

Participants were asked what would be most helpful to them for supporting students with developmental disabilities or delays. The most frequently noted need was ***additional and ongoing specialized training and professional development*** for supporting and managing students with special needs. The science around evidence-based strategies to support students with a variety of disabilities or neurodivergence is burgeoning. As such, ongoing training with the most up-to-date methods would be an asset to educators. Moreover, many Montessori educators have had long illustrious careers, yet their original Montessori training may be decades old and lacking in current information and strategies. Many guides noted this discrepancy, which is illustrated by the following quote from an 18-year veteran Montessori guide: "*There needs to be an overall retraining. [We] can't just say okay, what you learned 20 years is still going on today. We all need to be retrained in the science of reading and how it applies to Montessori. Montessori is very close to the science of reading, but we have to be specific… And we all really could be retrained in that.*" More specifically, it is important for the training to include some specialization in how to be inclusive and support children who are neurodivergent or may have developmental disabilities or delays. One participant described how the Montessori community could be more supportive and

inclusive with regards to training: "*I think we spent the day talking about alternative learners in my training when I did my teacher training, and not what real inclusion looks like, and what it takes to support children who are neurodivergent.*" In addition, participants in the study were concerned that Montessori trainers were missing from the conversation. Participants specifically asked that Montessori trainers and consultants be more aware of the reality and needs of today and work to align requirements and policies with present needs. This is highlighted in the following quote from a 35-year veteran Montessori guide: "*What if we had [Montessori] trainers participating in this [study] and they heard the voices of us... maybe they can think of ways of having workshops or adding to the training. My training never talked about any learning disability.*" The desire for more training and more involvement from Montessori trainers also aligns with participants survey responses. Respondents were asked if their Montessori training prepared them to support all students with developmental disabilities or delays, to which they tended to disagree. There were no significant differences across surveys or groups ($M_{Pre-Survey} = 2.85$, $SD_{Pre-Survey} = 1.70$; $M_{Post-Survey} = 2.92$, $SD_{Post-Survey} = 1.56$, $p = .923$; $M_{Post-Only Survey} = 2.81$, $SD_{Post-Only Survey} = 1.52$, $p = .398$; Figures 3-5 and Table 10 in Appendix E).

Figure 3. *Frequency of ASQ Pre-Survey Agreement Levels for "My Montessori teacher training prepared me to support all my students with developmental delays."*

| 26% | 24% | 19% | 13% | 10% | 3% | 5% |

Strongly Disagree — **Strongly Agree**

Figure 4. *Frequency of ASQ Post-Survey Agreement Levels for "My Montessori teacher training prepared me to support all my students with developmental delays."*

| 21% | 23% | 23% | 16% | 9% | 5% | 2% |

Strongly Disagree — **Strongly Agree**

Figure 5. *Frequency of Post-Only Survey Agreement Levels for "My Montessori teacher training prepared me to support all my students with developmental delays."*

| 25% | 19% | 25% | 19% | 6% | 6% |

Strongly Disagree — **Strongly Agree**

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In addition to more and ongoing training, guides and administrators also reported a need for more *adaptability and flexibility* within the work they do to support students with special needs. This came up specifically as a tension with Montessori practices. This is because for students who are neurodivergent or have developmental disabilities or delays, their occupational therapy plans can sometimes contradict Montessori pedagogy and practices. For example, a teacher in the study described a situation in which she was working with an occupational therapist to support a child with special needs. The occupational therapist suggested the student could benefit from practicing picking up and carrying objects in bundles to practice a specific skill that needed to be developed. However, this contrasted with what the teacher understood the Montessori approach to be—to have children pick up and carry only one material at a time. When these kinds of instances arise, guides and administrators in the study wish they could be more collaborative and want the flexibility and permission to modify Montessori practices to best support the needs of the child when appropriate.

In addition to flexibility, guides and administrators in the study also spoke about the need for *aligned systems* that are adapted to the realities of today to support all types of learners. This included alignment of resources, personnel, policies, administration, practice standards, culture, beliefs, and parent support. For example, from a policy level, one participant said, "*in terms of wanting schools to be inclusive and having screenings is a... Making sure kids aren't falling through the cracks…. it needs to be in a policy level.*" A teacher also pointed out the need for support from administration: "*the administration has to be really clear about what is it that they are agreeing to do because they can bring in these children, but not give the support or the flexibility of a guide to be able to be creative in.*" In addition, between schools and families, a teacher noted, "*Knowing where to send families for services and having a relationship with services providers created a trust between us and the parents and allowed them to feel we were on the same team together.*"

Importantly, no one intervention is the panacea or silver bullet. While participants noted specific pain points, these are all interacting systems that require a concerted and community-based approach so that the work does not all fall on one person or system. For schools who do this well, they develop reputations for being effective at supporting students from all backgrounds and abilities: "*That's one thing I love about [my school], is all of the decisions that are made by the entire staff together, from which child goes into which classroom to how we want our daily schedule to look, to how we want the summer programmed to run, all of those things we decide as a community.*"

While flexibility and alignment are key, specific areas of support within the system were also noted by participants. One request was for *more specialized professional staff* dedicated to supporting students with special needs. A teacher responded to another teacher in a focus group saying, "*I love the title of your job, Director of Inclusion, it's awesome! And it would be great if that was a recognized part of Montessori... And when we say inclusion, we don't just mean special needs. We*

mean all inclusion. But I think having a dedicated person would definitely help because then the teachers can actually do what their training is, is teach and help guide [the students]." This position was sometimes also described as a school-wide occupational therapist or person at a higher-level who could observe and intervene where needed. Of course, driving this solution involves more financial support and backing to hire such personnel, which was also noted as a need by participants.

In addition, guides and educators are community driven and learn a lot by interacting and sharing learnings with each other. They were interested in specialized **support groups** where they could engage other guides or experts in the field in conversations about the challenges they face. This is illustrated in the following quote from a teacher: "*It might be nice to have some more groups like this where you talk to other people sort of sponsored where you're just, "Hey, this is the autism group [where] we're going to talk about it." We may have like a couple of experts.*" They also felt if they had opportunities to connect, they could learn a great deal from each other: "*The more that we talk to each other the more that we can help each other.*" Participants even saw the focus groups in the study as an opportunity to connect with others and some asked when the group would be meeting again in the future. Others were eager to learn when there might be a similar opportunity to participate in the training and the study so that their colleagues could participate: "*I've actually had some questions from other colleagues that were wondering if anything like this would be offered again in the future.*"

> In summary, Montessori guides and administrators in the study reported on their current realities with supporting students with developmental disabilities or delays, which included a pervasive culture of fear and distrust from a history of blame, an increased need and urgency from greater numbers of students with individual special needs, and an environment depleted from the global pandemic. In addition, targeted resources are few and costly, and as a result, many guides shoulder the responsibility and seek out resources in their free time. In some cases, guides and administrators face contradictions between the needs of students and the Montessori pedagogy and practices. Because resources are scarce, families seek out schools or school systems that have developed reputations for being able to support students with developmental disabilities or delays. In addition to these realities, guides and administrators in the study noted several needs or requests to better help them serve students with disabilities or delays. These included additional and ongoing specialized training and professional development to learn current scientific best practices and strategies around supporting students with disabilities; more support in the classroom and school from specially trained personnel such as a director of inclusion; opportunities to gather as a community to support and learn from one another or experts in the field; and participants felt the need for aligned systems including resources, personnel, policies, administration, practice standards, culture, beliefs, and parent support.

EQ2: What are the perceptions and experiences of Montessori guides and administrators regarding the support they provide to students with developmental disabilities or delays before and after completing the ASQ training?

EQ 2A: What are the attitudes and beliefs of Montessori guides and administrators toward universal screeners before and after participating in the ASQ training?

Participants responded to a series of survey items addressing their attitudes and beliefs toward using universal screeners to detect developmental delays or disabilities in students (Table 3). A comparison of guides' and administrators' self-ratings of their attitudes and beliefs from before the January ASQ training to after the training were significantly different (see Table 10 in Appendix E). Guides and administrators were more likely to believe that there are benefits of using a universal screener after completing the ASQ training ($M = 5.89$, $SD = .93$) compared to before the training ($M = 5.20$, $SD = 1.05$, $p < 0.01$; Figure 6). In addition, guides and administrators who had taken the ASQ training before January and completed the

Table 3. *Attitudes & Beliefs toward Universal Screeners Survey Items*
Using them is essential for the detection of developmental delays in young children
They should be a requirement in early childhood school settings
They are a waste of resources (reverse scored)
They are effective at detecting students' developmental delays
Using them leads to harmful labeling of students (reverse scored)
They ensure more students get the support that they need
They ensure equitable access to developmental resources
They are useful for having conversations with caregivers about their child's developmental delays

post-only survey ($M = 6.05$, $SD = .58$), their attitudes and beliefs toward universal screeners were not significantly different from the January trained ASQ post survey ratings ($M = 5.89$, $SD = .93$, $p = 0.428$; Figure 6).

Figure 6. *Pre, Post, and Post-Only Mean Scores for Attitudes and Beliefs toward Universal Screeners for ASQ Trained Participants*
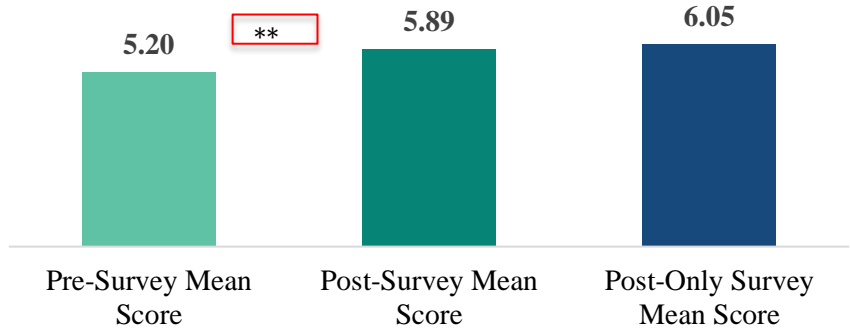
Note: * *p* < .05, ** *p* < .01, *** *p* < .001. A paired-samples significance test was calculated between the ASQ Pre-Survey mean scores and ASQ Post-Survey mean scores. An independent samples significance test was calculated between the ASQ Post-Survey mean score and Post-Only Survey mean score.

> Taken together, this set of results indicated that guides' and administrators' attitudes and beliefs toward universal screeners increased after completing the ASQ and suggests that they may remain stable thereafter.

EQ 2B: What are the knowledge and skills levels of Montessori guides and administrators who support students with developmental disabilities or delays before and after participating in the ASQ training?

Participants responded to a series of survey items self-rating their skills and knowledge related to detecting and supporting students with developmental delays or disabilities (Table 4). A comparison of guides' and administrators' self-ratings of their skills and knowledge from before the January ASQ training to after the training were significantly different (see Table 10 in Appendix E). Guides and administrators were more likely to self-rate their skills and knowledge as higher after completing the ASQ training (*M* = 5.45, *SD* = .90) compared to before the training (*M* = 4.42, *SD*

Table 4. *Skills & Knowledge Survey Items*
I know what universal developmental screening is
I can digest technical information (e.g., research articles) about child development outside of the Montessori context
I regularly use my skills to talk to caregivers about their child's developmental delays
I have a strong understanding of the types of developmental delays that can exist for children
I have the knowledge I need to be able to detect developmental delays within all my students
I have the skills I need to talk to caregivers about their child's developmental delays
I can explain to others the types of developmental delays that can exist for children
I regularly apply my knowledge to detect developmental delays within all my students

= 1.30, $p < 0.001$; Figure 7). In addition, guides and administrators who had taken the ASQ training before January and completed the post-only survey ($M = 5.81$, $SD = .95$), self-rated their skills and knowledge as significantly higher than participants in the January training ($M = 5.45$, $SD = .90$, $p < 0.05$; Figure 7).

Figure 7. *Pre, Post, and Post-Only Mean Scores in Skills and Knowledge for ASQ Trained Participants*
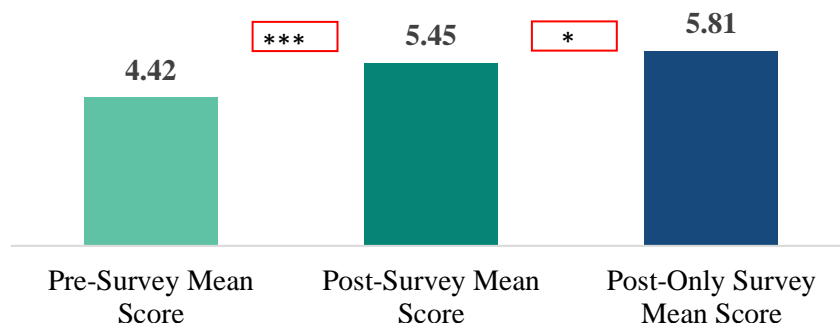
Note: * $p < .05$, ** $p < .01$, *** $p < .001$. A paired-samples significance test was calculated between the ASQ pre-survey mean scores and ASQ post-survey mean scores. An independent samples significance test was calculated between the ASQ post-survey mean score and post-only survey mean score.

In addition, guides and administrators who had taken the ASQ training before January and completed the post-only survey responded to a couple questions about their abilities (Figures 8 & 9). Given the time lag since these guides and administrators had complete the ASQ training, the following items assessed the extent to which they attributed any gains to the training as opposed to other experiences they had completed.

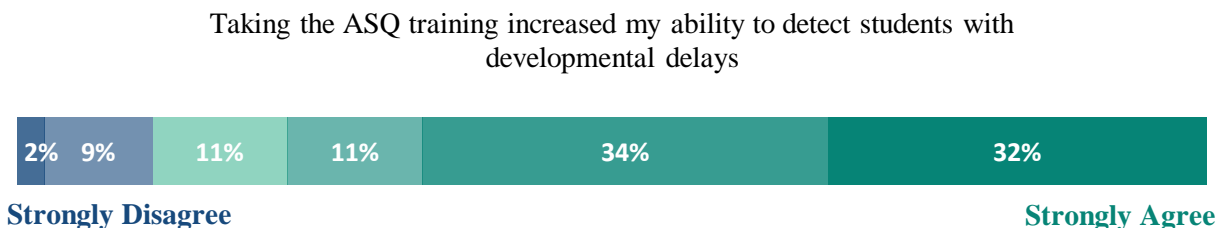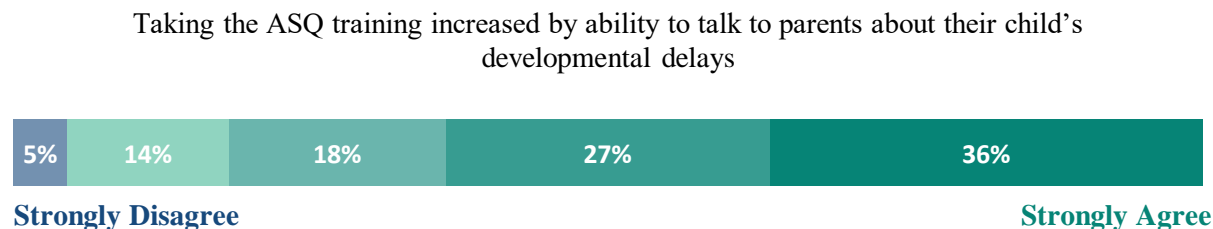Figure 8. *Post-Only Survey Participants' Frequencies of Levels of Agreement*

Taking the ASQ training increased my ability to detect students with developmental delays

Strongly Disagree | 2% 9% 11% 11% 34% 32% | Strongly Agree

Figure 9. *Post-Only Survey Participants' Frequencies of Levels of Agreement*

Taking the ASQ training increased by ability to talk to parents about their child's developmental delays

5%	14%	18%	27%	36%

Strongly Disagree   **Strongly Agree**

Taken together, this set of results indicate that guides' and administrators' skills and knowledge around detecting and supporting students with developmental disabilities or delays increased after completing the ASQ and suggests that their skills and knowledge may continue to rise gradually with more time and opportunity to practice.
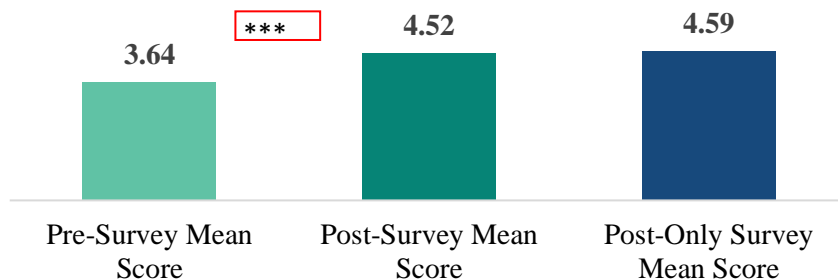
EQ 2C: What are the confidence and self-efficacy levels of Montessori guides and administrators who support students with developmental disabilities or delays before and after participating in the ASQ training?

Participants responded to a series of survey items self-rating their confidence and self-efficacy related to detecting and supporting students with developmental delays or disabilities (Table 5). A comparison of guides' and administrators' self-ratings of their confidence and self-efficacy from before the January ASQ training to after the training were significantly different (see Table 10 in Appendix E). Guides and administrators were more likely to self-rate their confidence and self-efficacy as higher after completing the ASQ training ($M = 4.52$, $SD = 1.25$) compared to before the training ($M = 3.64$, $SD = 1.46$, $p < 0.001$; Figure 10). In

Table 5. *Confidence & Self-Efficacy Survey Items*

I feel I can always identify all of the students in my school setting who have developmental delays
I am always confident in my ability to have conversations with caregivers about their child's developmental delays
I feel I can effectively support the needs of all my students who have developmental delays
I am confident I can appropriately refer all my students who may be in need of a disability diagnoses
I believe I can always identify difficult-to-detect developmental delays in my students

addition, guides and administrators who had taken the ASQ training before January and completed the post-only survey ($M = 4.59$, $SD = 1.12$), were not significantly different in their confidence and self-efficacy from the January trained ASQ post survey ratings ($M = 4.52$, $SD = 1.25$, $p = 0.328$; Figure 10).

Figure 10. *Pre, Post, and Post-Only Mean Scores in Confidence and Self-efficacy for ASQ Trained Participants*

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. A paired-samples significance test was calculated between the ASQ Pre-Survey mean scores and ASQ Post-Survey mean scores. An independent samples significance test was calculated between the ASQ Post-Survey mean score and Post-Only Survey mean score.

Taken together, this set of results indicate that guides' and administrators' confidence and self-efficacy to detect and support students with developmental disabilities or delays increased after completing the ASQ and suggests that they may remain stable thereafter.

EQ 2D: To what extent do Montessori guides and administrators believe they have the necessary resources and supports to serve students with developmental disabilities or delays before and after participating in the ASQ training?

Participants responded to a series of survey items rating their access to tools and resources that they believed they needed to adequately detect and support students with developmental delays or disabilities in students (Table 6). A comparison of guides' and administrators' ratings of their access to tools and resources from before the January ASQ training to after the training were significantly different (see Table 10 in Appendix E). Guides and administrators were more likely to indicate their access to resources and supports as higher after completing the ASQ training ($M = 4.92$, $SD = 1.08$) compared to before the training ($M = 4.21$, $SD = 1.18$, $p < 0.001$; Figure 11). In addition, guides and administrators who had taken the

Table 6. *Tools & Resources Survey Items*
I have a clear process for having conversations with caregivers about their child's developmental delays
I have the tools I need to provide appropriate interventions for students in need
I am supported by my colleagues in helping my students with developmental delays
I know the appropriate next steps to take after detecting developmental delays within my students
My school administration supports me in helping my students with developmental delays
I feel supported by Montessori leadership in helping my students with developmental delays

ASQ training before January and completed the post-only survey ($M = 5.22$, $SD = .84$), rated their access to tools and resources as significantly higher than participants in the January training ($M = 4.92$, $SD = 1.08$, $p < 0.05$; Figure 11).

Figure 11. *Pre, Post, and Post-Only Mean Scores in Having the Tools and Resources they Need for ASQ Trained Participants*
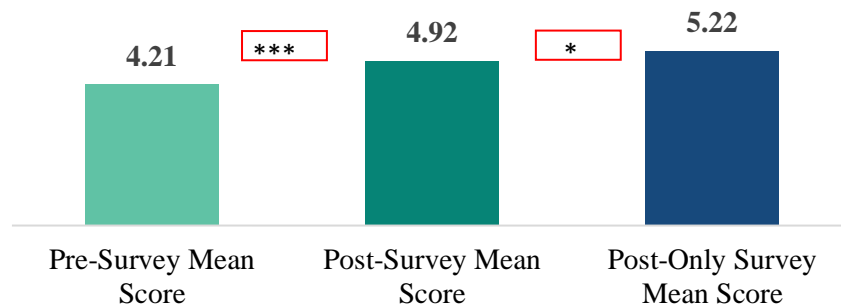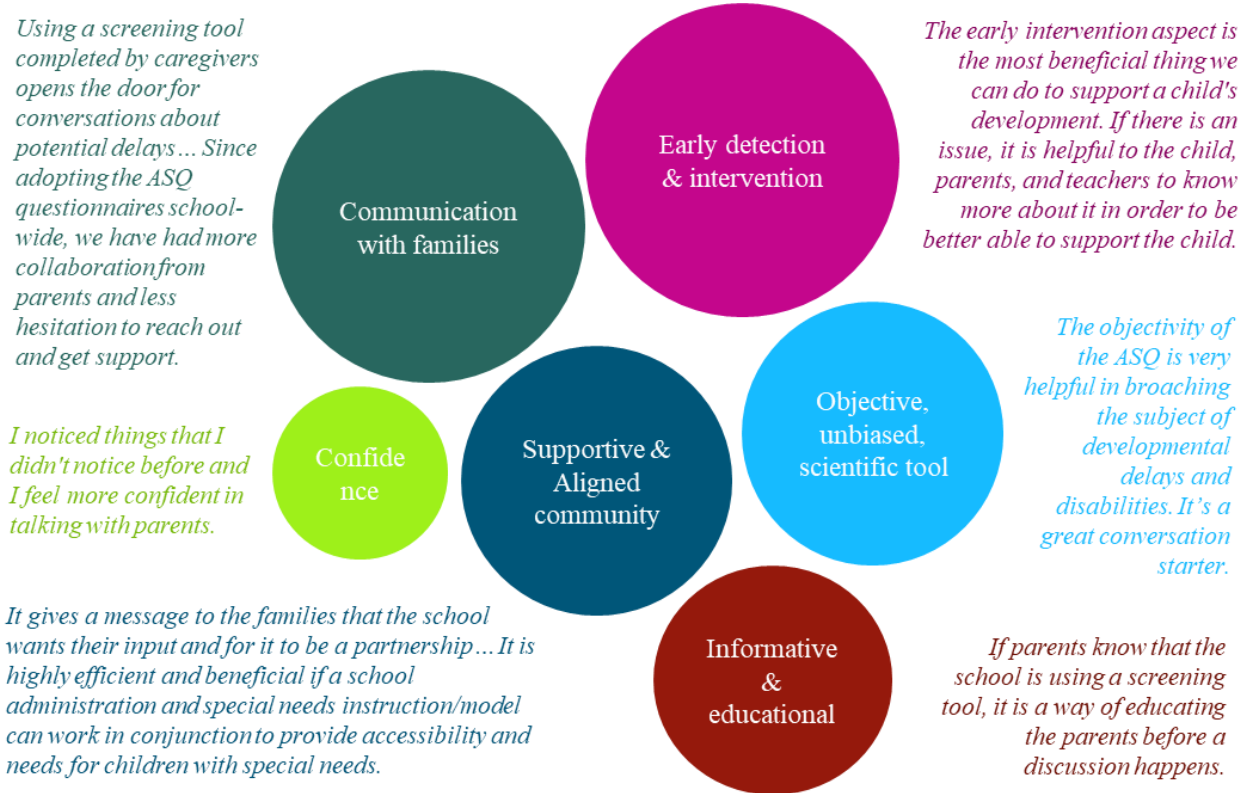

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. A paired-samples significance test was calculated between the ASQ Pre-Survey mean scores and ASQ Post-Survey mean scores. An independent samples significance test was calculated between the ASQ Post-Survey mean score and Post-Only Survey mean score.

> Taken together, this set of results indicate that guides and administrators believe their access to tools and resources to detect and support students with developmental disabilities or delays increased after completing the ASQ and suggests that access to tools and resources may continue to rise gradually with more time and opportunity.

EQ3: What are the perceived benefits and challenges of the implementation and use of the ASQ by Montessori community members?

Overall, the ASQ is seen as a beneficial and helpful training and tool. Thematic findings are presented in Figure 12 and discussed below. In the figure, larger circles represent more frequently reported themes while smaller circles represent less frequently reported themes.

Figure 12. *Reported Benefits of Implementing and Using the ASQ*

Using a screening tool completed by caregivers opens the door for conversations about potential delays… Since adopting the ASQ questionnaires school-wide, we have had more collaboration from parents and less hesitation to reach out and get support.

Communication with families

Early detection & intervention

The early intervention aspect is the most beneficial thing we can do to support a child's development. If there is an issue, it is helpful to the child, parents, and teachers to know more about it in order to be better able to support the child.

I noticed things that I didn't notice before and I feel more confident in talking with parents.

Confidence

Supportive & Aligned community

Objective, unbiased, scientific tool

The objectivity of the ASQ is very helpful in broaching the subject of developmental delays and disabilities. It's a great conversation starter.

It gives a message to the families that the school wants their input and for it to be a partnership… It is highly efficient and beneficial if a school administration and special needs instruction/model can work in conjunction to provide accessibility and needs for children with special needs.

Informative & educational

If parents know that the school is using a screening tool, it is a way of educating the parents before a discussion happens.

Guides and administrators who completed the ASQ training reported a range of benefits that they experienced. ***Early detection*** was one of the most prominent themes. Participants in the study reported that it is important to be able to provide supports early on so issues do not become exacerbated with time as the child develops. Not only that, but early detection and interventions can have a cascading effect on proximal systems outside the child. These benefits were illustrated in the following quote by a teacher: "*Benefits for developing a program to identify at risk students are the child receives help sooner so they have a better chance to make progress before missing too many milestones and hopefully requires less intensive help later in their life, the teacher is not overwhelmed with too many children in need of help who are not getting it and then finds more satisfaction in their job, and the school has better retention and parent satisfaction because there are not an overwhelming number of struggling students that should have had help when they were younger. I could go on…*" Given the ASQ is designed for detecting developmental disabilities or delays early, it is not surprising it was one of the most prevalent themes in the study.

In addition to early detection, participants also reported that the ASQ was valuable for ***facilitating communication with parents and families***. This theme is illustrated in the following quote by a teacher: "*We used a screening as a jumping off point for a conversation with a family about problems their child was having, and they opened up more about why we were seeing the problems*

so we could move forward." In addition to opening the door to conversations, guides and parents were more easily able to connect on a level playing field with common language and expectations as highlighted by a quote from an administrator: "*Teachers and parents are looking at the same skills and have a shared tool to look at a child's development. If parents know that the school is using a screening tool, it is a way of educating the parents before a discussion happens.*"

Not only are parents brought into the fold as partners, but participants in the study reported that the ASQ training and tool can *foster a healthy, aligned support system* and help connect the dots for internal and external resources. "*The ASQ training helped our school staff to have a universally used and understood tool with which we can assess students we previously would have felt under-equipped to support. We now have a more comfortable understanding of the tool, how to use it, when to use it, and how to discuss it with families… and it's useful in that we can use it when we are making a referral.*" Moreover, another administrator reported: "*The benefit to adopting a school program… [is that] these younger children will also have supports that will follow them into the elementary environment if needed which will create a continuity and provide for better communication during transition.*" This potential for a cohesive and aligned support system within the school community is an ideal outcome to strive for.

Another benefit of the ASQ reported by guides and administrators is the value it provides as a *scientifically, externally validated tool*. It is an objective measure that can help keep conversations neutral. This is illustrated in the following quote by a teacher: "*I feel [the ASQ] helps lend credibility to the guide's observations, when a scientific neutral tool can reinforce what you observe. I think it is also helpful in detecting those delays we may not see.*" In addition, it can normalize the experience, highlighting that there are many developmental pathways. This is highlighted in the following quote by an administrator: "*I believe a school-wide program normalizes the screening process since it would be done by all families. It reaffirms to caregivers the school's awareness of child development milestones and the importance of early intervention.*" Moreover, another teacher noted how when such a tool is applied universally, it can avoid picking out and labeling children with concerning behavior: "*[The] ability to screen all children with a consistent set of benchmarks across developmental domains. [It] avoids any feelings a parent might have that their child is being unfairly singled out, because everyone is being screened.*" As this teacher noted, it can also help everyone better understand developmental milestones.

Other guides and administrators in the study also pointed out how the ASQ can be more than a measurement tool. Not only did guides and administrators report that the ASQ was a useful screening tool, but it was also viewed as *a reliable source of information about human development*. A teacher reported, "*I think one of the pros is that it helps teachers to know what "normal" development is. I think although everybody had similar training, you don't always have all of those pieces of information about two-year-olds and three-year-olds and so on.*" The ASQ was also found to be a resource and a source of information for activities that could be shared with parents and families to help a student develop a skill in an area of growth that may have been

identified by the screener. For example, a teacher noted that, "*When the [ASQ] score indicates weaknesses in particular areas, the Guide has a clear area on which to focus and present lessons that will support growth in that area.*" Similarly, another teacher said, *"[The ASQ] gives you a lot of tools to use to help the parents... that the parents could work on at home. They're just so happy to have more information.*"

Finally, the ASQ training and use of the tool was reported as being an avenue for **increasing confidence** among guides and administrators. For example, a teacher said, "*I feel empowered with some extra skills that I have gained from the ASQ training and have shared this information with my school directors and staff, who are very supportive to use this approach for the benefit of the children.*" In addition to personal empowerment, participants reported a collective self-efficacy that was growing with time and opportunities to practice as noted in the following quote: "*Our confidence level is greater, and the fact that... the staff, the teachers, the primary and toddler teachers are just discussing a lot more and talking about ways that we are refining our resource list and referral list.*"

While participants generally had a positive view of the ASQ, guides and administrators also reported several challenges with implementing the ASQ, which are presented in Figure 13 and discussed below. In the figure, larger circles represent more frequently reported themes while smaller circles represent less frequently reported themes.

Figure 13. *Reported Challenges of Implementing and Using the ASQ*
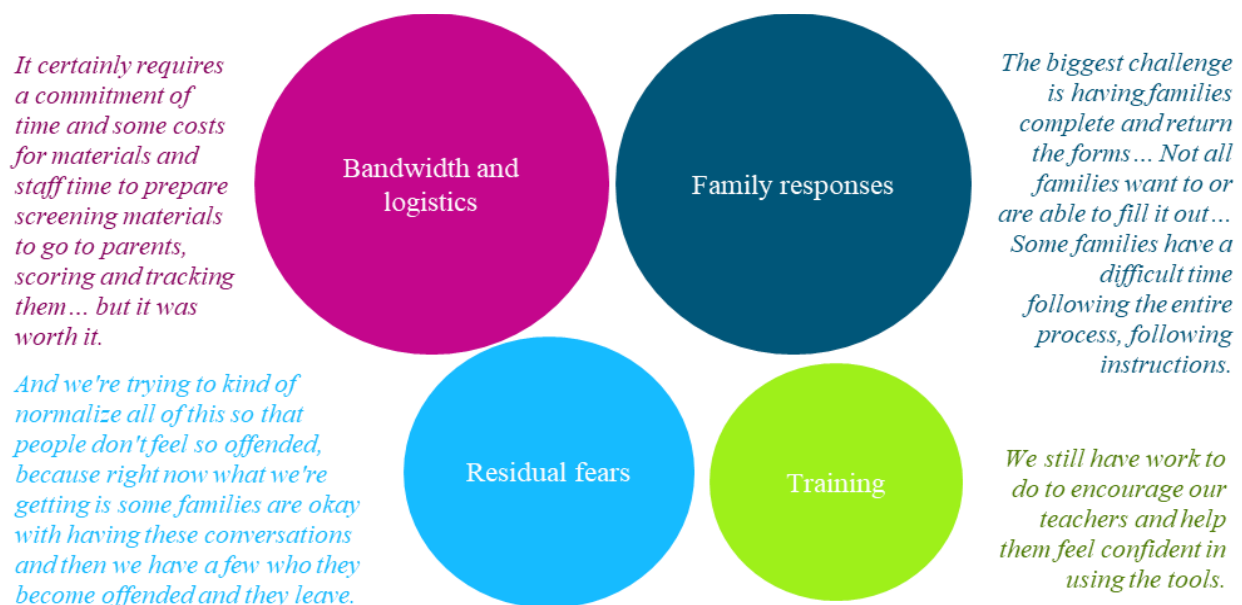
Bandwidth and logistical concerns were the most frequently reported challenge by guides and administrators. There were concerns that sending out packets to parents, processing them upon their return, and following up with parents and families would encroach on the bandwidth of

current personnel. For example, an administrator noted, "*I think there will be some pushback from staff who feel too much is on their plate already, but many understand that the work put in early on to identify can save many problems later.*" Given this concern, an associated suggestion made by participants was to have a designated staff person to handle the administrative logistics and work seamlessly with guides and parents to facilitate communication and next steps once the ASQ had been scored: "*A dedicated "point person" on staff who handles all of the ASQ paperwork for the school. It helps us immensely to have one person to direct all parents to talk to.*" Having dedicated personnel may be an ideal yet impractical solution in a system already strained in resources. In these cases, it may be even more important to have the full support of the school community and have a distributed work plan to alleviate any potential strain on any one individual. The importance of seamless supports between training, guides/teachers, assistants, support services, parents, and the district was noted by participants throughout this study.

Another challenge noted by participants in the study is **how families can sometimes respond** to requests for universal screening. On the one hand, families sometimes have concerns with the whole process because it is an unknown. A teacher noted this in her survey response: "*Resistance to change… Current families potentially feeling confused as to why [the ASQ] is suddenly being implemented.*" However, this type of concern dissipated for veteran ASQ users who had more experience working with parents and families. Instead, it transformed into a more logistical concern of getting parents and caregivers to always respond to the request to complete and return the ASQ. For instance, a teacher reported, "*For some families just filling out paperwork is a roadblock… Whether it's like a literacy thing or a language barrier or even just time. Some families just don't have the time to do it.*" However, once they are armed with the training and support, and have had more time and opportunities to work with families, they reported being more able to anticipate and assuage caregiver's concerns. More research is needed to confirm this trend.

In addition to concerns from parents, guides and administrators in the study reported a need for their **colleagues to have buy-in** to the process and the opportunity to go through the ASQ or similar trainings. "*[We need] staff training, collaboration, changes in school policies, having people partner to accomplish change and implement [a] call to action.*" Universal training could ensure all personnel have the same background, reference points, and understanding of the current research and best practices. Not only would this serve to calibrate the school community to support students with special needs, but it could also alleviate any hesitations or concerns that staff or guides may have.

This is particularly important considering the final challenge reported by guides and administrators in the study, which is **residual fears and hesitations** remain a concern across community members. Guides and administrators either had first-hand experiences with a lack of trust among parents or guides and presumed these concerns would still be present even after completing the ASQ training. For instance, a teacher reported concern she experienced with a family: "*There is always the family who declines to fill it out… I have heard, "I don't want my child 'marked' in the system this early"*

no matter how many times you tell them it is internal." Another teacher highlighted concerns from her colleagues, "*It could put teachers and administrators in a "fix-it" mode in which they see children as problems to be solved instead of persons to be loved in the present moment."* This theme highlights how entrenched the historic culture of labeling, tracking, and finger-pointing has been when it comes to neurodivergent or disabled children. While these are valid concerns, the overwhelming sentiment reported by guides and administrators across the study is that universal screening only serves to normalize and de-stigmatize students with special needs as well as ensure they receive intervention and supports as early as possible.

In summary, teacher and administrators who participated in the study reported benefits and challenges in their experiences with implementing the ASQ to support students with developmental disabilities or delays. The benefits included early detection and intervention and a way to facilitate difficult conversations with parents and families. In addition, the use of the ASQ supported the alignment of internal and external school support systems for a more comprehensive support plan. The ASQ was also viewed as a helpful resource that had accurate and scientifically valid information about developmental milestones while being an objective measure that could help normalize conversations around neurodiversity and disabilities. Finally, guides and administrators reported a boost in confidence in their abilities to find solutions and better support students with developmental disabilities or delays.

In addition to these benefits, guides and administrators reported several challenges regarding the implementation of the ASQ. These included concerns about the logistics and having the bandwidth to support the delivery and scoring of the ASQ. Yet, this challenge could be resolved by having a dedicated staff person for this work, a recommendation of participants in the study. In addition, there were concerns about families' responses to the request to participate in a universal screener. Guides and administrators newer to the ASQ thought that families might be fearful of labeling or tracking, while guides and administrators who had more experience with the ASQ cited more logistical concerns about parents having the time or bandwidth to score and return the ASQ. Guides and administrators also noted how the ASQ would have the greatest value and success when all the guides and staff were trained and bought into the process, which they noted as a concern. Finally, the entrenched issue of labeling, tracking, and finger pointing was a lingering concern of guides and administrators in the study. Yet, this concern is contrast to the general positive belief that universal screening can act as a normalizer and de-stigmatizes these issues.

Conclusions

The findings from this study highlight the realities faced by Montessori guides and administrators in supporting students with developmental disabilities and delays. Taken together, findings from this study indicate an increased need and urgency felt by educators to find solutions that can effectively support the growing number of students requiring special support. While the challenge of supporting students with developmental disabilities or delays is not new, there has been a perceptible shift in recent years, with significantly more students in need of additional support. Despite this, the available resources have not aligned with the current needs and realities, leading to strain on policies, finances, and staff.

Guides tend to bear the burden of responsibility in supporting students when schools are under resourced. The concern of not being able to adequately help the child, of potential blame, and a lack of training and preparation contribute to a culture of fear and distrust among guides, administrators, and parents. This culture can hamper transparent communication and collaboration, which are crucial for effectively supporting students with disabilities or developmental delays. Despite these challenges, many guides demonstrate remarkable resolve and perseverance. Many guides in the study reported taking personal initiative to seek out additional resources, training, and supports to better serve their students. Many guides in the study also reported a moral obligation to identify each student's unique needs and tailor the classroom experience accordingly. The Montessori pedagogy and training are seen as valuable tools for individualizing instruction. On the other hand, conforming to strict standards and practices can also be perceived as barriers in providing the necessary support for students with special needs.

The study also identified specific needs highlighted by guides and administrators. The most frequently mentioned need was additional and ongoing specialized training and professional development to support and manage students with special needs. Participants emphasized the importance of staying updated with evidence-based strategies and addressing the lack of training on supporting neurodivergent students or those with developmental disabilities or delays. They called for increased involvement of Montessori trainers in understanding present needs and aligning requirements and policies accordingly. Participants also stressed the need for adaptability, flexibility, and aligned systems within the Montessori framework to support all types of learners. This includes aligning resources, personnel, policies, practice standards, and parent support, as well as establishing trusting relationships with service providers. While no single intervention can solve all the challenges, a community-based approach that distributes the workload and involves all community members is crucial.

Additionally, participants highlighted the importance of specialized professional staff dedicated to supporting students with special needs, such as a Director of Inclusion or school-wide occupational therapists. They also expressed a desire for specialized support groups and opportunities for guides to connect and learn from each other.

In addition to the current realities and needs, findings from this study indicated that guides' and administrators' attitudes, beliefs, skills, knowledge, confidence, self-efficacy, and access to tools and resources related to detecting and supporting students with developmental delays or disabilities were positively impacted after completing the ASQ training. The participants' ratings significantly increased in all these areas after the training compared to before, suggesting that the training was effective in enhancing their perceptions and capabilities. The study also revealed that guides and administrators who had completed the ASQ training before January and participated in the post-only survey maintained their positive attitudes, beliefs, skills, knowledge, confidence, self-efficacy, and access to resources compared to those who took the training in January. This suggests that the effects of the training may be sustained over time.

In addition, the ASQ training and tool were perceived as beneficial by the participants, with early detection being a prominent theme. The ability to provide support early on, facilitate communication with parents, and establish a shared understanding of child development milestones were reported as key benefits. The ASQ was also viewed as a reliable, externally validated tool that helped keep conversations neutral, normalized the screening process, and provided valuable information and resources for guides, parents, and families. The training increased participants' confidence and self-efficacy, empowering them to support students more effectively.

However, implementing the ASQ also presented challenges, including bandwidth and logistical concerns, resistance to change from families, and the need for buy-in and training among colleagues. Participants emphasized the importance of seamless support systems and collaboration within the school community to address these challenges and ensure successful implementation.

In conclusion, the ASQ training and tool were perceived as beneficial and valuable for detecting and supporting students with developmental delays or disabilities. The training positively influenced participants' attitudes, beliefs, skills, knowledge, confidence, self-efficacy, and access to resources. While challenges exist, the findings highlight the potential of the ASQ to promote early intervention, improve communication with parents, foster aligned support systems, and increase confidence among guides and administrators.

It is crucial to address the challenges and needs highlighted by the study. This can be achieved through creating a culture of trust, providing specialized training and support, aligning systems and resources, integrating inclusive practices within the Montessori framework, and addressing concerns related to the implementation of universal screening tools like the ASQ. By addressing these issues, schools and educators can better support students with developmental disabilities or delays and provide a more inclusive and supportive learning environment.

Recommendations

Montessori school leaders, administrators, policy makers, trainers, consultants, and guides should acknowledge and address the increased need and urgency to support students with developmental disabilities and delays. Based on the study findings and conclusions, the following sets of recommendations are provided for community members.

Montessori Guides

♦ Have conversations with school personnel and parents/families about students who may need special support early and often.
♦ Develop a plan of support for students with special needs with administration, specialized staff, parents, and available resources.
♦ Establish trusting relationships with service providers to ensure coordinated support for students with special needs.

Montessori Administrators

♦ Provide additional and ongoing specialized training and professional development opportunities for guides and administrators to effectively support and manage students with special needs.
♦ Sustain the positive effects of the ASQ training over time by providing ongoing support and reinforcement.
♦ Foster a culture of trust and collaboration among guides, administrators, and parents to promote transparent communication and collaboration.
♦ Work to align systems and resources to support all types of learners, including students with special needs.
♦ Establish specialized professional staff positions, such as directors of inclusion or school-wide occupational therapists, dedicated to supporting students with special needs; or implement a community-based approach that distributes the workload and involves all community members in supporting students with developmental disabilities or delays.

Montessori Trainers

♦ Ensure that training programs are responsive to the current needs and realities and include training on evidence-based strategies for supporting neurodivergent students and those with developmental disabilities or delays.

Montessori Leaders and Policy Makers

- Provide adaptable, flexible, and aligned systems within the Montessori framework, policies, and practice standards to support all types of learners, including students with special needs wherever possible.
- Work closely with accreditation organizations to promote inclusive practices (e.g., make universal screening a requirement or recommendation alongside accreditation). By aligning policies and practices, schools can enhance the credibility and consistency of their inclusive policies.
- Involve Montessori trainers in understanding the present needs of educators and aligning requirements and policies accordingly.
- Create specialized support groups and opportunities for guides and school personnel to connect and learn from each other.

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Appendices

Appendix A: Measures

AMI-USA ASQ PRE Survey

MatchingCode In the response box below, please type the **last four digits of your cell phone number** followed by the **first two letters/numbers of your email address** (e.g., 1593EL)

This is your personal private code that **I will ask you for again in the follow-up survey** so that I can match your responses.

_____

Attitudes

To what extent do you disagree or agree with the following statements about universal developmental screening tools?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)	I do not know what a universal developmental screener is (8)
Using them is essential for the detection of developmental delays in young children (1)								
They should be a requirement in early childhood school settings (2)								
They are a waste of resources (3)								
They are effective at detecting students' developmental delays (4)								
Using them leads to harmful labeling of students (5)								

They ensure
more students
get the
support that
they need (6)

They ensure
equitable
access to
developmental
resources (7)

They are
useful for
having
conversations
with
caregivers
about their
child's
developmental
delays (8)

Skills_Knowledge To what extent do you disagree or agree with the following statements?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)
I know what universal developmental screening is (1)							
I can digest technical information (e.g., research articles) about child development outside of the Montessori context (2)							
I regularly use my skills to talk to caregivers about their child's developmental delays (3)							
I have a strong understanding of the types of developmental delays that can exist for children (4)							

I have the knowledge I need to be able to detect developmental delays within all my students (5)

I have the skills I need to talk to caregivers about their child's developmental delays (6)

I can explain to others the types of developmental delays that can exist for children (7)

I regularly apply my knowledge to detect developmental delays within all my students (8)

DefDevScreen Please briefly define universal developmental screening in your own words. If you do not know, please type "I do not know."

_____

End of Block: Skills/Knowlege

Start of Block: Confidence/Self-efficacy

Confidence_Self-eff To what extent do you disagree or agree with the following statements?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)
I feel I can always identify all of the students in my school setting who have developmental delays (1)							
I am always confident in my ability to have conversations with caregivers about their child's developmental delays (2)							
I feel I can effectively support the needs of all my students who have developmental delays (3)							

I am confident I can appropriately refer all my students who may be in need of a disability diagnoses (4)

I believe I can always identify difficult-to-detect developmental delays in my students (5)

Tools_Resources To what extent do you disagree or agree with the following statements?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)
I have a clear process for having conversations with caregivers about their child's developmental delays (1)							
I have the tools I need to provide appropriate interventions for students in need (2)							
I am supported by my colleagues in helping my students with developmental delays (3)							
I know the appropriate next steps to take after detecting developmental delays within my students (4)							

My school administration supports me in helping my students with developmental delays (5)

My Montessori teacher training prepared me to support all my students with developmental delays (6)

I feel supported by Montessori leadership in helping my students with developmental delays (7)

Benefits What do you see as potential benefits, if any, of adopting a school program to identify students at risk for developmental delays?

_____

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Challenges What do you see as potential challenges, if any, of adopting school program to identify students at risk for developmental delays?

_____

OpenResponse Is there anything else you would like to add?

_____

AgeTeach Please select the response option below that most closely reflects the age-group that you currently teach. Check all that apply.

1. 0-18 months old (1)
2. 18 months to 3-years old (2)
3. 3-6 years old (4)
4. Older than 6 years old (5)

SchoolTime How many years have you worked in a school setting? (Type just the number e.g., "3")

_____

MontessoriTime How many years have you worked in a Montessori setting? (Type just the number e.g., "3")

_____

PriorCoursework Please select from the options below which course or training content you have previously taken. Check all that apply

5. Child development (1)
6. Childhood disabilities (4)
7. Developmental delays (5)
8. Ages and Stages Questionnaire (ASQ) (6)
9. I have taken a relevant course not listed here (please type in the name of the course) (7)
   _____
10. I have not taken any of the above courses or trainings (2)
11. I can't remember if I've taken any of the above courses or trainings (3)

Age What is your age? (please type a numerical response e.g., 41)

_____

Sex Please select your sex:

Male (1)
Female (2)
Trans male (3)
Trans female (4)
Intersex (5)
Prefer not to disclose (6)

Gender Please select the option that reflects your gender identity:

Agender (1)
Genderqueer or Genderfluid (2)
Māhū (3)
Man (4)
Muxe (5)
Non-binary (6)
Questioning or unsure (7)
Two-spirit (8)
Woman (9)
Additional gender category/identity not listed, (Please specify): (10)
_____
Prefer not to disclose (11)

Race_ethnicity Please select your race and ethnicity (choose all that apply):

12. American Indian or Alaska Native   (1)
13. Asian   (2)
14. Black or African American   (3)
15. Filipino   (4)
16. Latinx or Hispanic   (5)
17. Middle Eastern or North African   (6)
18. Native Hawaiian or Other Pacific Islander   (7)
19. White or Caucasian   (8)
20. Other, (Please specify): (9) _____
21. Prefer not to disclose   (10)

End of Block: Background

Start of Block: ContactInfoOptional

FocusGroupRecruit If you are willing to participate in a follow-up one hour focus group in March/April about your experiences supporting your students with developmental delays, please select "yes" below. Participants in the focus group will receive a $5 e-gift card for compensation.

Yes (4)
No (5)

Start of Block: StakeholderType

StakeholderType Please select your role from the dropdown menu below.

Teacher (1)
Administrator (2)
Other (3) _____

End of Block: StakeholderType

AMI-USA ASQ POST Survey

MatchingCode In the response box below, please type the **last four digits of your cell phone number** followed by the **first two letters/numbers of your email address** (e.g., 1593EL)

This is your personal private code that **you created for the initial survey** and will be used to match your responses.

_____

StakeholderType Please select your role from the dropdown menu below.

○ Teacher (1)

○ Administrator (2)

○ Other (3) _____

Attitudes To what extent do you disagree or agree with the following statements about universal developmental screening tools?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)	I do not know what a universal developmental screener is (8)
Using them is essential for the detection of developmental delays in young children (1)	○	○	○	○	○	○	○	○
They should be a requirement in early childhood school settings (2)	○	○	○	○	○	○	○	○
They are a waste of resources (3)	○	○	○	○	○	○	○	○
They are effective at detecting students' developmental delays (4)	○	○	○	○	○	○	○	○
Using them leads to harmful labeling of students (5)	○	○	○	○	○	○	○	○

They ensure more students get the support that they need (6)	○	○	○	○	○	○	○	○
They ensure equitable access to developmental resources (7)	○	○	○	○	○	○	○	○
They are useful for having conversations with caregivers about their child's developmental delays (8)	○	○	○	○	○	○	○	○

Skills_Knowledge To what extent do you disagree or agree with the following statements?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)
I know what universal developmental screening is (1)	○	○	○	○	○	○	○
I can digest technical information (e.g., research articles) about child development outside of the Montessori context (2)	○	○	○	○	○	○	○
I regularly use my skills to talk to caregivers about their child's developmental delays (3)	○	○	○	○	○	○	○
I have a strong understanding of the types of developmental delays that can exist for children (4)	○	○	○	○	○	○	○

I have the knowledge I need to be able to detect developmental delays within all my students (5)

○　　　○　　　○　　　○　　　○　　　○　　　○

I have the skills I need to talk to caregivers about their child's developmental delays (6)

○　　　○　　　○　　　○　　　○　　　○　　　○

I can explain to others the types of developmental delays that can exist for children (7)

○　　　○　　　○　　　○　　　○　　　○　　　○

I regularly apply my knowledge to detect developmental delays within all my students (8)

○　　　○　　　○　　　○　　　○　　　○　　　○

| Taking the ASQ training increased my ability to detect students with developmental delays (9) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Taking the ASQ training increased by ability to talk to parents about their child's developmental delays (10) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

DefDevScreen Please briefly define universal developmental screening in your own words. If you do not know, please type "I do not know."

_____

End of Block: Skills/Knowlege

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Confidence_Self-eff To what extent do you disagree or agree with the following statements?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)
I feel I can always identify all of the students in my school setting who have developmental delays (1)	○	○	○	○	○	○	○
I am always confident in my ability to have conversations with caregivers about their child's developmental delays (2)	○	○	○	○	○	○	○
I feel I can effectively support the needs of all my students who have developmental delays (3)	○	○	○	○	○	○	○

I am confident I can appropriately refer all my students who may be in need of a disability diagnoses (4)	○	○	○	○	○	○	○
I believe I can always identify difficult-to-detect developmental delays in my students (5)	○	○	○	○	○	○	○

Tools_Resources To what extent do you disagree or agree with the following statements?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)
I have a clear process for having conversations with caregivers about their child's developmental delays (1)	○	○	○	○	○	○	○
I have the tools I need to provide appropriate interventions for students in need (2)	○	○	○	○	○	○	○
I am supported by my colleagues in helping my students with developmental delays (3)	○	○	○	○	○	○	○
I know the appropriate next steps to take after detecting developmental delays within my students (4)	○	○	○	○	○	○	○

My school administration supports me in helping my students with developmental delays (5)

◯   ◯   ◯   ◯   ◯   ◯   ◯

My Montessori teacher training prepared me to support all my students with developmental delays (6)

◯   ◯   ◯   ◯   ◯   ◯   ◯

I feel supported by Montessori leadership in helping my students with developmental delays (7)

◯   ◯   ◯   ◯   ◯   ◯   ◯

Benefits What do you see as potential benefits, if any, of adopting a school program to identify students at risk for developmental delays?

_____

BenefitsFromASQ What benefits, if any, have you experienced since participating in the ASQ training?

_____

Challenges What do you see as potential challenges, if any, of adopting school program to identify students at risk for developmental delays?

_____

ChallengesSinceASQ What challenges, if any, have you experienced since participating in the ASQ training?

_____

OpenResponse Is there anything else you would like to add?

_____

FocusGroupRecruit If you are willing to participate in a follow-up one hour focus group in April about your experiences supporting your students with developmental delays, please select "yes" below. Participants in the focus group will receive a $5 e-gift card for compensation.

○ Yes (4)

○ No (5)

AMI-USA ASQ Post-ONLY Survey

StakeholderType Please select your role from the dropdown menu below.

○ Teacher (1)

○ Administrator (2)

○ Other (3) _____

Intro The first section of this survey includes several open-ended questions for you to reflect upon and respond to. Please take your time providing specific examples and details. More descriptive responses in this section are helpful. The second section of this survey includes a series of close-ended responses and can be completed more quickly.

Experiences Please take a few moments to reflect upon and describe your overall experiences detecting and supporting students with developmental delays or disabilities in your school setting.

_____

CaretakerInteraction Please describe how your interactions with the caretakers of your students with developmental delays or disabilities have been?

_____

Benefits What *benefits*, if any, have you experienced since adopting a universal screener since participating in the Ages and Stages Questionnaire (ASQ) training?

_____

Challenges What *challenges*, if any, have you experienced since adopting a universal screener since participating in the ASQ training?

_____

Suggestions What recommendations do you have so that teachers and school staff can better support students and families with children with developmental delays or disabilities?

_____

AdditionalAdvice Is there anything else you would like to add?

_____

Attitudes To what extent do you disagree or agree with the following statements about universal developmental screening tools?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)	I do not know what a universal developmental screener is (8)
Using them is essential for the detection of developmental delays in young children (1)	○	○	○	○	○	○	○	○
They should be a requirement in early childhood school settings (2)	○	○	○	○	○	○	○	○
They are a waste of resources (3)	○	○	○	○	○	○	○	○
They are effective at detecting students' developmental delays (4)	○	○	○	○	○	○	○	○
Using them leads to harmful labeling of students (5)	○	○	○	○	○	○	○	○

They ensure more students get the support that they need (6)	○	○	○	○	○	○	○	○
They ensure equitable access to developmental resources (7)	○	○	○	○	○	○	○	○
They are useful for having conversations with caregivers about their child's developmental delays (8)	○	○	○	○	○	○	○	○

Skills_Knowledge To what extent do you disagree or agree with the following statements?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)
I know what universal developmental screening is (1)	○	○	○	○	○	○	○
I can digest technical information (e.g., research articles) about child development outside of the Montessori context (2)	○	○	○	○	○	○	○
I regularly use my skills to talk to caregivers about their child's developmental delays (3)	○	○	○	○	○	○	○
I have a strong understanding of the types of developmental delays that can exist for children (4)	○	○	○	○	○	○	○

I have the
knowledge I
need to be
able to detect
developmental
delays within
all my
students (5)

○　　　○　　　○　　　○　　　○　　　○　　　○

I have the
skills I need to
talk to
caregivers
about their
child's
developmental
delays (6)

○　　　○　　　○　　　○　　　○　　　○　　　○

I can explain
to others the
types of
developmental
delays that
can exist for
children (7)

○　　　○　　　○　　　○　　　○　　　○　　　○

I regularly
apply my
knowledge to
detect
developmental
delays within
all my
students (8)

○　　　○　　　○　　　○　　　○　　　○　　　○

DefDevScreen Please briefly define universal developmental screening in your own words. If you do not know, please type "I do not know."

_____

End of Block: Skills/Knowlege

Start of Block: Confidence/Self-efficacy

Confidence_Self-eff To what extent do you disagree or agree with the following statements?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)
I feel I can always identify all of the students in my school setting who have developmental delays (1)	○	○	○	○	○	○	○
I am always confident in my ability to have conversations with caregivers about their child's developmental delays (2)	○	○	○	○	○	○	○
I feel I can effectively support the needs of all my students who have developmental delays (3)	○	○	○	○	○	○	○

| I am confident I can appropriately refer all my students who may be in need of a disability diagnoses (4) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| I believe I can always identify difficult-to-detect developmental delays in my students (5) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Tools_Resources To what extent do you disagree or agree with the following statements?

	(1) Strongly disagree (1)	(2) (2)	(3) (3)	(4) (4)	(5) (5)	(6) (6)	(7) Strongly agree (7)
I have a clear process for having conversations with caregivers about their child's developmental delays (1)	○	○	○	○	○	○	○
I have the tools I need to provide appropriate interventions for students in need (2)	○	○	○	○	○	○	○
I am supported by my colleagues in helping my students with developmental delays (3)	○	○	○	○	○	○	○
I know the appropriate next steps to take after detecting developmental delays within my students (4)	○	○	○	○	○	○	○

My school administration supports me in helping my students with developmental delays (5)

○　　○　　○　　○　　○　　○　　○

My Montessori teacher training prepared me to support all my students with developmental delays (6)

○　　○　　○　　○　　○　　○　　○

I feel supported by Montessori leadership in helping my students with developmental delays (7)

○　　○　　○　　○　　○　　○　　○

ASQdate When did you take the Ages and Stages Questionnaires (ASQ) in Montessori Setting? (Please use the following format even if you estimate the date: mm/dd/yyyy)

_____

Q41 Please select from the options below which course or training content you have previously taken.

☐   Child development (1)

☐   Childhood disabilities (4)

☐   Developmental delays (5)

☐   I have not taken any of the above courses or trainings (2)

☐   I can't remember if I've taken any of the above courses or trainings (3)

✳

Q43 How many years have you been an educator? (Please type a whole number e.g., "5")

_____

MontessoriTime How many years have you worked in a Montessori setting? (Please type a whole number e.g., "3")

_____

Q47 Are you an AMI-USA member?

◯ Yes (1)

◯ No (2)

◯ Unsure (3)

Q45 Is the school you currently work at accredited by Association Montessori International-USA (AMI-USA)?

○ Yes (1)

○ No (2)

○ Unsure (3)

Q49 In which state is your school currently located?

▼ Alabama (1) ... I do not reside in the United States (53)

Q51 Please select the from the options below which one most appropriately describes your school.

○ Private school (2)

○ Public district school (1)

○ Public charter school (3)

○ Other (please specify) (4) _____

Age What is your age? (please type a numerical response e.g., 41)

_____

Sex Please select your sex:

○ Male (1)

○ Female   (2)

○ Trans male   (3)

○ Trans female   (4)

○ Intersex   (5)

○ Prefer not to disclose   (6)

Gender Please select the option that reflects your gender identity:

○ Agender   (1)

○ Genderqueer or Genderfluid   (2)

○ Māhū (3)

○ Man   (4)

○ Muxe   (5)

○ Non-binary   (6)

○ Questioning or unsure (7)

○ Two-spirit (8)

○ Woman   (9)

○ Additional gender category/identity not listed, (Please specify): (10)

_____

○ Prefer not to disclose   (11)

Race_ethnicity Please select your race and ethnicity (choose all that apply):

☐   American Indian or Alaska Native   (1)

☐   Asian   (2)

☐   Black or African American   (3)

☐   Filipino   (4)

☐   Latinx or Hispanic   (5)

☐   Middle Eastern or North African   (6)

☐   Native Hawaiian or Other Pacific Islander   (7)

☐   White or Caucasian   (8)

☐   Other, (Please specify): (9)

_____

☐   Prefer not to disclose   (10)

End of Block: Background

FocusGroupRecruit If you would be willing to participate in a follow up one hour focus group in March/April about your experiences supporting students with developmental delays, please select "yes" below. You may be contacted using the email address you provided above. Participants in the focus group will receive a $5 e-gift card for compensation.

◯ Yes (4)

◯ No (5)

ASQ Teacher & Administrator Focus Group Protocol

I. Intro
    a. What have your experience been like as a teacher/administrator supporting students with developmental delays *before* the ASQ training? (positive/neutral/negative)
    b. What have your experience as a teacher/administrator been like supporting students with developmental delays *now, after* the ASQ training? (positive/neutral/negative)

II. Attitudes
    a. What are universal screeners?
        i.   How are the meant to be used?
        ii. How do you feel about universal screeners? (positive/negative)
        iii. In what ways, if at all, did your beliefs or attitudes toward universal screeners change after taking the ASQ Montessori training?

III. Potential Benefits
    a. What do you see as potential benefits of adopting a universal screener for detecting developmental delays in students? (e.g., philosophically, in the classroom, with parents, the ASQ as a tool)
    b. What are some of the benefits that you experience as a teacher/administrator supporting students with developmental delays?
    c. What benefits, if any, have you experienced since participating in the ASQ training?

IV. Potential Challenges
    a. What do you see as potential challenges of adopting a universal screener for detecting developmental delays in students? (e.g., philosophically, in the classroom, with parents, the ASQ as a tool)
    b. What are some of the challenges that you face as a teacher/administrator supporting students with developmental delays?
    c. What challenges, if any, have you experienced since participating in the ASQ training?

V. Additional supports
    a. What additional supports do you need right now to support you?
    b. If you had a magic want, what other supports would be helpful for you?
        i. Probe: From the Montessori community?

VI. Closing
    a. Is there anything else you would like to add?
    b. Do you have any questions for me?

Teacher & Administrator Town Hall-Style Focus Group Protocol

I. Intro
   a. What have your experience been like as a teacher/administrator supporting students with developmental delays? (positive/neutral/negative)
      i. Where do you feel supported; where do you not feel supported; what are some challenges; what are some triumphs; what is your daily routine like?
      ii. 2-3 sentences about what your current experiences

II. Skills/Knowledge
   a. What is your current level of knowledge and skill in being able to support students with developmental delays? Why?
      i. How about talking with parents?
   b. In what areas, if at all, do you feel like you still need help/support/training?

III. Confidence (self-efficacy)
   a. What is your confidence level in being able to support students with developmental delays? Why?
      i. How about talking with parents?

IV. Attitudes
   a. What are universal screeners?
      i. How are the meant to be used?
      ii. How do you feel about universal screeners? (positive/negative)
         1. What is your attitude toward implementing universal screeners in schools.
   b. What do you see as the benefits, if any, of using universal screeners?
      i. Probe as needed:
         1. Philosophically?
         2. In the classroom detecting delays? With parents?
         3. The ASQ specifically as a tool?
   c. What do you see as the issues/pitfalls, if any, of using universal screeners?
      i. Probe as needed:
         1. Philosophically?
         2. In the classroom detecting delays? With parents?
         3. The ASQ specifically as a tool?

V. Additional supports
   a. What additional supports do you need right now to support you?
   b. If you had a magic want, what other supports would be helpful for you?
      i. Probe: From the Montessori community?

VI. Closing
   a. Is there anything else you would like to add?
   b. Do you have any questions for me?

Appendix B: Sample Demographics

Table 7. *Survey Sample Demographics*

	Pre-Survey		Post-Survey		Post-Only Survey	
	N	*%*	*N*	*%*	*N*	*%*
Sex						
Male	3	4%	1	2%	0	0%
Female	63	94%	39	91%	13	48%
Race and Ethnicity						
White	41	61%	23	53%	9	33%
American Indian or Alaska Native	1	1%	1	2%	0	0%
Asian	5	7%	5	12%	9	33%
Black or African American	1	1%	0	0%	9	33%
Filipino	2	3%	1	2%	9	33%
Latinx or Hispanic	5	7%	3	7%	3	11%
Middle Eastern or North African	1	1%	0	0%	0	0%
More than one race or ethnicity	6	9%	3	7%	0	0%
Other	0	0%	2	5%	2	7%
Prefer not to disclose	5	7%	3	7%	1	4%
Number of Years as an Educator						
< 6 years	15	22%	5	12%	1	4%
6 - 15 years	19	28%	9	21%	3	11%
16 - 25 years	24	36%	19	44%	7	26%
> 25 years	8	12%	8	19%	3	11%
Educator Role						
Teacher	35	52%	25	58%	9	33%
Administrator	23	34%	18	42%	16	59%
Other	1	1%	0	0%	2	7%
Prior Coursework						
No specialized coursework	10	15%	7	16%	3	11%
Only a child development course	13	19%	6	14%	4	15%
At least one specialized course	34	51%	27	63%	6	22%
Montessori Member						
Yes	30	45%	21	49%	6	22%
No	24	36%	19	44%	5	19%
Unsure	5	7%	3	7%	3	11%
School Type						
Private	51	76%	37	86%	13	48%
Public	2	3%	1	2%	1	4%
Other	6	9%	5	12%	0	0%
School is AMI-USA Accredited						
Yes	28	42%	17	40%	1	4%
No	25	37%	21	49%	13	48%
Unsure	6	9%	5	12%	0	0%

Appendix C: Reliability

Table 8. *Cronbach Alpha Scores by Scale*

To what extent do you disagree or agree with the following statements about universal developmental screening tools?		Cronbach's alpha Pre Survey	Cronbach's alpha Post Survey
Using them is essential for the detection of developmental delays in young children			
They should be a requirement in early childhood school settings			
They are a waste of resources (reverse scored)			
They are effective at detecting students' developmental delays	Attitudes & Beliefs	0.807	0.890
Using them leads to harmful labeling of students (reverse scored)			
They ensure more students get the support that they need			
They ensure equitable access to developmental resources			
They are useful for having conversations with caregivers about their child's developmental delays			
I know what universal developmental screening is			
I can digest technical information (e.g., research articles) about child development outside of the Montessori context			
I regularly use my skills to talk to caregivers about their child's developmental delays			
I have a strong understanding of the types of developmental delays that can exist for children			
I have the knowledge I need to be able to detect developmental delays within all my students	Skills & Knowledge	0.903	0.888
I have the skills I need to talk to caregivers about their child's developmental delays			
I can explain to others the types of developmental delays that can exist for children			
I regularly apply my knowledge to detect developmental delays within all my students			
I feel I can always identify all of the students in my school setting who have developmental delays			
I am always confident in my ability to have conversations with caregivers about their child's developmental delays	Confidence & Self-efficacy	0.880	0.886
I feel I can effectively support the needs of all my students who have developmental delays			

I am confident I can appropriately refer all my students who may be in need of a disability diagnoses			
I believe I can always identify difficult-to-detect developmental delays in my students			
I have a clear process for having conversations with caregivers about their child's developmental delays			
I have the tools I need to provide appropriate interventions for students in need			
I am supported by my colleagues in helping my students with developmental delays	Tools & Resources	0.830	0.853
I know the appropriate next steps to take after detecting developmental delays within my students			
My school administration supports me in helping my students with developmental delays			
I feel supported by Montessori leadership in helping my students with developmental delays			

Note: The stem for the survey was "To what extent do you disagree or agree with the following statements about universal developmental screening tools?"

Appendix D: Descriptive Statistics

Table 9. *Descriptive Statistics for Survey Responses*

	ASQ Pre-Survey			ASQ Post-Survey			Post-ONLY Survey		
	N	*M*	*SD*	*N*	*M*	*SD*	*N*	*M*	*SD*
Attitudes and Beliefs	49	5.20	0.93	41	5.89	1.05	14	6.05	0.58
Using them is essential for the detection of developmental delays in young children	50	5.14	1.39	41	5.90	1.30	15	5.47	1.55
They should be a requirement in early childhood school settings	49	5.43	1.49	42	6.02	1.37	14	6.29	1.54
They are a waste of resources (reverse scored)	54	1.78	1.24	42	1.74	1.62	15	1.40	1.06
They are effective at detecting students' developmental delays	52	4.87	1.22	42	5.90	1.30	15	5.93	1.16
Using them leads to harmful labeling of students (reverse scored)	53	2.32	1.22	42	1.95	1.51	15	1.60	1.12
They ensure more students get the support that they need	50	4.92	1.61	42	6.14	1.00	15	5.93	1.22
They ensure equitable access to developmental resources	51	4.61	1.69	42	5.38	1.72	15	5.33	1.45
They are useful for having conversations with caregivers about their child's developmental delays	49	5.78	1.30	41	6.24	1.22	15	6.80	0.41
Skills and Knowledge	62	4.42	1.30	44	5.45	0.90	14	5.81	0.95
I know what universal developmental screening is	63	4.33	1.85	44	6.34	1.03	14	6.43	0.85
I can digest technical information (e.g., research articles) about child development outside of the Montessori context	63	5.21	1.44	44	5.57	1.25	14	6.07	1.07
I regularly use my skills to talk to caregivers about their child's developmental delays	63	4.22	1.68	44	5.14	1.32	14	5.86	1.35
I have a strong understanding of the types of developmental delays that can exist for children	63	4.29	1.56	44	5.27	1.09	14	5.36	1.45
I have the knowledge I need to be able to detect developmental delays within all my students	63	3.48	1.58	44	4.73	1.30	14	5.50	1.40
I have the skills I need to talk to caregivers about their child's developmental delays	63	4.13	1.61	44	5.34	0.99	14	5.79	0.97

I can explain to others the types of developmental delays that can exist for children	62	4.08	1.56	44	5.18	1.19	14	5.50	1.45
I regularly apply my knowledge to detect developmental delays within all my students	62	4.23	1.56	44	5.11	1.37	14	6.00	1.36
Confidence & Self-efficacy	62	3.64	1.46	43	4.52	1.25	16	4.59	1.12
I feel I can always identify all of the students in my school setting who have developmental delays	62	3.58	1.89	43	4.28	1.62	16	4.69	1.49
I am always confident in my ability to have conversations with caregivers about their child's developmental delays	62	3.71	1.76	43	4.67	1.34	16	5.06	1.29
I feel I can effectively support the needs of all my students who have developmental delays	63	3.32	1.61	43	4.35	1.46	16	4.13	1.50
I am confident I can appropriately refer all my students who may be in need of a disability diagnoses	62	3.84	1.67	43	5.09	1.54	16	5.06	1.61
I believe I can always identify difficult-to-detect developmental delays in my students	62	2.79	1.74	43	3.74	1.54	16	4.00	1.26
Tools & Resources	62	4.21	1.18	43	4.92	1.08	16	5.22	0.84
I have a clear process for having conversations with caregivers about their child's developmental delays	62	3.68	1.60	43	5.12	1.24	16	5.13	1.41
I have the tools I need to provide appropriate interventions for students in need	62	3.34	1.33	43	4.33	1.51	16	4.25	1.81
I am supported by my colleagues in helping my students with developmental delays	62	4.87	1.50	43	5.21	1.21	16	5.75	1.39
I know the appropriate next steps to take after detecting developmental delays within my students	62	4.05	1.65	43	5.47	1.33	16	5.81	1.17
My school administration supports me in helping my students with developmental delays	62	4.77	1.68	43	5.16	1.51	16	6.06	1.12

I feel supported by Montessori leadership in helping my students with developmental delays	63	3.97	1.69	43	4.21	1.67	16	4.31	1.62
My Montessori teacher training prepared me to support all my students with developmental delays	62	2.85	1.70	43	2.93	1.56	16	2.81	1.52

Appendix E: Results Table

Table 10. *Paired Sample T-Test Results of Teacher and Administrator Scores Regarding Universal Screeners and Supporting Students with Developmental Disabilities or Delays*

	N	Pre-Survey Mean Score	Post-Survey Mean Score	Difference Score	SD	t (df)	p
Attitudes and Beliefs	29	5.20	5.89	0.69	1.32	2.80 (28)**	0.009
Skills & Knowledge	38	4.42	5.45	1.03	0.77	8.28 (37)***	<.001
Confidence & Self-efficacy	39	3.64	4.52	0.88	1.25	4.42 (38)***	<.001
Tools & Resources	39	4.21	4.92	0.71	0.89	4.96 (38)***	<.001
My Montessori teacher training prepared me to support all my students with developmental delays	39	2.95	2.92	0.026	1.65	.097 (38)	0.923

Note: * $p < .05$, ** $p < .01$, *** $p < .001$