NURTURING THE SOCIAL AND EMOTIONAL WELL-BEING OF CHILDREN AGES BIRTH TO FIVE

Mind in the Making Learning Modules for Early Childhood Teachers in Massachusetts:

Pilot Evaluation Report

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Connected Beginnings Training Institute
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<p style="text-align:center">Executive Summary</p>

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The compelling message from decades of social science research is that infants and very young children rely on all significant relationships to support their emotional well-being, intellectual curiosity, language development, and relationships with peers. The research expands what was once a narrow frame to embrace the influence of parents *and* early care and education providers. Nurturing give and take within these significant relationships can provide a foundation for children's success in school. On the other hand, a pattern of problematic exchanges may lead to difficulties in children's learning and self-regulation. Mind in the Making (MITM), developed by the Families and Work Institute, is a 12-part facilitated learning curriculum and pedagogical method that brings this research into the practice of teachers of children from birth to five in center and family child care settings.

In the spring of 2007, a MITM Train-the-Trainer seminar was offered in Massachusetts to 30 participants through a partnership among several agencies including United Way of Massachusetts Bay and Merrimack Valley (UWMB&MV), the Harvard Achievement Support Initiative (HASI), Together For Kids, and Connected Beginnings Training Institute, an initiative of UWMB&MV. In the winter of 2007, HASI began delivering the MITM Learning Modules to three cohorts of family child care providers. With the cooperation of HASI, Connected Beginnings Training Institute conducted a pilot evaluation of one cohort that received training from November 2007 to March 2008. This report describes that pilot evaluation.

<p style="text-align:center">Evaluation Approach and Design</p>

The long-term goal of developing an evaluation was to provide information to the MA Department of Early Education and Care and other key public and non-profit agencies potentially interested in bringing MITM to scale across the state of Massachusetts. The evaluation had several more specific purposes: (1) to examine providers' experiences with the MITM Learning Modules, (2) to assess how the MITM Learning Modules influence providers' perceived knowledge of and confidence in applying social, emotional, and intellectual principles of MITM in their work, and (3) to pilot measures for a larger scale evaluation. The evaluation had a pre-post without comparison group design. Therefore, any changes in participants' knowledge and confidence cannot be directly attributed to participation in MITM. However, the evaluation provides a first step toward understanding how MITM works for and is perceived by family child care providers.

<p style="text-align:center">Participants</p>

Twenty family child care providers and one family child care assistant from six Boston neighborhoods participated in the evaluation. All participants were female. They ranged in age from 23–68 years old, with a mean age of 47.9 years. The majority (57%) of participants identified as Black or African-American; about one-fourth identified as Hispanic. Participants were generally quite experienced in the early care and education field; over half had been in the

field for more than 10 years. Four out of the 21 providers who participated in the evaluation had a college degree; 12 additional participants had taken a college course in the past or were doing so at the time of the training.

Procedures and Instruments

After Modules 1 and 12, participants were asked to complete a set of surveys and respond to scenarios reflective of every day situations in child care. These surveys were designed to collect demographic information and measure participants' perceived knowledge of and confidence in applying social, emotional, and intellectual principles of MITM in their work. For piloting purposes, two other single module evaluation surveys were administered after Module 7, one to participants and one to facilitators. Finally, a semi-structured interview was piloted with three providers who volunteered to be interviewed.

Findings

Participants had very positive experiences with the MITM Learning Modules. Twenty-one (100%) of the participants found most of the components of the training to be very useful, including interactive activities with the group and their learning partner. Twenty participants (95.2%) found the videos and written learning table activities to be very useful and 19 participants (90.5%) found the journal pages to be very useful. All of the participants were very satisfied with the organization and content of the training.

Participants said they gained knowledge from participating in MITM, which they could apply to their work with children and families. Most often cited were learning about the connection between social, emotional and intellectual learning, about how children develop and learn, and about the importance of making connections and communicating with parents and children. Interview responses also suggested that participants thought that the training impacted their relationships and interactions with children and families in positive ways.

Participants' perceived knowledge of how children learn and develop increased. A comparison of participants' responses before and after the training suggested increases in their perceived knowledge of social and emotional development in early childhood, intellectual development in early childhood, the role temperament plays in behavior and learning, language development in early childhood, and the role of memory in learning.

Participants' perceived confidence in their skills and abilities in supporting children's learning and development increased. Some examples of areas where participants' perceived confidence increased from before to after the training were: (1) being able to reconnect with children after a misunderstanding, (2) assessing all the ways that children learn, (3) documenting all the ways that children learn, and (4) helping children feel known and understood.

Participants' reported comfort with their relationships with children and families improved. A comparison of participants' responses before and after the training suggested that

providers with less experience improved in their comfort more than providers with more experience. However, this finding is to be expected, as providers with more experience were more comfortable to begin with.

Participants' perceived knowledge of how to support children's learning and development was enhanced. Participants were presented with several scenarios of typical challenging situations in child care before and after the training. Their responses were more varied after the training. As compared to before the training, after the training participants discussed implementing more strategies that focused on making connections with children and on following the children's own curiosity and interests.

Instruments were easy to use, of reasonable length, and reliable. The majority of participants found the survey measures to be "not very difficult" to complete. Most participants completed each survey in five minutes or less. The single module evaluation surveys administered after Module 7 took longer to complete, but were also rated as "not difficult at all" by the majority of participants. Surveys were also found to be reliable; survey items seemed to be measuring the same constructs for each of the knowledge and confidence subscales.

Discussion and Recommendations

Overall, the results of this pilot evaluation show that participants had positive experiences with the MITM Learning Modules, and that their perceived knowledge, confidence, and comfort with relationships with children and families generally increased. Participants also seemed to take away several important messages highlighted in the Learning Modules including the importance of making connections with children and families, following children's interests, appreciating the uniqueness of each child, and understanding and supporting children's development and learning experiences. These results are consistent with prior evaluation findings (e.g., Zajac, Farber, Shivers, & Barnard, 2006). While the results of this evaluation cannot be directly attributed to participation in the MITM Learning Modules, it seems clear that participants learned a great deal and thought that they would be likely to implement what they learned in their work with children and families.

Implications for Future Implementation of MITM

- The results of this pilot evaluation suggest that the MITM Learning Modules were well received by family child care providers, indicating that future implementations should continue to reach out to this group.
- Participants seemed to gain knowledge in various content areas related to how children learn and develop. These results might help inform MITM facilitators in choosing areas of emphasis.
- Sixteen participants had taken, or were currently taking, a college course, which suggests that providers are investing in college courses. This information might be useful for institutions that are considering offering a credit-bearing course for MITM.

- The results of the pilot evaluation suggest that participants were receptive to and understood the shift to focusing on their relationships with the children. On-going mentoring has been found to support the integration of this paradigm shift into practice.

*** Future Directions for Evaluation***

- Efforts to revise survey measures should: (1) revisit the order and wording of questions, (2) assess the validity of the measures, (3) consider shortening the single module evaluation forms or administering them at pre-determined intervals, and (4) create a standardized scoring system for analyzing scenario survey data.
- Additional measures should be selected and/or developed for future evaluation efforts. These should include: (1) a survey measure of objective knowledge and (2) observational measures to assess changes in classroom practices and teacher-child interactions.
- Multiple informants and methods should be used in future evaluation efforts to gain a more complete picture of how MITM works and what its effects are for various stakeholders (e.g., supervisors, directors, parents.)
- A follow-up study might be helpful in assessing the longer-term impact of MITM on practice in early care and education settings.

In conclusion, while this pilot evaluation had several clear limitations (e.g., small sample, no comparison group, lack of objective or standardized measures), its results provide evidence in support of the effectiveness of MITM and the potential it shows for enhancing the professional development of early care and education providers. The evaluation also provides a promising next step toward informing future implementation and larger scale evaluation efforts of MITM.

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Background

Research Context

Five decades of research have taught us a great deal about how young children learn and how development unfolds. We have learned that babies are born ready to communicate and learn (Gopnik, Meltzoff, & Kuhl, 1999; Shonkoff & Philips, 2000). We have established that young children are not passive recipients of knowledge and experiences, but rather active participants in their own development (Piaget, 1952). We now understand that children learn best when they are interested, curious, and emotionally invested in what they are learning (National Association for the Education of Young Children, 1996). Finally, we now know that early experiences are critical to setting the stage for how children grow and develop, and that within these early experiences, relationships, both with parents and with other important adults in children's lives, play a critical role in children's development (Howes, 1999; Shonkoff & Phillips, 2000).

All of these discoveries have had important implications for early childhood education. Because young children are spending more and more time in child care, early childhood educators today play particularly important roles in children's lives. Ongoing professional development efforts that help child care providers understand the ways in which children learn and develop, as well as the importance of their own roles in supporting children's learning, are crucial to providing high quality care and education for young children (Arnett, 1989; National Association for the Education of Young Children, 1993; Wolfe, 1994). The Mind in the Making (MITM) Learning Modules for Early Childhood Teachers are one such professional development effort. MITM is based on research about teaching and learning. The course seeks to provide early childhood professionals with tools to implement what they have learned about child development and learning in their practice.

Overview of Report

The purpose of this report is to describe a pilot evaluation of MITM in Massachusetts. First, we provide a brief overview of the MITM Learning Modules as well as past and current evaluation efforts. In the next section, we describe the conceptual model for the pilot evaluation including the evaluation approach, design, and questions. We then describe the methods including participant characteristics, procedures, and instruments. In the next two sections, we summarize and discuss the results of the pilot evaluation. We also highlight the implications of the evaluation for the implementation of MITM and offer recommendations for future evaluation efforts. Finally, we discuss limitations and conclusions of the pilot evaluation.

Mind In The Making Overview

Mind in the Making is a 12-module learning process that was created by the Families and Work Institute in 2004. Using research on children's development as well as research about teaching and learning, the modules are designed for teachers of young children, in both center-

and home-based care. During each module, videos featuring well-known researchers or educators are shown and activities are completed either individually or in groups. The modules are based on the following five principles:

(1) "Research . . . finds that learning is more likely to occur when the learner is engaged *emotionally*."
(2) "Research finds that learning is more likely to occur when the learner is engaged *socially* and where there is genuine *support* for growth and change."
(3) "Research . . . finds that learning is more likely to occur when the learner is engaged *intellectually*."
(4) "Research shows that *social*, *emotional*, and *intellectual* (SEI) learning are inextricably linked."
(5) "Research finds that we learn best when we learn like *scientists*—that is, forming theories, testing out ideas, asking questions, making mistakes, learning from these mistakes, and continuing to learn." (Galinsky, Sprague, O'Donnell, & Dombro, 2006a, p. 1 – 2)

As an overview, Table 1 below provides the titles of the 12 Learning Modules.

Table 1. MITM Learning Modules.

Module Number	Module Title
1	Beginning a Learning Adventure
2	Essential Connections
3	How Learning Begins
4	SEI Together: Social, Emotional, and Intellectual Learning are Inextricably Linked
5	SEI Together: Understanding Temperament
6	SEI Together: Building Confidence and Competence
7	SEI Together: How We Learn to Know Others' Thoughts and Feelings
8	SEI Together: How to Use Language to Make Meaning from Experience
9	SEI Together: Encouraging Curiosity and Problem Solving
10	SEI Together: Memory and Learning
11	SEI Together: Stress and Learning
12	SEI Together: Creating Communities of Learners

To date, the MITM Learning Modules have been implemented in nine states (Pennsylvania, New Mexico, Arizona, New Jersey, Massachusetts, Florida, Illinois, North Carolina, and Oklahoma).

Evaluation Background of MITM

While no large-scale evaluation efforts of MITM have taken place on a national level, Families and Work Institute does collect some evaluative information including a survey that participants complete after finishing the Learning Modules. This survey asks participants to rate their satisfaction with logistics of the sessions (e.g., seating, audio/visual equipment, learning environment), the facilitators themselves (e.g., style, clarity, responsiveness), and the overall learning experience.

Several evaluations of MITM have also been conducted at the state level. For example, in Pennsylvania, the Office of Child Development at the University of Pittsburgh conducted a process study to examine directors' and teachers' experiences with the MITM Learning Modules and to assess how the modules influenced teachers' abilities to apply social, emotional and intellectual principles to their classroom practices (Zajac, Farber, Shivers, & Barnard, 2006). This evaluation also explored how teacher and director education levels and experience as well as center quality affected the success of the MITM program. As this implementation was a train-the-trainer model, Master Facilitators[1] educated two individuals from each of five regions in Pennsylvania. These individuals each then delivered the modules to 10 Directors in their regions, who in turn, trained the teachers in their centers. The findings of this study included the following:

- The train-the-trainer model has the potential to be implemented and received successfully by a diverse group of directors and teachers.
- MITM may be implemented differently depending on teachers' education levels and experience as well as center quality.
- Almost all of the teachers indicated that they were likely to use what they learned from the MITM training in their classrooms.
- All centers that were observed improved in overall quality. Teachers made improvements to classroom quality through using more language-enriching communication, providing better play-based learning opportunities, and providing more activities to enhance children's social development.

In addition to the study conducted by the Office of Child Development at the University of Pittsburgh, researchers at Pennsylvania State University also conducted an outcome evaluation of 42 child care centers (21 intervention and 21 control) in Pennsylvania. While this study did not find any significant results, the evaluation indicated that the intervention sites showed positive changes in several areas including personal care routines, language and reasoning activities, and teacher-child interactions (Fiene & Carl, 2006).

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[1] "A highly-trained educator who is: (1) authorized by Families and Work Institute to teach others how to teach the Learning Modules (i.e., Learning Facilitators); and (2) listed in FWI's registry of approved Master Learning Facilitators." (Families and Work Institute, 2007, p. 4).

Finally, Diana Abel, Director of the Early Childhood and Human Development program at Rio Salado College in Tempe, Arizona is working with a team to plan and conduct an evaluation of the MITM Learning Modules using a multi-methods approach. The evaluation team plans to use interviews, observations, focus groups, and knowledge assessment questionnaires to assess participants' satisfaction, change in knowledge, and implementation of MITM in their work (D. Abel, personal communication, July 16, 2007). This evaluation is in its beginning stages as the MITM Learning Modules are still in the process of being rolled out. However, results should shed some additional light on how participants' learn and retain information related to MITM and how successfully they are able to implement related principles in their work with children and families.

Present Evaluation – MITM in Massachusetts

In the spring of 2007, a MITM Train the Trainer seminar was offered in Massachusetts to 30 participants through a partnership among several agencies including United Way of Massachusetts Bay and Merrimack Valley (UWMB&MV), the Harvard Achievement Support Initiative (HASI), Together For Kids, and Connected Beginnings Training Institute, an initiative of UWMB&MV. In the winter of 2007, HASI began delivering the MITM Learning Modules to three cohorts of family child care providers. With the cooperation of HASI, Connected Beginnings Training Institute conducted a pilot evaluation of one cohort that received training from November 2007 to March 2008.

Evaluation Approach and Questions

Conceptual Model and Evaluation Design

The conceptual model for this pilot evaluation is based on Jacobs' Five-Tiered Approach (FTA) to Evaluation (see Jacobs, 1988; Jacobs 2003; Jacobs & Kapuscik, 2000). This approach organizes evaluation efforts into five levels or "tiers." The first three tiers—Needs Assessment (Tier 1), Monitoring and Accountability (Tier 2), and Quality Review and Program Clarification (Tier 3)—involve process evaluation activities and provide groundwork for later evaluation activities. Tier 4 (Achieving Outcomes) and Tier 5 (Establishing Impact) focus on assessing the short-term and long-term outcomes of programs. The present evaluation focuses on activities at Tier 3, which involves the examination of participants' perceptions of the effects of "program," in this case, the MITM Learning Modules.

This evaluation also seeks to assess changes in participants' knowledge of and confidence in implementing MITM principles. Because the evaluation is a pre-post without comparison group design, any detected changes in participants' knowledge and confidence cannot be directly attributed to participation in MITM. However, results from this pilot evaluation will illustrate participants' "perceived effects" of participating in MITM, and will provide a first step toward understanding how the program works for family child care providers.

Purposes of Evaluation and Evaluation Questions

The long-term goal of developing an evaluation was to provide information to the MA Department of Early Education and Care and other key public and non-profit agencies

potentially interested in bringing MITM to scale across the state of Massachusetts. The evaluation also had several other specific purposes. These purposes are listed along with associated evaluation questions in Table 2.

Table 2. Evaluation Purposes and Associated Questions.

Evaluation Purposes	Evaluation Questions
To examine providers' experiences with the MITM Learning Modules	• How do participants experience the MITM Learning Modules?
To assess how the MITM Learning Modules influence providers' perceived knowledge of and confidence in applying social, emotional and intellectual principles of MITM in their work with children and families	• To what extent does MITM increase providers' perceived knowledge of how children learn and develop? • To what extent does MITM increase providers' perceived confidence in their skills and abilities in supporting children's learning and development? • To what extent does MITM increase providers' knowledge of how to support children's learning and development?
To pilot measures for a larger scale evaluation	• Were the measures easy to complete? • How long did the measures take to complete? • Were the measures reliable? • What lessons were learned from piloting these measures?

Evaluation methods were designed to answer the above questions and are described in more detail in the following section.

Methods

Participants

MITM Learning Module Implementation

The MITM Learning Modules were implemented in the Boston area with three cohorts of family child care providers in the winter of 2007. One of these cohorts received the training in Cambridge at the Gutman Library at Harvard University. This cohort was selected to participate in the pilot evaluation. The facilitators were a Master Facilitator and a Learning Facilitator. Both have been in the early care and education field for over 30 years and have extensive (approximately 15 years) experience delivering training for early care and education providers.

Learning Modules took place on six Saturdays between November 2007 and March 2008. In order to earn continuing education credits, participants were required to attend all sessions and to complete homework activities.

Participant Characteristics

Family child care providers were recruited by mail to participate in the evaluation and signed up voluntarily. Twenty-two participated in the Learning Modules and 21 participated in the evaluation. All participants worked in family child care homes: 20 identified themselves as family child care providers and one identified herself as a family child care assistant. The demographic information reported here is based on participants' responses to the Pre-Training Experiences Survey (described in the following section) and the registration forms they filled out prior to attending the MITM training.

Gender, age, language, and race/ethnicity. All participants were female. They ranged in age from 23 to 68 years old with a mean age of 47.9 years (SD = 9.9). All but three of the participants indicated that they were fluent in English (N = 18). The breakdown of participants' race/ethnicity is shown in Figure 1. The majority of participants were Black or African-American, followed by Hispanic participants who made up approximately one-fourth of the group.
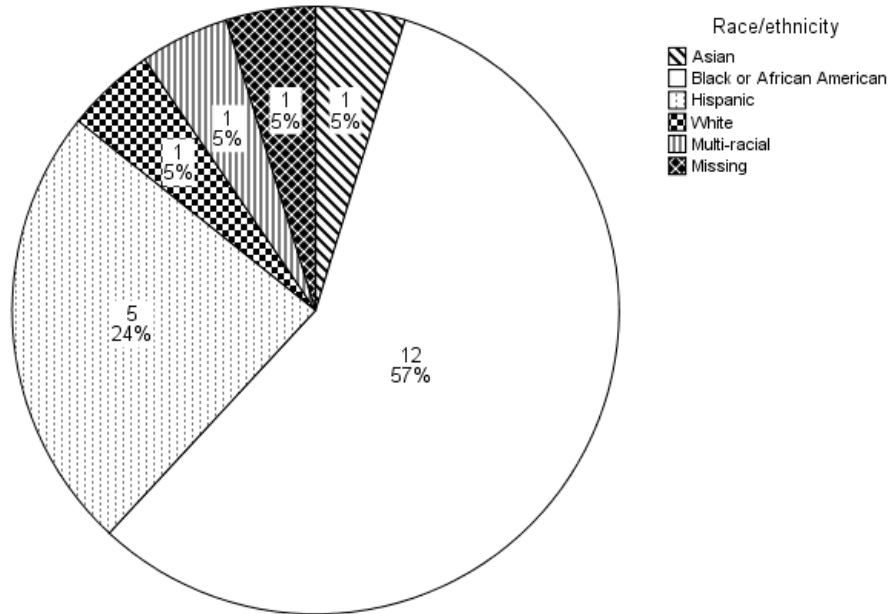
Figure 1. Participants by Race/Ethnicity

Years of experience. Participants were asked to indicate how long they had been working in the early care and education field and how long they had been family child care providers. Participants' years of experience as family child care providers ranged from less than 1 year to 25 years with a mean of 11.8 years (SD = 8.7). Experience in the early care and education field is represented in Figure 2. Over half of the participants had more than 10 years of experience.
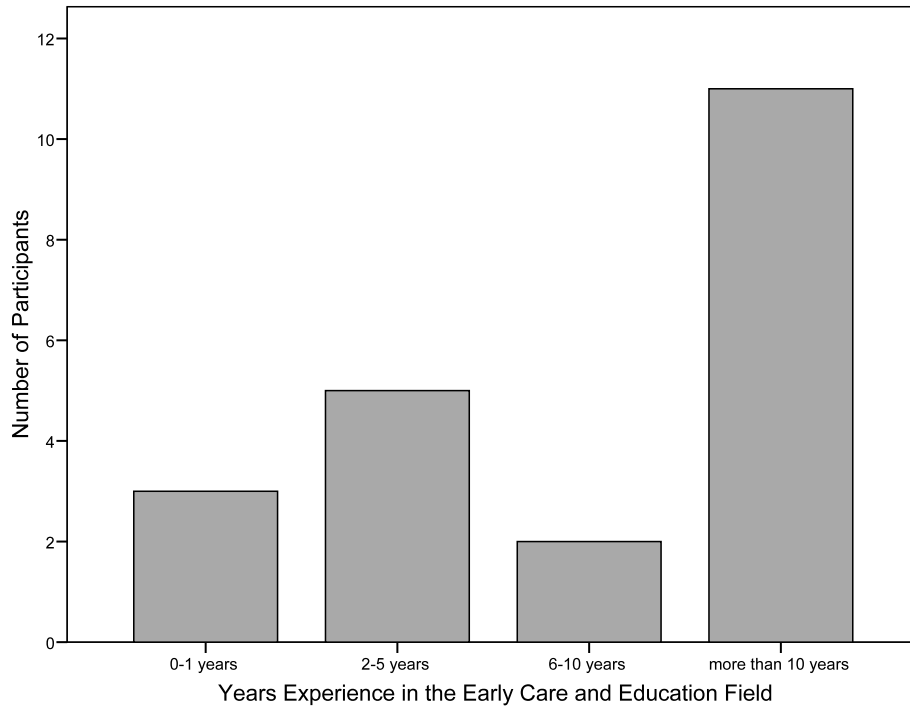
Figure 2. Participant Experience in the Early Care and Education Field

        Educational background. Four participants had a college degree, and 15 did not. Two did not answer the question (see Figure 3). Of those participants that did have a college degree, three had bachelor's degrees and one had an associate's degree. Of those participants who did *not* have a college degree, 12 were either enrolled in a college course at the time of the training or had taken a college course in the past. Thus, a total of 16 participants had taken a college course in the past or were doing so at the time of the training.
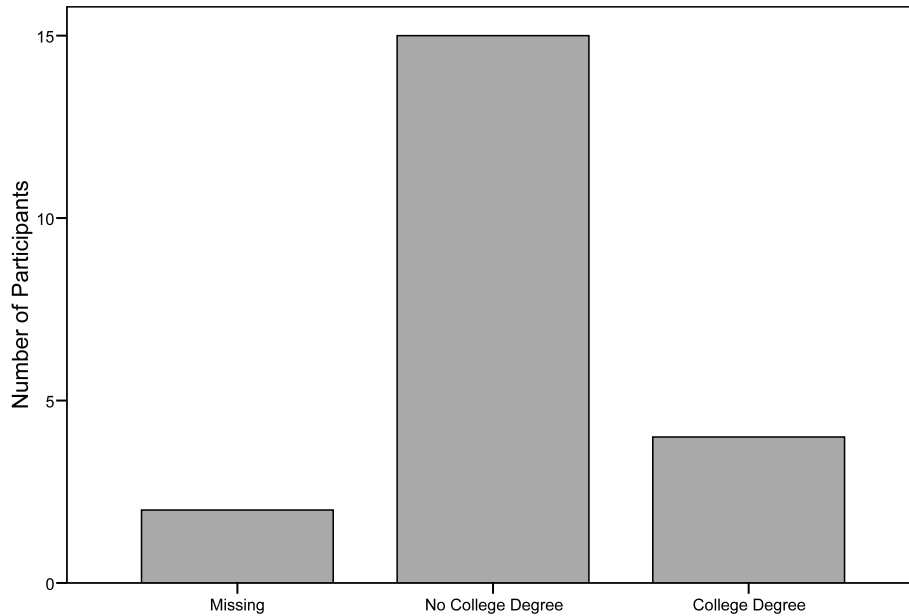
Figure 3. Participant Educational Background

Location of family child care homes. Participants came from six neighborhoods within the city of Boston. The largest group of participants was from Dorchester (52%) followed by Mattapan (14%) and Roslindale (14%) (see Table 3).

Table 3. Participants by Boston Neighborhood.

Location of Family Child Care Home	Frequency	Percent
Dorchester	11	52
Mattapan	3	14
Roslindale	3	14
Brighton	2	10
Jamaica Plain	1	5
Boston	1	5

Children served by participants. Participants served anywhere from 1 to 14 children with a mean of 5.48 children ($SD = 2.80$). The majority of participants (12) served infants, toddlers, and preschoolers only (see Figure 4). Overall, 20 participants served infants and toddlers, 19

served preschoolers, and 6 served school age children (because some participants serve more than one age group, they may be counted more than once in these frequencies).
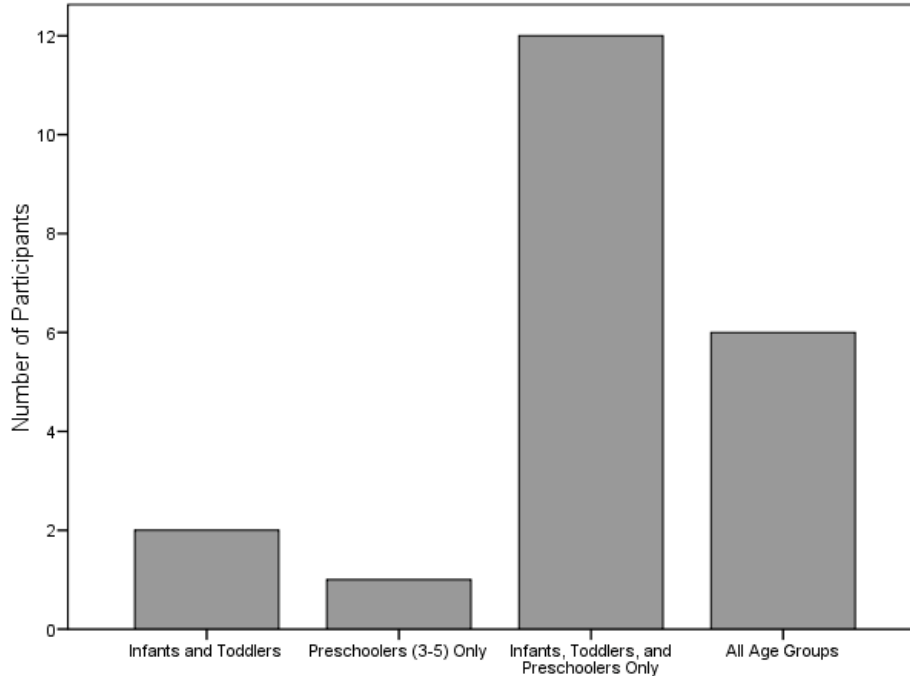
Figure 4. Participants by Ages of Children Currently Served

Procedures

Participants were asked to participate in the evaluation just prior to the delivery of the second module (Time 1). Each participant was given a packet of materials including a letter and consent form explaining the evaluation and the evaluation questionnaires (described below). They were asked to: (a) read and sign the consent form (and to keep a copy for themselves); (b) indicate on the consent form whether or not they would be willing to participate in an interview about their experiences with MITM; and (c) complete the rest of the forms, place them back in the folder, and return the folders to the facilitators. Participants completed a second packet of surveys immediately following the completion of the Learning Modules (Time 2). In addition, participants and facilitators were each asked to complete one measure directly following Module 7, the Single Module Evaluation and Facilitator Module Log, respectively. Finally, three participants were randomly selected from those who had indicated on their consent forms that they were interested in participating in a post-MITM interview. Interviews took place at the Connected Beginnings offices four weeks after the last MITM session.

Instruments[2]

      Seven instruments were developed for use in this pilot evaluation. Four were analyzed to inform the primary results (Pre-Training Experiences Survey, Post-Training Experiences Survey, Knowledge and Confidence Survey, and Scenarios Survey). The other three instruments (Single Module Evaluation, Facilitator Module Log, and Post-Training Interview) were piloted for ease of use and time to complete. Anecdotal information from the piloted interviews is also shared in this report. Table 4 summarizes the constructs measured and the associated instruments and times they were administered. Each instrument is described in more detail below.

Table 4. Instruments Used for Data Collection

Construct	Instrument	Time Point
Provider Background	MA MITM Registration Form	Before MITM
	Pre-Training Experiences Survey	Time 1
Knowledge of child development and learning	Knowledge and Confidence Survey	Time 1, Time 2
	Scenarios Survey [a]	Time 1, Time 2
Confidence in supporting relationships	Knowledge and Confidence Survey	Time 1, Time 2
Satisfaction with training	Post-Training Experiences Survey	Time 2
	Post-Training Interview	Four weeks after Time 2
Comfort with relationships with children and families	Pre-Training Experiences Survey	Time 1
	Post-Training Experiences Survey	Time 2

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[2] The instruments used in this pilot evaluation are still in the process of being revised. Connected Beginnings Training Institute would be happy to share more information with interested parties. Please contact Mallary I. Swartz at mswartz@connectedbeginnings.org for further information.

Construct	Instrument	Time Point
Perception of individual module	Single Module Evaluation – Participant	After Module 7
	Facilitator Module Log	After Module 7

Notes.
[a] A shorter version of this form was used at Time 2.

MA Mind in the Making Registration Form

This measure was developed by HASI in collaboration with UWMB&MV and Connected Beginnings. It included questions regarding participants' work and educational experience, as well as about the population of children they serve. The facilitators shared this data with the evaluation team in order to (a) avoid duplication of questions and (b) better inform the evaluation.

Pre-Training Experiences Survey

The Pre-Training Experiences Survey was developed by Connected Beginnings evaluators and was primarily used to gather demographic data including gender, age, race/ethnicity, educational background, and experience in the early childhood field. The survey asked participants to share information about their previous professional development experiences, learning styles, and comfort with relationships with children and families. Participants were also asked to agree or disagree with a series of statements about young children and families. However, because of the way that the questions were ordered, responses were not reliable and are therefore not reported here.[3] Finally, participants were asked to indicate how difficult the survey was to complete (1 = not difficult at all, 2 = somewhat difficult, 3 = difficult, 4 = very difficult).

Knowledge and Confidence Survey

The Knowledge and Confidence Survey was also developed by the evaluation team at Connected Beginnings. It was divided into two sections: Knowledge and Confidence. Questions on both sections were drawn primarily from the MITM facilitator and participant guides.

Eleven questions focused on participants' perceived knowledge about child development and learning. Participants were asked to rate their perceived knowledge of various aspects of child development and learning relevant to MITM (e.g., What best describes your current

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[3] This portion of the measure will be revised before future evaluation efforts.

knowledge of language development? What best describes your knowledge of the impact of early relationships on development?) They were asked to rate their knowledge level on each item using a scale of 1–4 (1 = beginner, 2 = intermediate, 3 = advanced, 4 = very advanced).

Eighteen questions focused on participants' perceived confidence in various aspects of supporting children's development and learning relevant to MITM. They were asked to rate their confidence level on each item using a scale of 1–4 (1 = not confident, 2 = somewhat confident, 3 = confident, 4 = very confident).

At both time points, participants were asked to indicate how difficult the survey was to complete. At Time 2, participants' were asked to record their start and end times for completing the survey.

Scenarios Survey

The Scenarios Survey presented participants with various scenarios typical of family child care and asked how they would respond. The scenarios were adapted by the evaluation team from the *Knowledge Assessment Questionnaire Scenarios* used in the University of Pittsburgh evaluation (Zajac, et al., 2006). Scenarios revolved around children of different ages (ages 4 months – 4 ½ years) and covered different aspects of children's development and learning (e.g., emotional development, language development). Participants were asked to respond to five scenarios at Time 1. Three of these scenarios were selected and presented again at Time 2. Participants were asked at both time points to rate how difficult the survey was to complete.

Single Module Evaluation

The Single Module Evaluation was also adapted from the University of Pittsburgh Evaluation. Participants were asked to answer questions regarding their familiarity with the material, the amount of time allotted for the module, how helpful they found the activities and videos, the presentation of the material, the relevance of the information presented to their own work with children, and the likelihood of them putting their new knowledge into action. They were also asked to rate how difficult the survey was and to record their start time and end time in completing the form.

Facilitator Module Log

The Facilitator Module Log was also adapted from the University of Pittsburgh Evaluation. Facilitators were asked to rate their experiences in presenting the module including how comfortable they were, how well they thought they explained new terms and concepts, how engaged and familiar they thought the participants were with the material, and how successful they thought they were in presenting the module overall. They were also asked to discuss barriers that they faced in presenting the module and how they overcame these barriers and if they made any special adaptations or were surprised by anything while presenting the module. Facilitators were also asked how difficult the survey was to complete and to record their start time and end time in completing the form.

Post-Training Experiences Survey

After completing the Learning Modules, participants were asked to complete the Post-Training Experiences Survey. Connected Beginnings evaluators developed this survey. Questions asked participants to share their views on the usefulness of and their satisfaction with various components of the training (e.g., organization, content, activities, videos, etc.). Participants were also asked to name two things that they learned from the Mind in the Making Learning Modules that they felt they could apply to their work. Finally, they were asked to record their start and end times and to rate how difficult they found the survey.

Post-Training Interview

The post-training interview was designed to assess in a more in-depth way participants' satisfaction with the training and their experiences with trying to implement what they learned. The interview was divided into four sections. The first section asked about participants' experiences working with young children and families (e.g., what they liked, what they found challenging). The second section focused on their relationships with children and families and their views of their roles in impacting children's development and learning. The third section focused specifically on the MITM Learning Modules and asked participants to share (a) what they thought of the training overall, (b) why they participated in it, (c) what they got out of it, (d) if and how they were implementing what they learned in their work, and (e) if they thought that the training had affected their relationships and interactions with children and families and/or their knowledge about child development and learning. Participants were also asked to share their thoughts about other professional development experiences in which they had participated. Interviews followed a semi-structured format, where all pre-created questions were asked but participants were able to share additional information if they desired. Follow-up questions or probes were also used to help elicit responses in cases where the questions were unclear. All interviews were audio-recorded and transcribed.

Results

Qualitative and quantitative analyses were conducted to answer each evaluation question. Results are described for each question in the following section.

Evaluation Question 1: How Do Participants Experience the MITM Learning Modules?

Overall, participants had very positive experiences with the MITM Learning Modules. Results from the Post-Training Experiences Survey indicated that participants found most of the components to be useful and were satisfied with the training. More specific results are discussed below.

Usefulness of Training

All (21) of the participants found the following components of the training to be "very useful": interactive activities, learning partner activities–written, learning partner activities–spoken, and "moving on"/homework activities. Twenty (95.2%) of the participants found the

following components to be "very useful": learning table activities–written, learning table activities–spoken, and videos. The remaining participant found these components to be "somewhat useful." Finally, 90.5% (19) of the participants found the journal pages to be "very useful." One participant found the journal pages to be "somewhat useful," and one found them to be "not very useful."

Satisfaction with the Training

All 21 (100%) of the participants were "very satisfied" with the organization and content of the training. Eighteen participants (85.7%) were "very satisfied" with the training overall. One participant was "somewhat satisfied" with the training overall. Two participants not answer this question.

Participants were also asked on the Post-Training Experiences Survey to respond to the following question: "What are two things that you learned from the Mind in the Making Training that you can apply to your work?" Responses were categorized by four primary themes. The most frequently mentioned theme was related to the *connection between social, emotional and intellectual learning being linked ("SEI")*. Eight participants mentioned this theme. For example, one participant said she learned that, "Social, emotional and intellectual are all connected and we cannot have one without the other." Seven participants mentioned that they learned something about *how children learn* that they felt they could apply to their work. For example, one participant said she learned that "children must 'own' the learning experience." Another participant said she learned that "the things we teach children will last forever." Six participants highlighted that they learned the *importance of making connections with children or families*. For example, one participant said that she learned about, "being in sync and making a connection." Others stated more generally that they learned the importance of making connections with children and families. Finally, three participants said that they learned about *communicating with parents and children* (see Table 5).

Table 5. Participant Responses to the Question: "What are two things that you learned from the Mind in the Making Training that you can apply to your work?"

What was Learned	Number of Participants
Connection between social, emotional and intellectual learning being linked ("SEI")	8
How children learn	7
Importance of making connections with children or families	6
Communicating with parents and children	3

Post-Training Interviews

While the post-training interviews were conducted primarily for piloting purposes (i.e., to assess the clarity and usefulness of the questions, to determine how long the interview took to administer, etc.), some responses are worth sharing and are relevant to how participants' experienced the MITM Learning Modules. Results should be interpreted with caution as only three participants, of the 17 who volunteered, were interviewed. Participants were asked several questions related to their experiences with the MITM Learning Modules. Responses to these questions are explored in more detail below.

General Impressions and Overall Satisfaction with the MITM Learning Modules

All three of the interview participants' general perceptions of the Learning Modules were extremely positive. Several quotes are provided below, which illustrate participants' satisfaction and experiences with the MITM Learning Modules:

I loved it. It's funny because I've been in the business for a long time and not a lot of [the information] was new, but presented as it was, it was just so clear. And I felt like I was vindicated for all of the love and support. Because my biggest curriculum base is basically "I'm loving your children." And I'm very kind and I'm very gentle and I work from an altruistic standpoint and I try to create altruism within my community. And that's not always understood by parents. But that's what I heard in Mind in the Making. That's so important and that made me really happy.

I loved it. I loved it. If I didn't like it, I wouldn't have come back. I liked the two teachers. It was like double learning because I'm the kind of person [who] you have to give examples to and you have to really kind of repeat things, so with two teachers working at one time, that was awesome… The two teachers that taught were already in the field of child care and that made a huge difference…I also like the fact that sometimes you feel like you're alone as a provider, like everyday it's almost like parenting so when you get together…I think sometimes even if you don't want to take that particular class, you just go because you're like "I need an outlet." I need to know if what I'm doing is the right or wrong thing as a provider. And then when you hear other people's stories…like at Mind in the Making, [the facilitators] were in it for a long time, in being a provider, so that helped and then you had some [providers] that [had been in it for] 25-30 years, so that helped.

I think I'm very lucky to take part in it. [The facilitators] are very good teachers. I can't ask for more. And the place is great. Accessible…The materials are good. The way they teach, the presentation is good. I have no complaints. I can't think of anything except good things.

What Participants Learned from the MITM Learning Modules

Participants were asked to share what they learned from participating in MITM. Two responses were as follows:

Emotional, intellectual, and social all go together…They all work together and they are all connected and when you are happy, you're secure, you learn more. And it's true. Cause I can't learn when people yell at me…So I apply the same strategies to the children. When I'm calm, and when I have confidence, I can teach better and the children can learn better. I don't like to be yelled at and that means the children don't like to be yelled at too….So I learned from the class and also from my experience that children learn better when they are more stable and when they are happy.

The most monumental thing is – you can't do it for them. You can't model and you've got to let them struggle and learn it on their own. I was always thinking, "Well, I'll just put the puzzle together, they'll watch me." But no, Mind in the Making taught me that they really should struggle and go through the process and you provide it for them and let them work it out…And it's those learning steps that are so essential and they'll really know how to do it because they've learned it on their own.

These two participants also emphasized that participating in MITM helped them to organize their thoughts around what they were already doing in their work with children.

[I learned] a lot of things…I already know quite a bit of what to do in certain situations, but I have a problem putting them in words. Now, this helped me to organize my thoughts, to answer my questions of, "Why am I doing this?" Like when you say, "Good job." I say that all the time. But I learned from the class that you have to tell the kid what good job it is. So that he won't always say, "Ok, good job. Ok you're very good." Because "you did this and this" so the children get it because "Yes, I did this. So that's why she said I am good." So they will keep working on it and keep getting better. So I think those are very good points. Yeah, I learned a lot through them - to express myself and also to put my feelings in thoughts.

[I learned] more sophisticated terms for the things I was already doing, more organized thought around what I was doing. New ways of looking at certain things and little technical things like writing words… like to write "table" it doesn't have to be all uppercase, it should be mixed, which is something that I'd always questioned and had different opinions on, but just like little technical things like that.

Implementation of MITM Content in Participants' Work

Participants were also asked to describe what, if anything, from MITM they had tried to implement in their work. Several of them said that they were able to implement several specific aspects of what they had learned.

Realizing the temperament of children… and how to try to work with that … I've actually had a child who I was worried about being a misfit and I worried—Should I back off?— but it's a difficult time for the family because they're having a new child and I thought well, let me just suspend my own personal ideas about how this child is behaving and realize that there's a little bit of a misfit, but try to shift gears to place him and give him some comfort.

First of all, [the facilitators] were saying that if your day care is over-crowded with too much stuff that that could cause confusion in the child's mind, which I didn't realize. I just figured as long as it was clean and neat, it would be fine and if it was colorful, that would engage them to be excited, but they said that if everything was just too many things, and wasn't in a specific order by age group you kind of have to eliminate some of the things. Because a lot of the times we just think a child comes, they're bad, they are a hyper, ADD child, you know, they just won't focus or whatever, but I didn't realize it was the environment first and foremost…What I did was got age-appropriate things for the children that I was really working with and the ones that I don't have, I just kind of put that stuff aside.

Barriers or Challenges to Implementation of MITM Content in Participants' Work

Some participants shared barriers they faced in implementing things that they learned in the MITM Learning Modules.

Nothing's ever perfect. You know, and it's always challenging. I can give you a good example. I've really struggled all these years with the structured lesson plan idea...I always have ideas of what I want to do but I really believe in letting things flow…I figure… I know there's a lot of people who would just let time pass and not interact with the children if they didn't have structured lesson plans, but I believe…that I've got things going and well this looks good and we'll do this and we talk about it and there's so much language and so much going on that I've never been worried. But, given what we went through in the class and I thought, "Well let me try one of these things" and one thing I had is that we have lots of newspaper and masking tape and I said, "Well, we'll try making the structures like we did in Mind in the Making." And the first thing I had to do is to give them some idea of how to roll, to build. And it didn't go very well. Although a really great thing, one guy was building and he said, "I'm making a periscope." So, maybe it did go well because this little guy is three and knows what a periscope was. So we got to teach the rest of the group what that was. But you see it's my own ideas of what I wanted and that's what usually happens in a lot of structured things is you have your idea of what you want things to be and you get upset when it doesn't go in the way you want it, but these little guys are there for just that experience and you just have to suspend ideas.

The parent board. [The facilitators] suggested we do a parent board, which was nice. [But,] the two parents that I've even interviewed or the parents that come, they don't pay it any mind.

Effects of Training on Interactions with Children

Participants were asked if they thought that the MITM Learning Modules had affected how they interact with the children with whom they work. Most responded that they felt the training had a positive impact on their interactions with children.

I'm even more aware of their precious little beings and even more able to take my time with responses. I believe that I've always been authentic and in the moment, but… now I am even more aware if I am disconnected or not. I think it's so important and that was underlined so much in the class.

It was almost like a stress-buster because you don't know everything. I don't care how long you've been in the business or how short, you don't know everything. You can always refresh yourself. There's always room to be open with new ideas and new ways, and better ways to structure things and strategies. And it helped me deal better with the parents that I was dealing with.

Yeah. I will explain in more detail of why I said certain things to [the children]. And it works. Actually, it really works. Especially for the really active and naughty ones, I shouldn't use the word "naughty" but sometimes it helps. I explain in detail why I'm upset with him and I tell him "I'm not even upset with you, I'm just upset with the things that you do. I still love you. Just a naughty thing that you do. It's not very good". So I think it works. It calms down the very high problems.

Effects of Training on Relationships with Children

Similarly, participants were asked if they thought that the MITM Learning Modules had affected their relationships with children. Participants responded that they felt the training had a positive impact on these relationships.

There's one story where we watched a video of a child…and a child was going across a glass floor or table…and it's just amazing that as a provider you have so much influence over that child. They're either going to trust you or they're not going to trust you so when I got back to my program, I was like, "Wow. They're really watching and paying attention and they can sense if they can trust you or not." So that opened up a whole bunch – to be very cautious at the same time and it put like a huge responsibility on me because I was like "wow." This is delicate.

They [relationships] are better…Probably I am even more patient with [the children]…I was very patient with them before because that's my job and now even more. And it seems if I am more patient, they seem to react better and learn more and I think that affects the relationships. But I only have good relationships with them…And now they are even better. Because I feel better about myself that I am doing even a better job for the kids.

One participant noted how a change in her understanding of children's needs led her to change how she connected to a particular child, who had a hard time adjusting at the beginning of the day.

> *Well, everyday there's a situation [with] another guy who is…high energy …My first thought when I first started to hold somebody when they get upset was through Mind in the Making and that happened just the other day. He comes into the house, he comes in after everybody is already established in playing and his way of joining in, I've always known he's just got to settle in and his mom is still watching and he'll just walk over and smash somebody's building and then he'll walk over and do this and try to make his mark, so mom can know he's here too. So I just really quietly held him on my lap and rubbed his head and talked to him really quietly about choices he could have of joining in and that was just the other day and I don't know if I would have done that before [MITM]. You know I probably would have just thought, "I'll just let him smash and crash and get through it…And it's just not fair in a lot of ways because he's also breaking…You know, he's building relationships with these kids are going to expect him to be like that and they are going to treat him differently so if we could break that antecedent rather than dealing with the behavior. So it has gone well."*

Effects of Training on Interactions and Relationships with Families

Participants were also asked if they thought that the MITM Learning Modules had affected their interactions and relationships with families. Participants responded that they thought that the Learning Modules did have a positive impact on their interactions and relationships with families:

> *I think that families are even more excited about what's going on with me because they see something so concrete and academic and I've got different terminology that they've never heard of and they go, "Oh well she really does know what she's talking about." So, I try to give them examples, I've had for years now, people who have stayed with me right through until they're five and go to competitive kindergartens and be fine…And then I'll get people who decided they're going to go off to a fancy nursery school because they've got the right school all lined up, so I think people are more confident to stay in my environment.*

> *I think that they have even more respect for me, I believe. And more interest in what I have to say, which is a nice thing.*

> *I'd say the change is because I let them know all the time that we're constantly in training. Constantly. And sometimes if they're having certain issues, I may refer them to information that I got from Mind in the Making. Because when they see it in writing, as opposed to you trying to tell them what you had in training, the writing makes more of a difference. They feel a little more safe and comfortable for some reason. Second of all, it*

makes me feel a lot more confident. I'm confident anyway, but a lot more because I have more information and knowledge to go on. I don't like to be ignorant about anything. So when I have that extra information, like I said, I was able to refer back certain times and remember certain things and implement it.

Effects of Training on Knowledge of Child Development and Learning

Finally, participants were asked to indicate whether or not they felt that the Learning Modules affected their knowledge of how children learn and develop. All of them felt that participating in MITM increased their knowledge in these areas.

I mean I knew innately how much babies learn and how much more they're learning than we could even imagine, but I know indeed now that we've done even more research recently and they are just so aware and it makes me so in awe of those little tiny infants.

When they showed the videos about the child's brain and the images that they take in and what they can remember, those kinds of things. That was awesome.

Ah. [I learned that] children do remember things when they're very very young. That's interesting.

Evaluation Question 2a: To what extent does MITM increase providers' perceived knowledge of how children learn and develop?

Overall, based on an average of all of the items in the Knowledge section of the Knowledge and Confidence Survey, participants' perceived knowledge increased from before the training ($M = 2.53$, $SD = .68$) to after the training ($M = 2.86$, $SD = .61$), $t(19) = -1.90$, $p = .07$. As $p > .05$, this was not a statistically significant change, but does suggest a trend.[4] We also conducted t-tests to examine whether participants' knowledge of specific items increased from Time 1 to Time 2. Five items showed at least trend-level changes as shown in Table 6.

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[4] Because of the small sample, statistical significance is unlikely. As is often the protocol for pilot studies, in this report, we report trends, which indicate that the results are going toward statistical significance. In other words, in some cases, the pilot data reported here show trends that may be confirmed with a larger dataset.

Table 6. Items on the Knowledge Subscale Survey that Showed at Least Trend-Level Changes from Time 1 to Time 2.

Item	Time 1		Time 2		t-value (df)	p-value
	Mean	*SD*	*Mean*	*SD*		
Knowledge of social & emotional development in early childhood	2.60	.821	2.95	.887	-1.79 (19)	.09
Knowledge of intellectual development in early childhood	2.45	.826	2.95	.826	-2.03 (19)	.06
Knowledge of the role temperament plays in behavior and learning	2.30	.865	2.95	.759	-2.46 (19)	.02
Knowledge of language development in early childhood	2.45	.887	3.00	.795	-2.15 (19)	.05
Knowledge of the role of memory in learning	2.45	.759	2.95	.999	-2.24 (19)	.04

Overall, 5 participants' (25%) perceived knowledge decreased, 2 participants' (10%) perceived knowledge stayed the same, and 13 participants' (65%) perceived knowledge increased (see Figure 5).
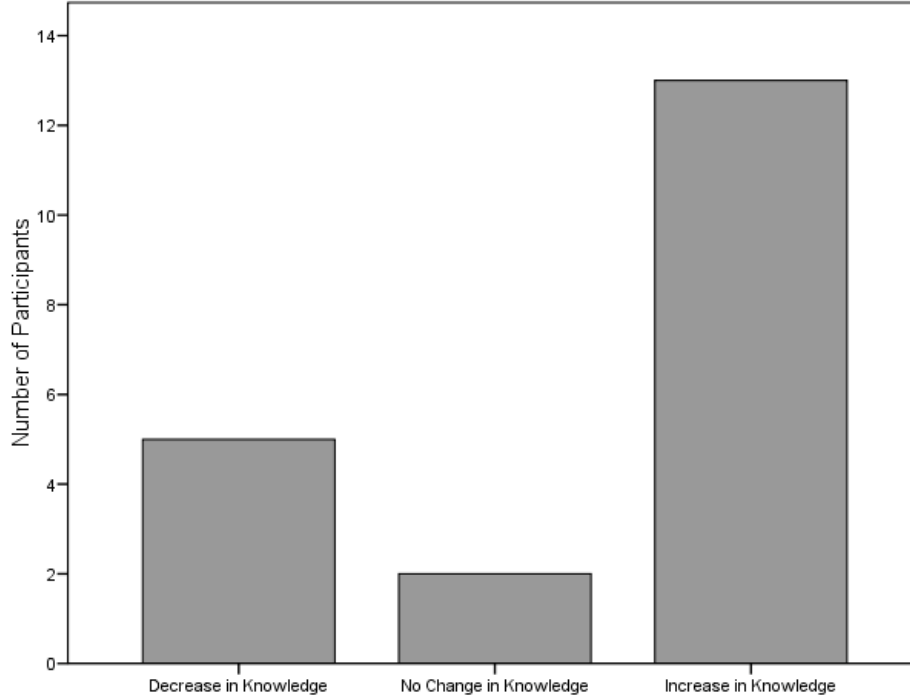
Figure 5. Change in Perceived Knowledge

This analysis led us to think about whether there was a relation between change in perceived knowledge and experience in the early care and education field, years as a family child care provider, education level, or language. Because of the uneven and small group sizes, we were unable to examine group differences based on experience in the field or language.[5] There was not a significant correlation between education level or experience as a family child care provider and change in perceived knowledge ($p > .05$).

Evaluation Question 2b: To What Extent Does MITM Increase Providers' Perceived Confidence in Their Skills and Abilities in Supporting Children's Learning and Development?

Overall, based on an average of all of the items in the Confidence section of the Knowledge and Confidence Survey, participants' perceived confidence increased from before the training ($M = 3.06$, $SD = .47$) to after the training ($M = 3.33$, $SD = .48$), $t(19) = -2.00$, $p = .06$. As $p > .05$, this change was not statistically significant, but does suggest a trend.

We also conducted t-tests to examine whether participants' confidence on specific items increased from Time 1 to Time 2. Four items showed at least trend-level changes as shown in Table 7.

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[5] This was also the case for change in perceived confidence and change in comfort with relationships with children and families. Future analyses, however, in which there may be a larger sample size, should allow for further examination of the effect of language and experience in the field on these outcome variables.

Table 7. Items on the Confidence Subscale Survey that Showed at Least Trend-Level Changes from Time 1 to Time 2.

Item	Time 1		Time 2		t-value (df)	p-value
	Mean	*SD*	*Mean*	*SD*		
Confidence in being able to reconnect with the children after a misunderstanding	3.35	.587	3.65	.587	-1.83 (19)	.08
Confidence in assessing all the ways that children learn	2.75	.550	3.20	.616	-2.93 (19)	.01
Confidence in documenting all the ways that children learn	2.70	.657	3.30	.801	-3.27 (19)	.00
Confidence in helping children feel known and understood to promote confidence & competence	3.00	.725	3.40	.681	-1.70 (19)	.10

Seven participants' (35%) perceived confidence decreased, while 13 participants' (65%) perceived confidence increased (see Figure 6).
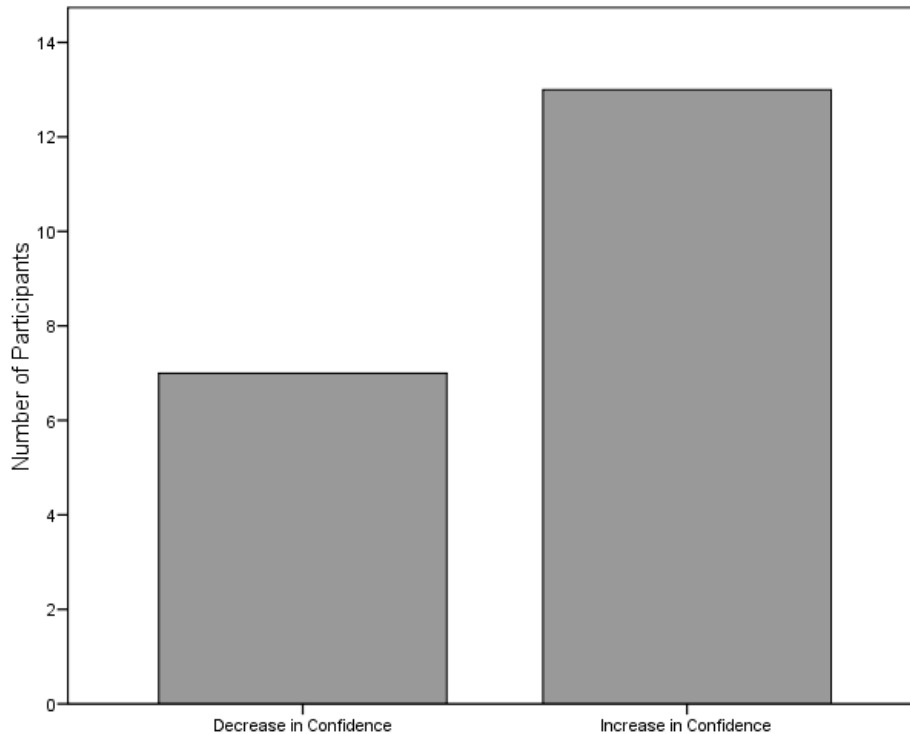
Figure 6. Change in Perceived Confidence

This analysis led us to think about whether there was a relation between change in perceived confidence and education level or years as a family child care provider. There was not a significant correlation between change in perceived confidence and either of these variables (*p* > .05).

Finally, as might be expected, as perceived knowledge improved, perceived confidence also improved (Spearman's rho = .516, *p* = .02).

Change in Comfort with Relationships with Children and Families

One other related construct is participants' change in comfort with relationships with children and families. More specifically, participants were asked to respond to the following question before and after the training on the Pre- and Post-Training Experiences Surveys: "How comfortable are you talking and thinking about your relationships with children and families?" (1 = not comfortable at all, 2 = somewhat comfortable, 3 = comfortable, 4 = very comfortable). Participants were, on average, at least "comfortable" with their relationships with children and families both before and after the training. Participants' reported comfort with their relationships with children and families improved from before the training (*M* = 3.48, *SD* = .60) to after the training (*M* = 3.76, *SD* = .436), *t*(20) = -1.83, *p* = .08. As *p* > .05, this change was not statistically significant, but does suggest a trend.

We also looked at the number of participants who became less comfortable, stayed the same, or improved in their comfort with relationships with children and families (see Figure 7).
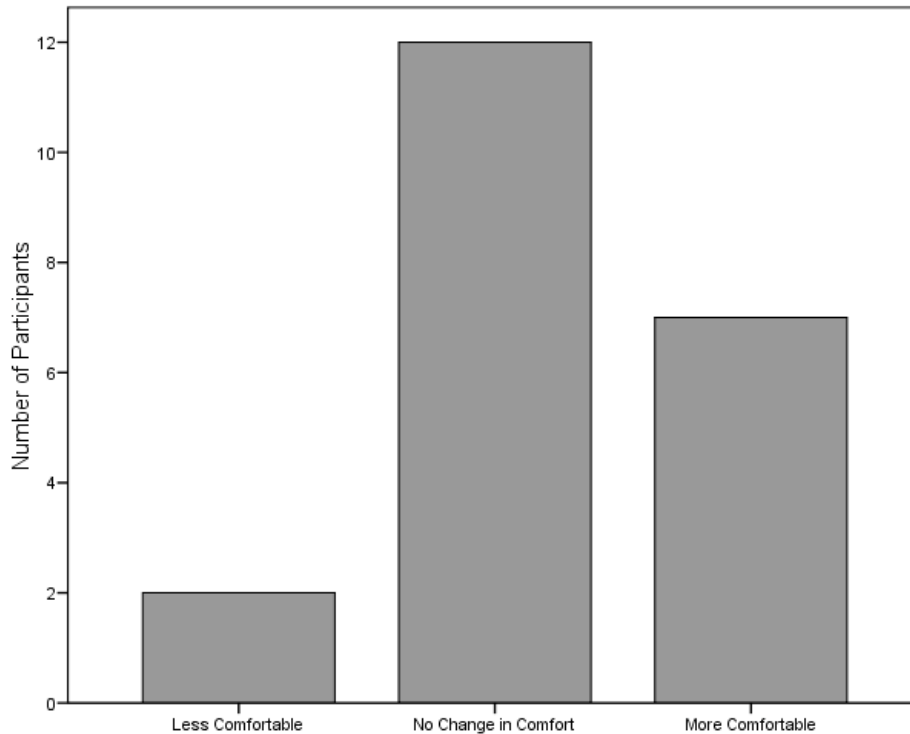
Figure 7. Change in Perceived Comfort with Relationships with Children and Families

Two participants' (9.5%) responses indicated that they were less comfortable with their relationships with children and families after the training than they were before the training. Twelve (57.1%) remained the same in their comfort levels before and after the training. Seven participants (33.3%) were more comfortable with their relationships with children and families after the training. Of these seven participants, six went from "comfortable" to "very comfortable" and one went from "somewhat comfortable" to "very comfortable."

This analysis led us to think about whether there was a relation between change in comfort with relationships with families and children and education or years as a family child care provider. Results showed that, overall, family child care providers with less experience improved more in their comfort with relationships than family child care providers with more experience (Spearman's rho = -.54, *p* <. 05). Preliminary analysis suggests that providers with more experience were more comfortable with their relationships with families and children to begin with, at the start of the training (Spearman's rho = .52, *p* < .05)**.** There was not a significant correlation between change in comfort with relationships with children and families and education level (*p* >. 05).

Evaluation Question 2c: To what extent does MITM increase providers' knowledge of how to support children's learning and development?

This question was answered by analyzing the results of the Scenarios Surveys at Time 1 and Time 2. The Scenarios Survey responses were analyzed first by looking for behavioral themes. After an initial list of themes was created, themes were organized and collapsed into a

list of categories and more specific behavioral responses. (See Appendix A). All survey responses were entered into Atlas.ti (qualitative data analysis software) and were analyzed according to this list. Each time a particular behavioral response was mentioned, it was tagged.

The next step in the analysis was to count how many participants mentioned each behavioral theme and response across scenarios and for each scenario. [6] We then calculated difference scores for each behavioral response by subtracting the number of participants who mentioned the behavioral response at Time 1 from the number of participants who mentioned it at Time 2. Tables 7– 9 show for each scenario the number of participants mentioning each behavioral response at each time point, and which were mentioned more and less often at Time 1 as compared to Time 2. Overall, 19 behavioral responses were mentioned by more participants at Time 2 than Time 1. Eight behavioral responses were mentioned less frequently, and six were mentioned by the same number of participants at Time 1 and Time 2.

Scenario 1

> Mom brought 3-year-old Charlie to your family child care home today in a rush. She has just started a new job and was late for a meeting. Mom was only able to stay long enough to bring Charlie into the house, give him a kiss, and mention something to you about being later than usual to pick him up this evening. When Mom left, Charlie, a usually cheerful child, stood in a daze for a minute and then dissolved into tears.

For Scenario 1, the most commonly mentioned behavioral themes were "Redirect" and "Comfort/Reassure." Participants indicated that they would respond to this scenario by trying to comfort Charlie or redirect him to another activity. Ten behavioral responses were mentioned by more participants at Time 2 than at Time 1 (see Table 8). The behavioral theme "Redirect" was used by many more participants at Time 2 (15 participants) than Time 1 (6 participants). This theme was further broken down by the type of redirection that participants said they would use. More specifically, at Time 1, of the six participants who said they would use the strategy of redirection, only one specified that she would redirect the child to an activity that he loved as opposed to another activity in general. However, at Time 2, a much larger proportion of participants (6 out of 15) who said they would use redirection as a strategy specified that they would redirect the child to an activity that he loved.

Another behavioral response that was mentioned by more participants at Time 2 than Time 1 was "Comfort/Reassure using physical contact (e.g., hug or hold child)." This behavioral response was mentioned by four more participants at Time 2 (11 participants) than at Time 1 (7 participants).

For Scenario 1, only four behavioral responses were mentioned by fewer participants at Time 2 than Time 1. The response that decreased the most in use was "Ask questions about emotions." Four participants mentioned this response at Time 1, while only one participant did

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[6] Behavioral responses given by only one participant were dropped from the analysis. Behavioral responses that only two or three participants gave were also dropped from the analysis unless they were considered to be theoretically important to the MITM content. Several behavioral themes applied to more than one scenario (Reflect/Interpret Behavior, Praise/Encourage, Talk to Parent, and Make a Connection).

so at Time 2. Appendix B provides examples of some of the participants' responses to Scenario 1.

Table 8. Scenario 1: Number of Participants Mentioning Each Behavioral Response.

	Behavioral Response	Overall	T1	T2	T2-T1
Behavioral Responses mentioned by more participants at Time 2	Redirect Overall	16	6	15	9
	Redirect: with things that he loves	6	1	6	5
	Comfort/Reassure: Physical contact	13	7	11	4
	Redirect: To another activity	12	5	9	4
	Praise/Encourage	2	0	2	2
	Spend some one-on-one time with him	2	0	2	2
	Comfort/Reassure Overall	17	16	17	1
	Promote parent-child relationship	6	3	4	1
	Talk to parent	5	3	4	1
	Let him express feelings	5	2	3	1
	Get down on child's level	3	1	2	1
	Make a connection	1	0	1	1
	Observe child	1	0	1	1
Behavioral Responses mentioned by the same number of participants at Time 1 and Time 2	Comfort/Reassure Verbal Combined	16	14	14	0
	Comfort/Reassure: Verbally: Mom will be back	10	9	9	0
	Give him time/space	3	2	2	0
	Reflect/Interpret Behavior	1	1	1	0

	Behavioral Response	Overall	T1	T2	T2-T1
Behavioral Responses mentioned by less participants at Time 2	Comfort/Reassure: Verbally General	13	10	9	-1
	Comfort/Reassure: Not clear verbal or physical	7	5	3	-2
	Give food	4	4	2	-2
	Ask question about emotions	4	4	1	-3

Scenario 2

> *Max is 4 months old and has just started babbling. Today, Max is in a "talkative" mood and is babbling up a storm.*

For Scenario 2, the most commonly mentioned behavioral responses overall were "Respond Vocally-Talk" and "Reflect/Interpret Behavior" (see
Table 9). In comparing Time 2 with Time 1 behavioral responses, seven more participants indicated that they would reflect on or interpret the child's behavior at Time 2 than Time 1. Three more participants also said that they would respond nonverbally to the baby's babbling at Time 2 than Time 1. Appendix B provides examples of some of the participants' responses to Scenario 2.

Table 9. Scenario 2: Number of Participants Mentioning Each Behavioral Response.

	Behavioral Response	Overall	T1	T2	T2-T1
Behavioral Responses mentioned by more participants at Time 2	Reflect/Interpret Behavior	9	2	9	7
	Respond nonverbally	3	0	3	3
	Make a connection	2	0	2	2
	Respond vocally - talk	13	7	9	2
	Praise/Encourage	5	3	4	1

	Behavioral Response	Overall	T1	T2	T2-T1
Behavioral Responses mentioned by the same number of participants at Time 1 and Time 2	Talk to parent	2	1	1	0
	Respond vocally - Babble back	7	6	6	0
Behavioral Responses mentioned by less participants at Time 2	Sing	4	3	2	-1
	Involve other children	5	4	2	-2
	Let him keep talking	4	3	1	-2

Scenario 3

> *Dante is 2 ½ years old and his parents are worried that he is not talking very much. Dante tends to use just one word at a time ("ball," "dog," "baby") rather than short sentences. Today, Dante is standing in front of a bookcase reaching for a stuffed bear that he cannot reach. He turns to you, points to the bear and says, "Bear."*

For Scenario 3, the most commonly mentioned behavioral themes were "Extend" and "Praise/Encourage." Participants said that they would extend the child's language in several ways. Use of two behavioral responses increased significantly from Time 1 to Time 2. These were "Extend: Ask a question yes/no" and "Extend: embed in an activity." The latter increase was particularly noteworthy, as no participants at Time 1 mentioned this strategy, while seven participants mentioned that they would use it at Time 2. Finally, only three behavioral responses were mentioned less often at Time 2 than Time 1 for Scenario 3. These included "sing," "let him keep talking" and "involve other children" (see Table 10). Appendix B provides examples of some of the participants' responses to Scenario 3.

Table 10. Scenario 3: Number of Participants Mentioning Each Behavioral Response

	Behavioral Response	Overall	T1	T2	T2-T1
Behavioral Responses mentioned by more participants at Time 2	Extend: Embed in Activity	7	0	7	7
	Extend: Ask a Question: Yes/No	10	4	9	5
	Praise/Encourage	9	5	7	2
	Extend: Add more words	11	8	10	2
	Extend: Ask a Question: Open-Ended	4	2	4	2
Behavioral Responses mentioned by the same number of participants at Time 1 and Time 2	Reflect/Interpret Behavior	6	4	4	0
Behavioral Responses mentioned by less participants at Time 2	Talk to parent	1	1	0	-1

Other Results from Scenarios Surveys

One participant's survey responses in particular highlight the types of changes that took place in participants' knowledge of how to respond to children's expressions of emotion and efforts to communicate. Table 11 shows a comparison of this participant's survey responses at Time 1 and Time 2. While the participant clearly shows some positive strategies for responding at Time 1 (e.g., holding the child, talking with the child), at Time 2, her responses become more varied and focused on connecting with each child and following his interests (see bold italicized text for examples). Her response to Scenario 1 at Time 2 is similar to her response at Time 1, however, at Time 2 she adds that she will redirect the child to something that will make him

comfortable and something that he likes to do. For Scenario 2, she goes from simply listening to the child at Time 1, to actively responding in a way that will help her make a connection to him at Time 2. For Scenario 3, at Time 1, she simply says that she will respond by talking to the parent, while at Time 2, she plans to actively engage with the child and build on his interests.

Table 11. Comparison of Participant's Responses to Each Scenario at Time 1 and Time 2.

Scenario	Time 1 Response	Time 2 Response
1	I will hold or sit with Charlie and have a talk with him telling that's ok and his mother will be back for him this afternoon because she was a little late for work and that his friends will be here and that we will have a good day together.	When the chance came, I might have called the mother at her job and ask her how much later so that I would know what to expect in the afternoon. After Charlie began crying, I would go to him letting him that it's ok and that your mother will be back for you and ***try to redirect him to area that might make him feel comfortable of something that he like to do or work with.***
2	I feel that it's not much can be done to stop because he is 4 months old and just let him babbling and I will sit with him and listen to him.	I would go over and talk with Max ***as part of making connection with him*** and showing him different things and talking with him ***since he feeling like talking.***
3	I would respond by letting the parent know that Dante will probably speak more words after being around the other children and from listening to me talk to him day after day using words in a sentence.	Before when he wasn't using much words, ***I would repeat to him what it is that he pointed*** to and him that he said the word I tell him good job and try to see if he would sit and we listen to the phonics or leap frog activity ***getting him to repeat more words if he showed interest.***

The participant mentioned more varied behavioral responses at Time 2 and shifted her focus toward making connections with each child and respecting children's curiosity and interests.

T-tests were also run to test whether participants mentioned more varied behavioral responses at Time 2 than Time 1. Overall, this was true; across all three scenarios, participants mentioned more behavioral responses at Time 2 (mean number of behavioral responses = 6.9, *SD* = 2.68) than Time 1 (mean number of behavioral responses = 5.00, *SD* = 2.65), $t(20) = -5.65$, $p = .00$). T-tests were also run for each scenario. Participants had more varied responses at Time 2 than Time 1 for Scenario 1, $t(20) = -2.31$, $p = .03$, and Scenario 3, $t(20) = -4.20$, $p = .00$. For Scenario 1, participants used an average of 2.43 behavioral responses at Time 1 and 3.14 behavioral responses at Time 2. For Scenario 3, they used 1.19 behavioral responses at Time 1 and 1.95 behavioral responses at Time 2. However, for Scenario 2, while participants did use

more varied strategies at Time 2 (M = 1.81, SD = 1.03) than Time 1 (M = 1.38, SD = 1.02), this difference was not statistically significant, $t(20)$ = -1.57, p = .13, nor did it show a trend.

Results of Piloting Measures

As described in previous sections, one purpose of this evaluation was to pilot the evaluation measures. As such, two main questions were asked for each measure: (1) Were the measures easy to complete? and (2) How long did the measures take to complete? The results for the Scenarios Surveys, Pre- and Post-Training Experiences Surveys, Knowledge and Confidence Surveys, Single Module Evaluations (Facilitator Log and participant Single Module Evaluation), and Post-Training Interviews are presented below.

Pre- and Post-Training Experiences Surveys

For the Pre-Training Experiences Survey, 16 (76%) of participants indicated the measure was "not difficult at all," and 5 (24%) said it was "somewhat difficult" (M = 1.24, SD = .44, where 1 = not difficult at all, 2 = somewhat difficult, 3 = difficult, and 4 = extremely difficult) (see Figure 8).
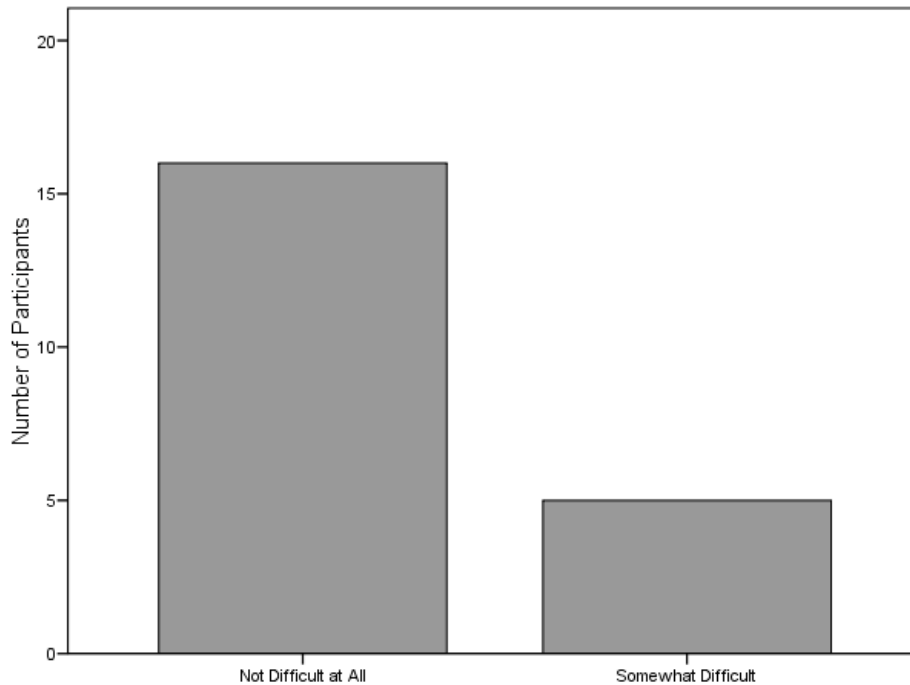

Figure 8. Difficulty Level of Pre-Training Experiences Survey

For the Post-Training Experiences Survey, 19 (90%) of participants indicated the measure was "not difficult at all," and 2 (10%) said it was "somewhat difficult" (M = 1.10, SD = .30, where 1 = not difficult at all, 2 = somewhat difficult, 3 = difficult, and 4 = extremely difficult) (see Figure 9). The Post-Training Experiences Survey took participants between 2 and 12 minutes to complete (M = 5.76, SD = 2.80) (see Figure 10).
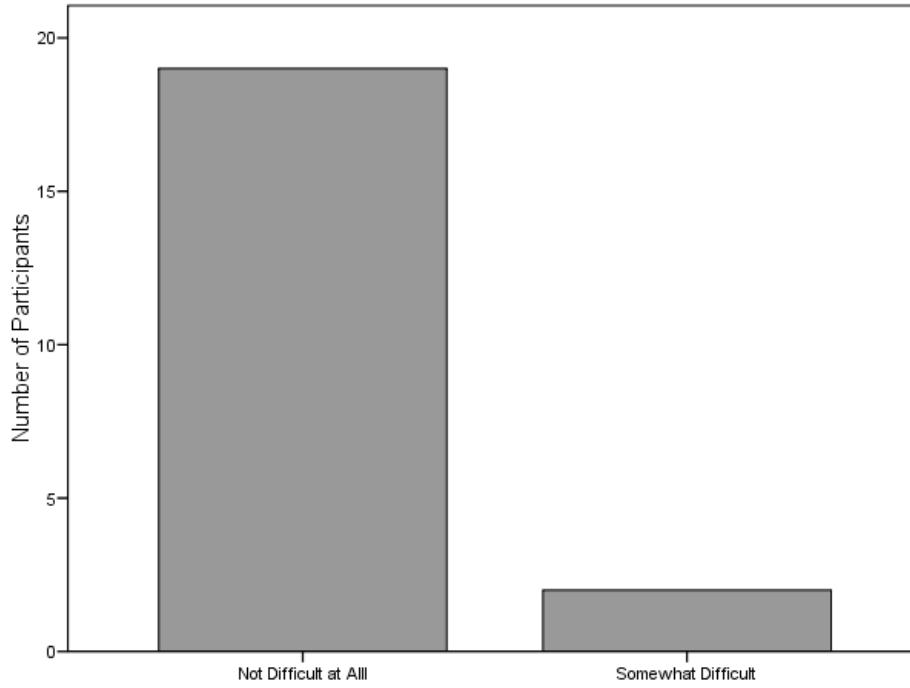
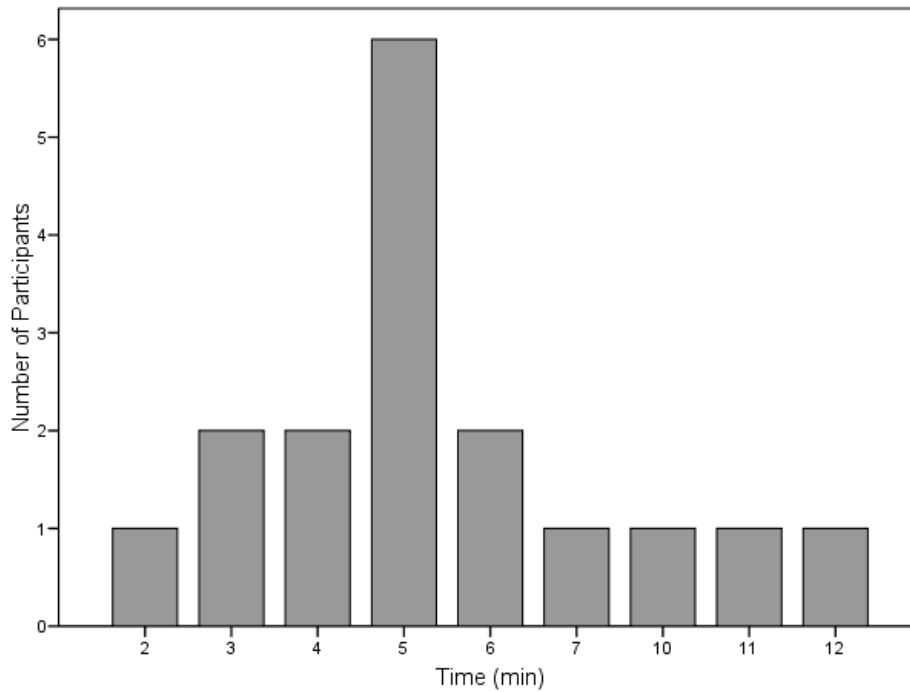*Figure 9. Difficulty of Post-Training Experiences Survey*

Figure 10. Time to Complete Post-Training Experiences Survey

Knowledge and Confidence Surveys

For the Pre-Training Knowledge and Confidence Survey, 14 (67%) of participants indicated that the measure was "not difficult at all," 2 (10%) said it was "somewhat difficult," 3 (14%) found it "difficult," and 1 said it was (5%) "very difficult" (M = 1.55, SD = .95, where 1 = not difficult at all, 2 = somewhat difficult, 3 = difficult, and 4 = extremely difficult) (see Figure 11).
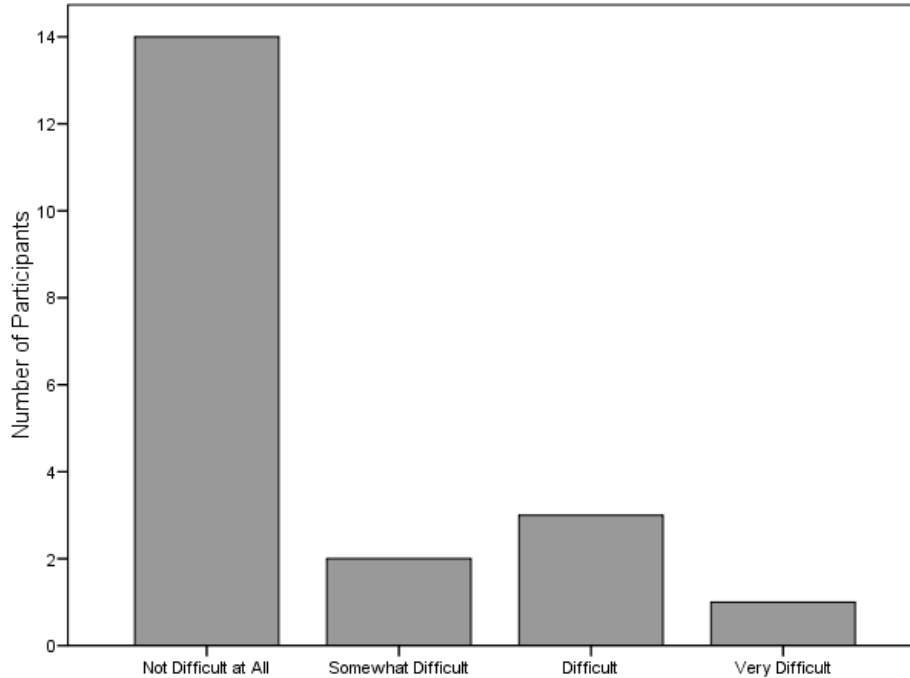

Figure 11. Difficulty Level of Pre-Training Knowledge and Confidence Survey

For the Post-Training Knowledge and Confidence Survey, 14 (67%) of participants indicated the measure was "not difficult at all," 6 (29%) reported that it was "somewhat difficult," and one participant did not respond (M = 1.30, SD = .47, where 1 = not difficult at all, 2 = somewhat difficult, 3 = difficult, and 4 = extremely difficult) (see Figure 12). Participants completed the survey in 2 to 15 minutes (M = 5.31, SD = 3.28) (see Figure 13).
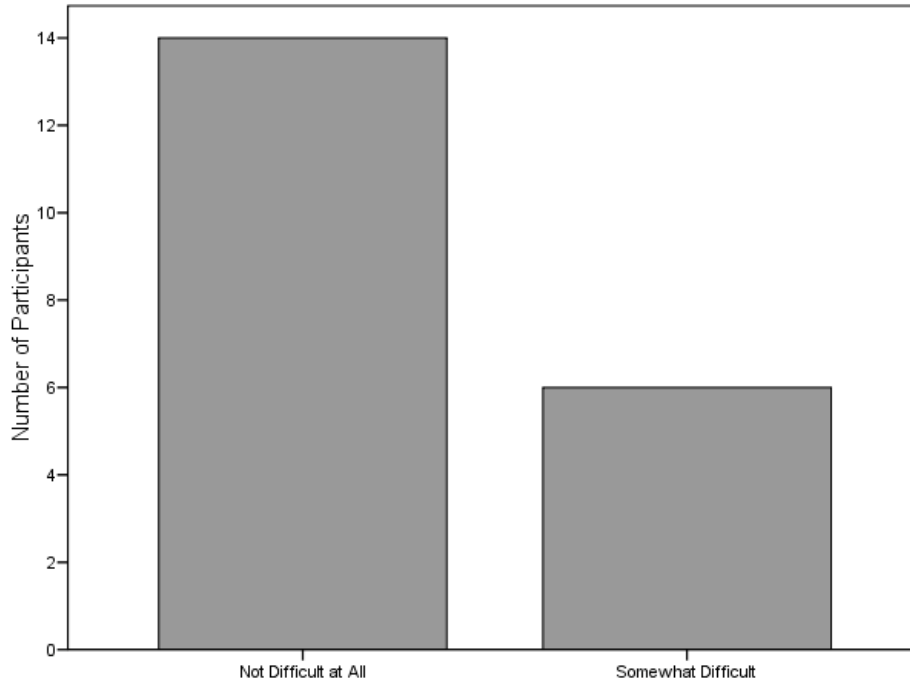
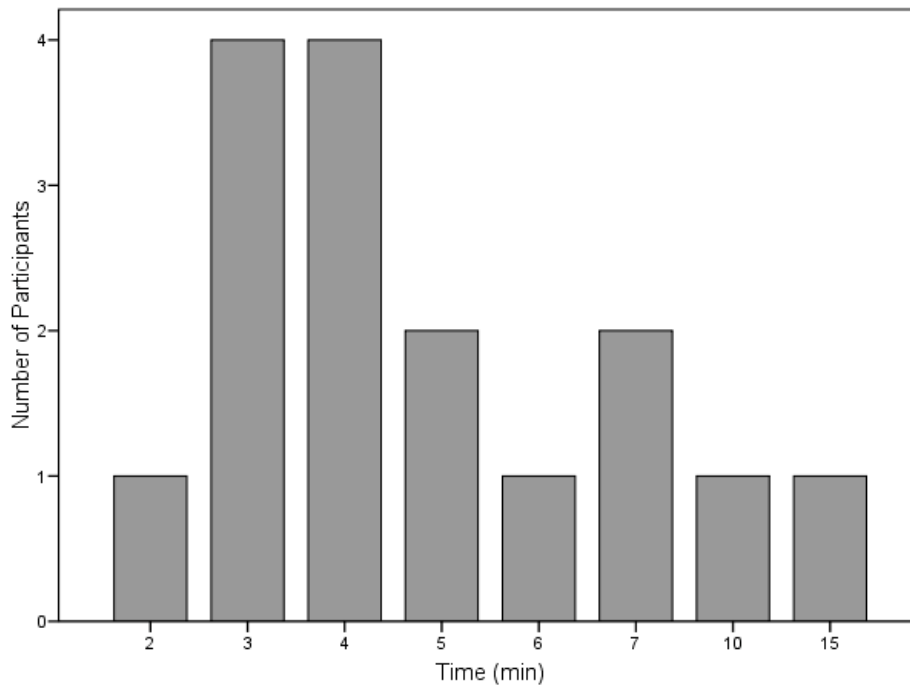*Figure 12. Difficulty Level of Post-Training Knowledge and Confidence Survey*

Figure 13. Time to Complete Post-Training Knowledge and Confidence Survey

Reliability of Knowledge and Confidence Surveys. In addition to the two initial questions: "Were the measures easy to complete?" and "How long did the measures take to complete?" a third question, "Were the measures reliable?", was important for the Knowledge

and Confidence Surveys. Reliability is, at the simplest level, the consistency of the measure; "Are the results repeatable?" Estimates of reliability indicate whether a person's score on a measure completed at different times, under the same conditions, will be similar. Reliability can be estimated in two ways: test/retest reliability and/or internal consistency. For this analysis, we estimated the internal consistency by examining the correlations between items on an instrument that purport to measure the same concept. Tests of internal consistency are reported using Cronbach's alpha, where an alpha of greater than 0.70 is considered acceptable (Nunnaly, 1978). Table 12 indicates the reliability estimate for each subsection of the Knowledge and Confidence Survey.

Table 12. Reliability for Subscales of Knowledge and Confidence Survey.

Subscale of Knowledge and Confidence Survey	Cronbach's Alpha
Knowledge (Pre-Training)	.95
Knowledge (Post-Training)	.88
Confidence (Pre-Training)	.95
Confidence (Post-Training)	.96

Reliability estimates for the subscales of the Knowledge and Confidence Survey are excellent, suggesting internal consistency. However, additional examination of these measures should be completed with a larger sample size to ensure accuracy of these results.[7]

Scenarios Surveys

For the Pre-Training Scenarios Survey, 12 (57%) of participants indicated the measure was "not difficult at all," 2 (10%) said it was "somewhat difficult," 4 (19%) found it "difficult," and 3 (14%) did not respond to the question ($M = 1.56$, $SD = .86$, where 1 = not difficult at all, 2 = somewhat difficult, 3 = difficult, and 4 = extremely difficult) (see Figure 14).

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[7] In order to be truly confident in a measure, two constructs are important: reliability and validity. We have already explained reliability. Validity examines whether the measure is actually assessing what it says it is assessing. A measure can be reliable but not valid, but cannot be valid without being reliable. Therefore, in the creation of measures, the first step is to estimate reliability, as we did for the Knowledge and Confidence Survey. Further discussion and analysis of the validity of the Knowledge and Confidence survey are beyond the scope of this report; future analyses based on both pilot data and future data will examine the validity of the measure and may require triangulating (i.e. cross-checking) the results with results of other measures, such as interviews or facilitator reports of participant progress.
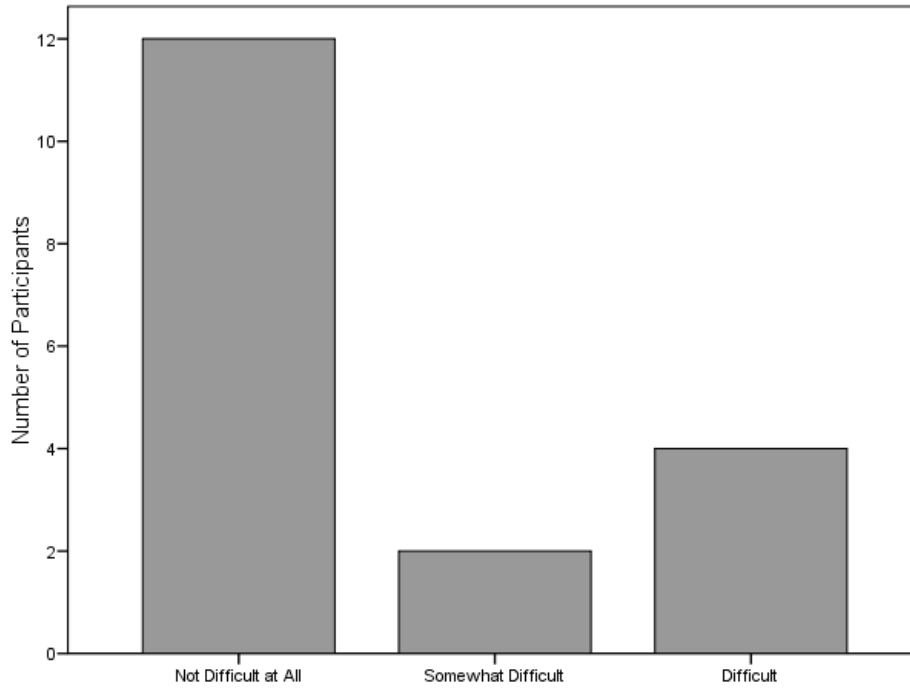
Figure 14. Difficulty Level of Pre-Training Scenarios Survey

For the Post-Training Scenarios Survey, 14 (67%) of participants indicated the measure was "not difficult at all" and 6 (29%) said it was "somewhat difficult" ($M = 1.33$, $SD = .48$, where 1 = not difficult at all, 2 = somewhat difficult, 3 = difficult, and 4 = extremely difficult) (see Figure 15).
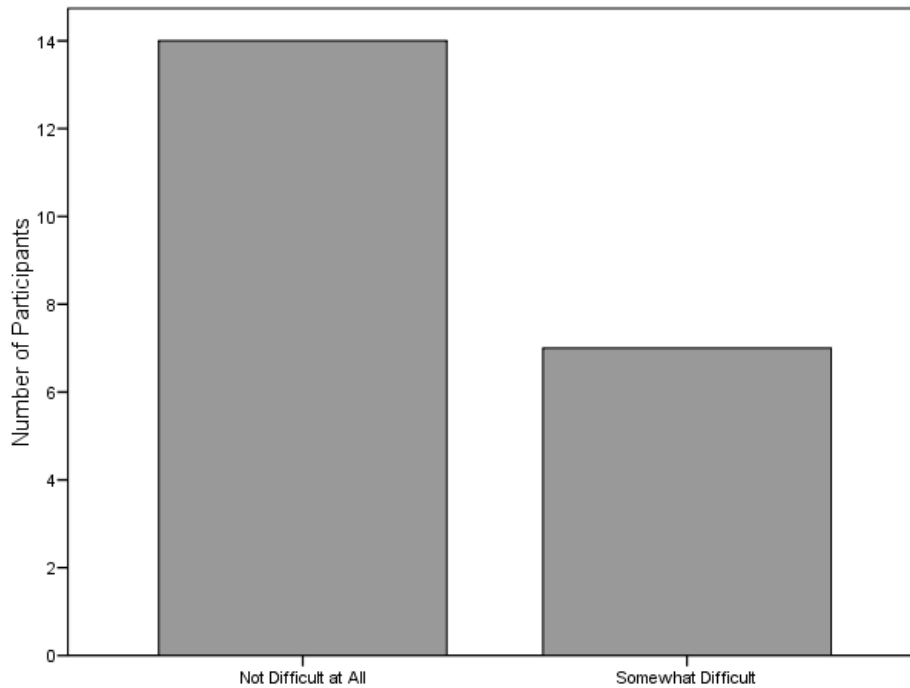
Figure 15. Difficulty Level of Post-Training Scenarios Survey

Overall, these data illustrate that more participants found the Scenarios Survey to be "not difficult at all" at Time 2 than at Time 1. In addition, no participants found it "difficult" at Time 2. This could have been because the form took less time to complete (i.e., included only 3 scenarios instead of 5). However, because we do not have "time to complete" data on this measure, this will need to be examined in future evaluation efforts.

Single Module Evaluation Surveys

Both the Facilitator Module Log and the participant Single Module evaluation were administered only once during the training, as a means to pilot the measures. The results presented below are only for this one administration and are presented to indicate the usefulness of the measure, not as an analysis of the facilitator or participant responses.

Facilitator Module Log. Both facilitators indicated that the survey was "not difficult at all" to complete. One facilitator completed the log in 20 minutes, the other 27 minutes, suggesting that it is a fairly time-intensive measure. However, the facilitators included rich information about how they felt the presentation of the module went. For example, in response to the question, "Please describe what contributed to participants' level of understanding of the new terms and concepts," one facilitator wrote:

> *A number of participants are ELL [English Language Learners]—therefore I believe the concepts were <u>very well</u> understood, but the terms—possibly well. I was aware of words I was using and I tried to re-state comments—both my own and comments made by participants so increasing the ability of everyone to grasp the meaning.*

As another example, in response to the question, "Please describe what contributed to your level of comfort (or discomfort) in presenting this material," one facilitator wrote:

> *I was comfortable with this module because (1) I had presented this module previously, (2) the module topic was meaningful to me and to the participants (based on my knowledge of the group), and (3) much participant involvement with the activities—very active learning—the participants learn by doing.*

Thus, while the primary purpose was to test how long this measure took to complete and how difficult it was, the qualitative information provided by the facilitators shows that responses from this log may be important for understanding the effectiveness of the MITM Learning Modules in future evaluation efforts.

 Participant Single Module Evaluation. For the participant Single Module Evaluation, 20 (95%) of participants indicated the measure was "not difficult at all" and one (5%) said it was "somewhat difficult" ($M = 1.05$, $SD = .218$, where 1 = not difficult at all, 2 = somewhat difficult, 3 = difficult, and 4 = extremely difficult) (see Figure 16). Participants took between 2 and 18 minutes to complete the single module evaluation ($M = 10.26$, $SD = 4.28$) (see Figure 17).
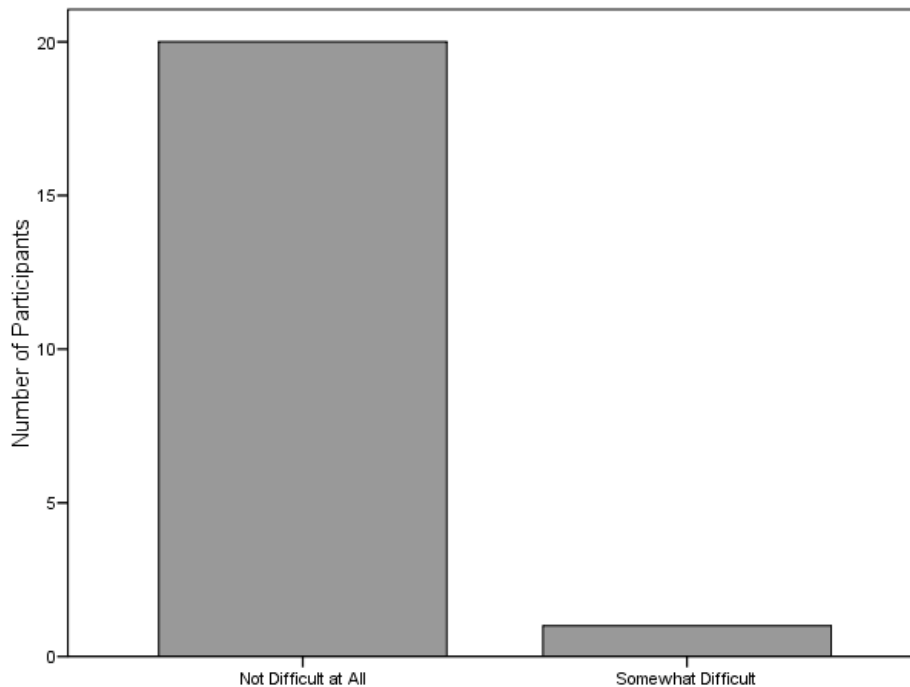

Figure 16. Difficulty of Single Module Evaluation
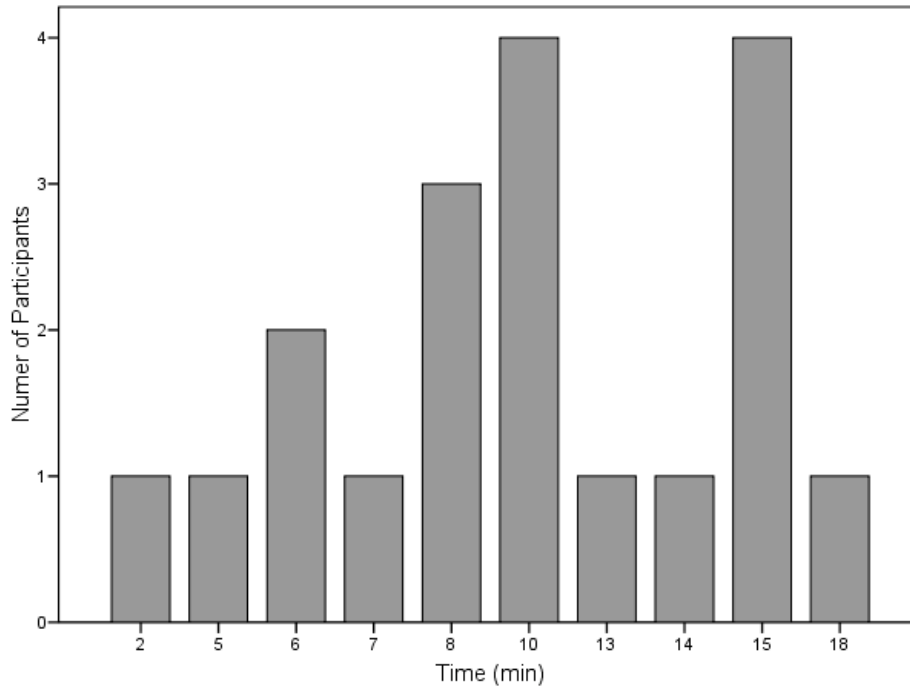
Figure 17. Time to Complete Single Module Evaluation

Figures 18 through 21 below present participant responses to a sampling of questions on the single module evaluation. As mentioned above, these responses correspond to just one module of the curriculum and are represented here only to show the variability in the responses of participants in order to highlight the importance of asking questions such as these for each module and the usefulness of the measure itself.

Figure 18. Familiarity with Information Presented in Module

Figure 19. Amount of Time for Module

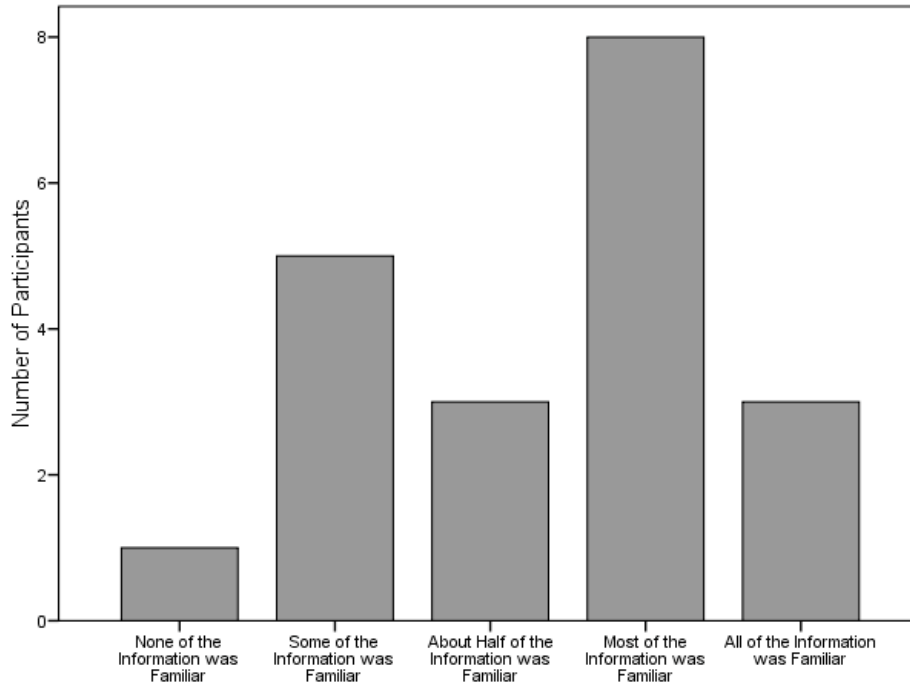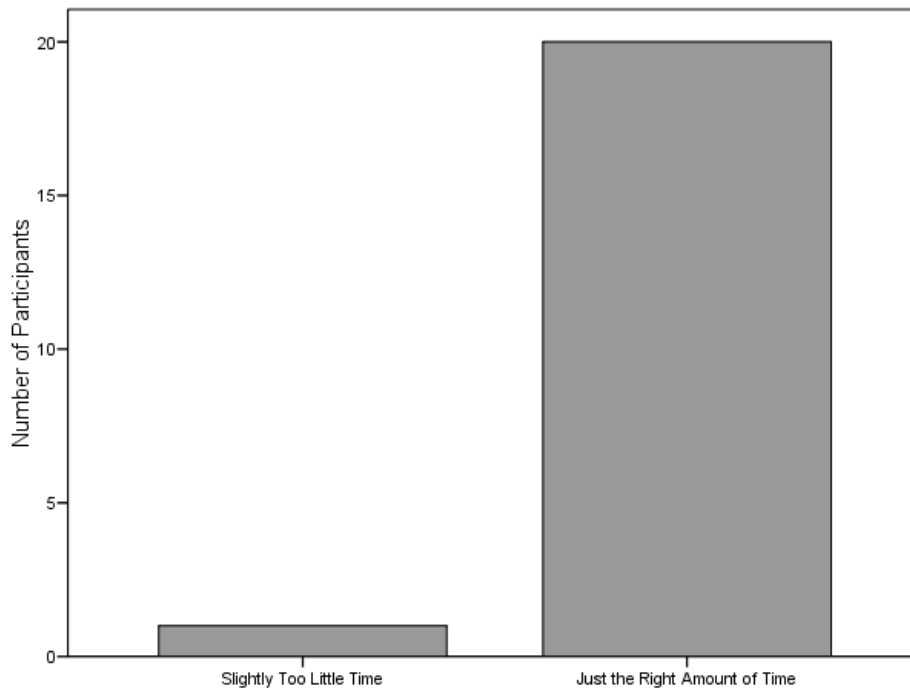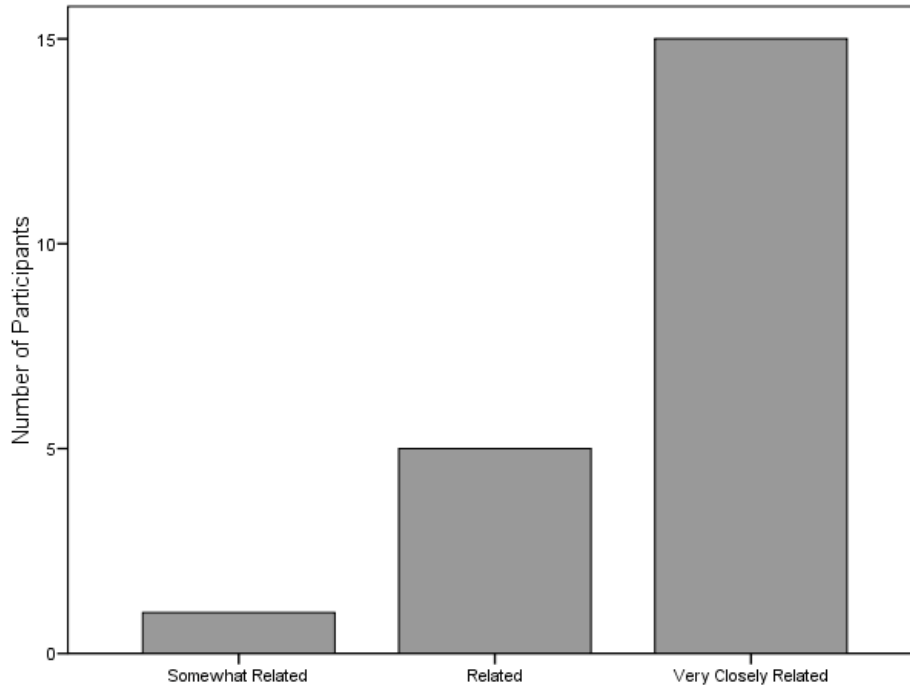*Figure 20. Relation of Information in Module to Work with Children*
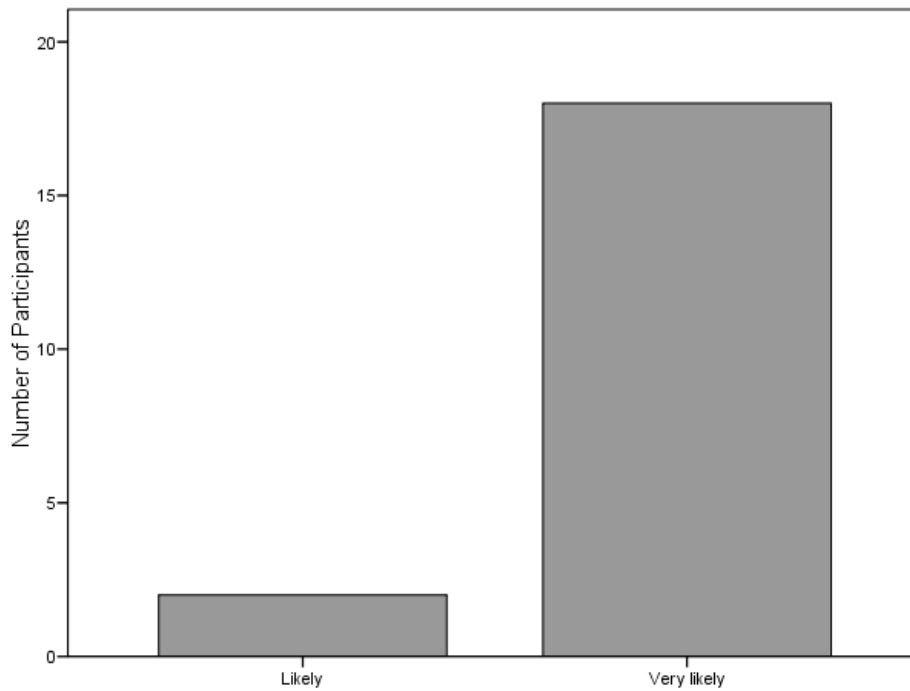

Figure 21. Likelihood of Putting the New Knowledge to Action

Post-Training Interviews

As mentioned in a previous section, three interviews were completed in order to evaluate the interview protocol. Overall, all three participants seemed comfortable and responsive during the interviews. Their responses indicated that the questions were clear. The interviews took approximately 32 minutes, 28 minutes, and 34 minutes, for an average of 31.3 minutes. The interviews were designed to take about 30 minutes, and in fact, they did. Participants were enthusiastic about participating in the interviews and sharing their experiences with the MITM Learning Modules.

Discussion And Recommendations

This evaluation had several purposes: (a) to examine providers' experiences with the MITM Learning Modules, (b) to assess how the MITM Learning Modules influence providers' perceived knowledge of and confidence in applying social, emotional and intellectual principles of MITM in their work with children and families, and (c) to pilot measures for a larger scale evaluation. Evaluation results informing the first two purposes have implications for future implementation of the MITM Learning Modules. Results informing the third purpose lead to recommendations for future evaluation efforts. These results, implications, and recommendations are discussed in more detail below.

Integration of Results

Overall, the results of this pilot evaluation show that participants had positive experiences with the MITM Learning Modules and that their perceived knowledge, confidence, and comfort with relationships with children and families generally increased. We do not have a definitive explanation about why some participants indicated a decrease in perceived knowledge and confidence following completing the modules. One possibility is that learning new material and a new way of perceiving the world is often destabilizing, though is an important part of the creative process. The results indicate that participants also seemed to take away several important messages highlighted in the Learning Modules, including the importance of making connections with children and families, following children's interests, appreciating the uniqueness of each child, and understanding and supporting children's development and learning experiences. Each of these messages is described in more detail below.

Making Connections with Children

Results from several of the measures showed that participants gave more thought to making connections with families and children after participating in the MITM Learning Modules than they did before. This was illustrated by their responses on the Knowledge and Confidence Surveys, the Post-Training Experiences Surveys, the Scenarios Surveys, and, anecdotally, in the Post-Training Interviews. Results from the Knowledge and Confidence Survey showed that participants felt more confident in their ability to reconnect with children after a misunderstanding. Another interesting change related to making connections with children was participants' reported likelihood of using physical contact in supporting children. This emerged both in the Scenarios Survey results as well as anecdotally in the interviews.

Finally, participants' responses to the scenarios also illustrated a focus on attunement (as also emphasized in the modules; Galinsky, Sprague, O'Donnell, & Dombro, 2006b, Module Six), yet another way of working toward making a connection with a child. More specifically, participants showed that they recognized the importance of babbling back to infants when they babbled to them (as mentioned in the modules; Galinsky, et al., 2006b, Module One). Overall, the idea of making connections with children is an important one central to the MITM Learning Modules (Galinsky, et al., 2006b, Module One) and was clearly received well by participants.

Following Children's Interests

In addition to learning about making connections with children, participants seemed to learn the importance of following children's interests. This was especially evident through their responses to the Scenario Surveys, as they focused more on recognizing children's unique interests and responding accordingly after the training than they did before. Following children's interests is another important focus of the MITM Learning Modules (Galinsky, et al., 2006b: Module Four).

Recognizing the Uniqueness of Each Child

Participants also highlighted the importance of recognizing the uniqueness of each child, both temperamentally and otherwise. More specifically, participants' perceived knowledge of the role that temperament plays in behavior and learning increased from Time 1 to Time 2. In addition, participants indicated that they felt more confident in helping children feel known and understood after participating in the Learning Modules than they did before participating. Participants' responses to Scenario 1 also showed that they focused more on children as unique individuals at Time 2 than at Time 1. More specifically, participants were more likely to say that they would support the child by providing him with an opportunity to play with something that he loves or feels connected to (e.g., a favorite blanket, book, or activity) after participating in MITM than before.

These themes of making connections with children, following children's interests, and recognizing the uniqueness of each child are important both in the MITM Learning Modules as well as in the early childhood field. As Jack Shonkoff (2004) wrote,

> Growth-promoting relationships are based on the child's continuous give-and-take ("action and interaction") with a human partner who provides what nothing else in the world can offer – experiences that are individualized to the child's unique personality; that build on his or her own interests, capabilities, and initiative; that shape the child's self-awareness; and that stimulate the growth of his or her heart and mind (p. 1).

Participants seemed to incorporate this philosophy into their thinking about their work with children. Given the evaluation design, we cannot definitively attribute changes in participants' thinking to participation in the MITM Learning Modules. However, the modules do emphasize these learning themes. This in turn, lends credence to the possibility that what participants learned in the MITM modules affected their thoughts about the uniqueness of each child and the importance of their own relationships with children.

Understanding and Supporting Children's Learning and Development

Results also illustrated participants' enhanced understanding of (1) how children learn and develop and (2) how to support children in their learning and development. First, participants seemed more likely to reflect on their teaching and children's learning and to make interpretations about what they were observing in children after completing the Learning Modules than before completing them. These are things that they were encouraged to do throughout their participation in the MITM Learning Modules. Second, participants discussed extending children's learning in various ways including embedding new language learning into different activities. Results from the Knowledge and Confidence survey, including participants' increased confidence in assessing and documenting all the ways that children learn, also suggest that they gained knowledge about how children learn from participating in the MITM Learning Modules. Finally, the results of the Post-Training Experiences and Knowledge and Confidence Surveys suggest that participants learned more about child development in various domains including social-emotional, intellectual, and language development. Anecdotal information from the interviews also supports this conclusion.

Comparison with Prior Evaluation Findings

The results summarized here are consistent with prior evaluation findings. More specifically, the present findings that illustrate participants' enhanced understanding of supporting children's learning and development are similar to the University of Pittsburgh Evaluation (Zajac, et al., 2006) findings that participation in the MITM Learning Modules led to more language-enriching communication, better play-based learning opportunities, and more activities that enhance children's social development. These findings are also consistent with the Penn State Evaluation findings that that the MITM Learning Modules stimulated positive change in the quality of language and reasoning activities provided in the classroom. Furthermore, the present findings that highlight participants' focus on making connections with children are consistent with the Penn State Evaluation (Fiene & Carl, 2006) findings that the MITM Learning Modules stimulated positive change in the quality of teacher-child interactions. Thus, it is clear that several common themes run through results of these evaluation studies.

Overall, while the results of this evaluation cannot be directly attributed to participation in the MITM Learning Modules, it seems clear that participants learned a great deal from the experience and felt that they were likely to implement what they learned in their practice. While participants were not asked directly how likely it was that they were going to implement what they learned into their practice, several data sources clearly showed that participants were taking away important messages from their experiences with the MITM Learning Modules. In addition, they named several specific ways that they would be able to implement what they learned in their practice. Furthermore, the data from the Single Module Evaluation showed that participants felt they were likely to use what they learned in that module in their work with children. These results are consistent with the University of Pittsburgh Evaluation findings that teachers felt that they would be able to apply what they learned in the MITM Learning Modules to their work with children. Future evaluation efforts might include a question on the Post-Training Experiences Survey or combine results from the Single Module Evaluations to directly examine participants' perceived likelihood of applying what they learned in their work with children.

Finally, it should be noted that given the results of the University of Pittsburgh Evaluation, it seems that the MITM Learning Modules may work better for some early childhood educators than others. Because this was a pilot evaluation with a small sample size, we are not able to say much about whether this was true for this group of family child care providers or not. While we did find that family child care providers with less experience seemed to improve more in their comfort with relationships with children and families than those with more experience, these results should be interpreted with caution as providers with more experience started out more comfortable than those with less experience. Future evaluations with larger samples are needed in order to address the question of whether the MITM Learning Modules "work better" for some participants than others.

Implications for Future Implementation of MITM Learning Modules

These results have several important implications for future implementation of the MITM Learning Modules. First, while the MITM Learning Modules (at least those that have been evaluated) have been offered primarily to center providers, this pilot evaluation shows that the MITM Learning Modules seem to be received well by family child care providers. Future implementation might include continuing to reach out to this group, as this cohort seemed enthusiastic about participating in the training and were satisfied with the results. Second, participants seemed to come away with specific knowledge in various content areas related to how children learn and develop. These results might help inform facilitators in choosing promising areas of emphasis in delivering the Learning Modules. Third, while we were unable to draw definitive conclusions about the effectiveness of the training for providers with different backgrounds, it is worth noting that 16 participants in this cohort had taken, or were currently taking, a college course. This suggests that the participants in this cohort are investing in college courses. This information might be useful for institutions that are considering creating a credit-bearing course for Mind in the Making. Finally, learning new information and making a paradigm shift can be destabilizing and lead to a decrease in confidence, suggesting that on-going mentoring might be important to help integrate knowledge and boost confidence.

Future Directions for Evaluation

Using the University of Pittsburgh Evaluation as a starting point, this pilot evaluation provided a next step toward developing a large-scale evaluation of the MITM Learning Modules. Several important lessons were learned along the way. Future evaluations should consider the following conclusions and suggestions for revising existing measures, selecting and developing additional measures, and incorporating multiple methods and different participant perspectives into the evaluation design.

Measurement Revision

The first set of suggestions relates to the revision of the measures used in this pilot evaluation. Measures need to be revised in several ways. First, careful consideration should be given to the order and wording of the questions. For example, the order of the questions on one section of the Pre-Training Experiences Surveys resulted in what appeared to be response bias.

These questions will have to be re-ordered to see if more variability in responses can be achieved. In addition, several questions on the measures were "double-barreled," meaning that they asked participants to provide one answer to a question that was really asking about two separate concepts. Questions will need to be reworded to avoid this pitfall in the future.

Second, existing measures need to be assessed for several characteristics for use in future evaluations. One such characteristic is validity, or whether a measure is truly measuring what it is designed to measure. A second characteristic involves determining which items are truly important to the construct that is being measured. For example, in the case of the Knowledge and Confidence Survey, it may be that certain items contribute more to the constructs themselves and to variability of responses. A related issue is whether certain subscales emerge as important to the measure. Further analyses, including factor analysis, will help answer some of these questions. In order to further inform these efforts, MITM facilitators are being asked for feedback on which of the items seem the most important or representative of MITM content.

Third, the analysis of the difficulty level of the surveys showed that, for the most part, participants did not find the measures difficult to complete. For all of the Time 1 measures, the majority of participants found the measures to be "not difficult at all," with very few reporting that they were "difficult" or "very difficult." At Time 2, most participants also reported that the measures were not "difficult at all." Some reported that they were "somewhat difficult," but none reported that they were "difficult" or "very difficult." The Single Module Measures were also rated by the majority of participants as "not difficult at all," as were the Facilitator Module Logs. Thus, it appears that the difficulty level of measures will not need to be addressed or changed for future evaluation efforts.

Fourth, at Time 1, the facilitators expressed some concern that the measures took too long to complete. In response to this concern, at Time 2, we asked participants to record the time they began and completed the Post-Training Experiences Survey and the Knowledge and Confidence Survey. Most of the participants indicated that it took 5 minutes or less to complete each of these measures. We also shortened the Scenarios Survey at Time 2. While we did not ask participants to record how long it took them to complete the Scenarios Survey, the total time to complete all three primary measures ranged from approximately 20 to 30 minutes. Thus, these measures seem to be of reasonable length, although they may be shortened depending on the results of additional measurement analysis (e.g., factor analysis).

Completion times were longer for the Single Module Evaluation and the Facilitator Module Log. This is most likely because participants were required to provide more detailed information on these surveys than on the others. For future evaluation efforts, these single module evaluation instruments may include fewer questions or be administered at pre-determined intervals (e.g., every third module).

A fifth, and final, set of suggestions applies to the Scenarios Survey. This measure was adapted from the *Knowledge Assessment Questionnaire Scenarios* used in the University of Pittsburgh evaluation (Zajac, et al., 2006). Zajac and her colleagues (2006) made several suggestions for use of this measure including developing a standardized scoring strategy. We concur with this recommendation. In coding for specific behavioral responses, we did move beyond just looking at "positive" and "negative" responses, as the Pittsburgh team did. The next version of the measure should take into account some of these specific behavioral responses. More specifically, a subset of the behavioral responses that emerged could be used to create multiple-choice responses. Alternatively, if it is deemed desirable to retain the open-ended

format, MITM facilitators could inform the further development of this measure by participating in focus groups, interviews, or written feedback sessions to come up with "model MITM" survey responses. These model responses could then be used to create a standardized scoring system. Finally, the scenarios themselves should be revised to ensure that they cover an adequate age range and a variety of developmental issues or content areas.

Selection and Development of Additional Measures

The second set of recommendations involves selecting additional measures for future evaluation efforts. First, while this pilot evaluation measured changes in *perceived* knowledge and confidence, a more objective measure of knowledge would be useful for measuring actual changes in knowledge. This could be an evaluator-developed measure based on actual MITM content (like the *Knowledge Acquisition Survey* being developed in Arizona), or a standardized measure of knowledge of child development already used in the field (e.g., the *Knowledge of Child Development Inventory*, Larsen and Juhasz, 1986). The use of these measures will depend on the evaluation question(s) being explored and whether evaluators wish to measure change in general knowledge of child development and/or change in specific knowledge of MITM-related content.

Second, observational instruments that measure classroom practices and teacher-child interactions would be important for measuring actual changes in the classrooms or outcomes of participating in the MITM Learning Modules. Standardized measures such as the Infant-Toddler Environment Rating Scale-Revised (ITERS-R) (Harms, Cryer, & Clifford, 2003), Early Childhood Environment Rating Scale-Revised (ECERS-R) (Harms, Clifford, & Cryer, 1998), Family Day Care Rating Scale (Harms & Clifford, 1989), and Caregiver Interaction Scale (Arnett, 1989) would be useful for this purpose. In addition, an observational measure that captures what happens in the MITM Learning Modules themselves would be useful in both process and outcome evaluations to help contextualize the results. Another useful data collection strategy would be to use some of the documents and exercises that participants are already completing for the Learning Modules. For example, examining participants' journal pages, charts, or other reflective or homework exercises (e.g., Galinsky, et al., 2006b, Chart 6.4 "New Ways to Communicate") could be an effective way to capture changes in their thinking and practice that might occur over the course of their participation in the MITM.

Using Multiple Informants

Finally, while this evaluation piloted an instrument that measured facilitators' perspectives (the Facilitator Module Log), the majority of the instruments measured participants' perspectives. Future evaluation efforts can increase the validity and reliability of measures and results by using multiple informants such as parents, directors, providers, facilitators, and objective observers. Such triangulation efforts could be accomplished not only by having multiple informants, but also multiple instruments that measure the same constructs such as interviews, observations, and questionnaires. Future evaluation efforts will hopefully use some of these strategies and multi-method approaches, along with a pre-post comparison design, to examine outcomes of the MITM Learning Modules for classroom practices, providers, families, and children themselves.

Limitations and Conclusions

There were several clear limitations to this evaluation. First, because it was a pilot evaluation and only conducted with one cohort of participants, the sample size was small and rather homogenous. There were only 21 participants, all of whom were family child care providers who had, for the most part, been in the field for quite some time. Therefore, results may not generalize to other populations. Second, despite the fact that we found some promising results, because there was no comparison group, it is impossible to attribute the results to participants' participation in the MITM Learning Modules. In addition, while we did attempt to examine changes in participants' knowledge and confidence, the associated measure was based on *perceived* knowledge and confidence, not on an objective test of knowledge gained from the Learning Modules. Finally, the timing of the evaluation made it impossible to conduct the Time 1 measures prior to the start of the evaluation, and thus they had to be completed after one module had already been administered. Therefore, Time 1 measures were not truly "pre" training, but took place soon after the training had already begun.

However, despite its limitations, this pilot evaluation provides evidence that supports the effectiveness of MITM Learning Modules. Overall, results indicated that the MITM Learning Modules were received well by this group of family child care providers, and generally seemed to have positive effects on their learning, knowledge, and confidence. In addition, while further analysis is needed, the measures used in this pilot evaluation proved to be reliable and fairly easy to complete. Thus, although we cannot draw definitive conclusions based on the results reported here, this pilot evaluation provides a promising next step toward informing future implementation and larger scale evaluation efforts of MITM in Massachusetts and across the country.

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Appendix A

List of Behavioral Themes and Responses

Scenario 1

- *Redirect Overall:* Both of the redirect behavioral responses combined
  - *Redirect with things that child loves:* Redirect child's attention to an activity or object that he loves or is his favorite
  - *Redirect to another activity:* Redirect child's attention to another activity like reading a book, looking at fish tank, telling him stories

- *Comfort/Reassure Overall:* All of the comfort/reassure behavioral responses combined; examples include letting child know you are there for him and making child feel secure and safe
  - *Comfort/Reassure: Physical contact:* Hug or hold child
  - *Comfort/Reassure: Verbal Combined:* Combination of two responses below
    - *Comfort/Reassure: Verbally: General:* Tell him "you are safe with me"
    - *Comfort/Reassure: Verbally: Mom will be back:* Tell him that his mom will be back

- *Spend some one-on-one time with him:* Take the time to spend some on-on-one time with child

- *Promote parent-child relationship:* Focus on child's relationship with parent by telling him that his mom loves him or calling and having him talk to his mom

- *Let him express feelings:* Allow child to cry and talk about what he is feeling

- *Get down on child's level*: Physically bend or sit down in order to be at child's level

- *Observe child:* Specific mention of observing child or child's behavior

- *Give him time/space:* Provide the child with time or space he needs to deal with his emotions

- *Give food:* Give child food

- *Ask question about his emotions:* Ask child to describe to you how he is feeling

Scenario 2

- *Respond vocally – talk:* Respond to the baby by talking back to him using words

- *Respond vocally – babble back:* Respond by babbling back to the baby; repeat his sounds, copy him

- *Respond nonverbally:* Respond nonverbally by holding his hand, smiling, giving him a toy

- *Sing:* Sing to baby in response to his babbling

- *Involve other children:* Have other children listen to and talk to baby

- *Let him keep talking:* Just let him keep babbling

Scenario 3

- *Extend: Embed in Activity:* Extend the child's language learning by embedding the bear in an activity such as singing a song or reading a book about a bear

- *Extend: Ask a Question: Yes/No:* Extend the child's learning by asking a question about the bear that requires a yes/no answer (e.g., "Do you want the bear?")

- *Extend: Ask a Question: Open-Ended:* Extend the child's learning by asking a question or encouraging child to say more about the bear (e.g., "What would like to do with the bear?")

- *Extend: Add more words:* Extend by describing something more about the bear and/or encouraging the child to do so (e.g., encourage him to say more words such as "May I have the bear please?)

Behavioral Responses Mentioned for all Three Scenarios

- *Praise/Encourage:* Encourage child verbally by telling him he's doing a good job or providing other words of praise or encouragement

- *Talk to parent:* Call or talk to the parent in person about what's going on with the child

- *Reflect/Interpret Behavior:* Reflect on situation; make interpretations about meaning of behavior based on knowledge of development or otherwise

- *Make a connection:* Specifically mention making a connection with the child

Appendix B

Examples of Scenarios Survey Responses and Associated Behavioral Responses

Scenario	*Survey Response*	*Behavioral Response*
#1: *Mom brought 3-year old Charlie to your family child care home today in a rush. She has just started a new job and was late for a meeting. Mom was only able to stay long enough to bring Charlie into the house, give him a kiss, and mention something to you about being later than usual to pick him up this evening. When Mom left, Charlie, a usually cheerful child, stood in a daze for a minute and then dissolved into tears.*	*I would talk to child at eye level perhaps give him a hug and tell him that his mom will be back to pick him up. I would also tell Charlie that his mom will be a little later than usual to pick him up and I would let him express to me his feelings (use encouragement).*	• Comfort/Reassure Verbally - Mom will be back • Let him express feelings • Praise/Encourage
	I will hold him up showing him love and attention even giving him his favorite blanket.	• Comfort/Reassure – physical contact • Redirect with something that he loves
	I would talk to Charlie, try to settle him down, get him to feel safe and involved in what we were doing, then later ask the parent what the problem was if any thing she can share to help his day continue better.	• Talk to parent • Comfort/Reassure – Verbally • Redirect to another activity

Scenario	Survey Response	Behavioral responses
#2: *Max is 4 months old and has just started babbling. Today, Max is in a "talkative" mood and is babbling up a storm.*	*I would repeat what Max babbles and smile, make funny faces so that we can make a connection with each other. This is a good way to communicate and to build baby's vocabulary.*	• Make a connection • Respond nonverbally • Respond vocally – babble back • Reflect/Interpret Behavior
	I would encourage Max in a loving way that he's doing a great job trying to talk.	• Praise/Encourage
	Copy him so he feels being recognized - attunement introduce or two more similar words. He may learn them. I can also say one or two words to him with action followed. E.g. bottle, up, bye bye, etc.	• Respond vocally – babble back • Respond vocally – talk • Reflect/Interpret Behavior
#3: *Dante is 2 ½ years old and his parents are worried that he is not talking very much. Dante tends to use just one word at a time ("ball," "dog," "baby") rather than short sentences. Today, Dante is standing in front of a bookcase reaching for a stuffed bar that he cannot reach. He turns to you, points to the bear and says, "Bear."*	*I would encourage him to use more words. For example, Dante says bear I would say big bear. I would keep adding words to build his vocabulary - big brown bear.*	• Extend – add more words • Praise/Encourage
	I say yay! Because he pointed and said the actual object. His temperament maybe to talk only in spurts and truly mean what he says when it is said. I would express stages of child development in areas of vocabulary and language and encourage them to read more to him as I am reading to him.	• Reflect/Interpret Behavior • Praise/Encourage • Extend – Embed in activity
	I'll say "Oh Dante, you want to get the bear, the big, brown bear, right? Um, can you say big bear, or brown bear?" Thus increasing his vocabulary slowly.	• Extend – add more words • Extend – ask a question: Yes/No • Reflect/Interpret behavior