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

Mind in the Making Learning Modules for Early Childhood Teachers in the Greater Boston Area:

Evaluation Report

Mallary I. Swartz, Ph.D.

Connected Beginnings Training Institute

September 2009

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United Way of Massachusetts Bay and Merrimack Valley

CONNECTED BEGINNINGS TRAINING INSTITUTE is an infant and early childhood mental health training institute that promotes awareness of the central importance of relationships in the lives of infants and young children. Our work extends the capacity of infant and early childhood practitioners and programs to understand and apply current knowledge of the effects of relationships on very young children's social and emotional well being, evolving brain architecture, and capacity to learn.

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Executive Summary

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The Mind in the Making Learning Modules for Early Childhood Teachers™ (MITM), developed by the Families and Work Institute in 2004, is a 12-module facilitated learning curriculum and pedagogical method that helps bridge research and practice in early care and education. Using research on child 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. MITM endeavors to help teachers learn about seminal research on how young children learn and develop and apply this research to their practice, while emphasizing the importance of relationships in young children's learning and development.

In the spring of 2008, Catholic Charities, a large non-profit Boston-based social service provider, trained 23 leadership staff from nine program sites to be MITM facilitators. From the fall of 2008 through the spring of 2009, these trained facilitators delivered the MITM learning modules to nine cohorts of early childhood teachers from center-based programs and family child care providers who were affiliated with the agency. With the cooperation of the United Way of Massachusetts Bay and Merrimack Valley and Catholic Charities, Connected Beginnings Training Institute conducted an evaluation of MITM as it was implemented with these nine cohorts. This report describes that evaluation.

Evaluation Questions and Design

Evaluation questions were as follows:

1. To what extent does MITM increase participants':
    a. Perceived knowledge of how children learn and develop?
    b. Perceived confidence in their abilities to support children's learning and development?
    c. Knowledge of how to apply MITM principles to their everyday work with children?

2. To what extent does MITM influence participants' beliefs about how children learn and develop?

3. How do participants experience MITM?

The evaluation had a pre-post without comparison group design. Therefore, any changes in participants' knowledge, confidence, and beliefs cannot be directly attributed to participation in MITM. However, the evaluation provides a next step toward understanding how a train-the-trainer model works for and is perceived by early care and education providers. It also provides

the basis for developing a larger scale evaluation of the implementation of Mind in the Making in Massachusetts.

Participants

Participants included 120 center and family child care providers. All participants but one were female. They ranged in age from 21 to 68 years old with a mean age of 40.8 years. Almost half of the participants identified themselves as White; about one-fifth identified as Hispanic. Participants' years of experience ranged from less than 1 year to 41 years with a mean of 11.6 years. Slightly over half of the participants had a college degree; almost three-quarters indicated that they had taken a college course in the past or were doing so at the time of the training.

Procedures and Instruments

Participants were given a battery of survey measures both before and after participating in MITM. Surveys assessed participants' perceived knowledge of and beliefs about how children learn and develop, their confidence in supporting children's learning and development, their knowledge of how to apply principles learned in MITM to everyday child care situations, and their satisfaction with MITM. Facilitators were also asked to complete a survey after the training to capture their perspectives on how participants experienced the training and how comfortable facilitators were in presenting the material.

Findings

- **The MITM modules were effective in helping providers from many different backgrounds enhance their knowledge about how children learn and develop.** On average, a comparison of participants' responses before and after the training suggested increases in their perceived knowledge about social and emotional, intellectual, and language development in early childhood.

- **The MITM modules were effective in helping providers from many different backgrounds become more confident in their abilities to support children's learning and development.** On average, a comparison of participants' responses before and after the training suggested increases in their perceived confidence in supporting children's development and learning in various domains. Examples include being able to respond to children's verbal and non-verbal cues, documenting the ways in which children learn, and being aware of *goodness of fit* between one's own temperament and the temperaments of individual children.

- **Participants' beliefs about child development and learning changed in a positive direction.** A comparison of participants' responses before and after the training suggested a shift in participants' thinking about children's development and learning; on average, participants' beliefs became more aligned with MITM principles.

- **On average, participants' knowledge of how to apply MITM principles to their everyday work with children did not change significantly from before to after the training.** There are several possible explanations for this finding related to data collection

and analysis methods. However, it is also possible that while the training may be successful in increasing participants' perceived knowledge and confidence and in shifting their thinking about young children's development and learning, without ongoing mentoring, these positive effects may not be likely to carry over into their everyday work with children and families. While some participants may have received ongoing mentoring based on what they learned in MITM from their directors or facilitators, many others likely did not receive such mentoring, as this was not an institutionalized part of the training model.

- **The majority of participants found the MITM learning modules to be very useful and were very satisfied with the training overall.** The majority also said that the information presented was very closely related to their work with children and that they would be very likely to put their new knowledge into practice.

- **While most participants had positive experiences with the MITM learning modules, there were some differences in how the modules were received based on participants' experience in the field and educational backgrounds.** Participants with less experience in the early care and education field found the training to be more useful than participants with more experience. Family child care providers were also more satisfied with the training than center-based providers. Finally, participants who held a degree felt that the training related better to their work with children than participants who did not hold a degree.

- **The majority of facilitators reported that they were comfortable and successful in presenting the MITM material, and that participants were very engaged with the material.**
    - Participants found the training to be more useful overall when facilitators had more years of experience as facilitators.
    - Facilitators who had more experience were more comfortable presenting the material.

Implications for Future Implementations of MITM

Future implementations of MITM should consider…

- Using a train-the-trainer model with diverse groups of family child care and center-based providers.

- Building in a mentoring or coaching component—both for facilitators and participants.

- Emphasizing self and shared reflective practices in order to help participants think more deeply about how their beliefs about child development and learning may influence their work with young children and families and vice versa.

- Pairing more experienced facilitators with less experienced facilitators.

In addition…

- MITM seems to be successful in its efforts to link the content of the modules to participants' everyday work with children and families. Facilitators should continue to encourage participants to make these connections to their work.

- Future facilitators of MITM should take steps to ensure that the content and presentation of the material are relevant and appropriate for participants with varying levels of experience and education. Mentoring, peer supervision, and other opportunities to engage in reflective practices with other MITM facilitators may help facilitators learn effective ways to tailor their presentation of the MITM curriculum to diverse audiences.

Recommendations for Future Evaluations of MITM

- Evaluation should be included in the planning of future implementations of MITM in order to help facilitate the data collection process.

- Future evaluations should make translated forms available to participants whose first language is not English.

- Survey questions need to be reviewed and revised, especially on the registration form, in order for all data to be considered reliable in future implementations and evaluations of MITM.

- More work is needed on the design, administration, scoring, and analysis of the *Scenarios Survey*, an instrument that measures participants' knowledge of how to apply MITM principles to their everyday work with children. Such revisions would likely make results more meaningful.

- Future larger scale evaluations should include classroom observations to examine whether MITM content is actually influencing providers' practice with children.

- Future evaluations should include a comparison group in order to determine whether the evaluation is truly affecting participants' knowledge, confidence, beliefs, and practice.

Conclusions

Overall, the results of this evaluation illustrate that MITM participants' perceived knowledge, confidence, and beliefs about child development and learning changed in positive ways, and that both family child care and center providers had positive experiences with the learning modules. These results were largely consistent across all participants, showing that the training seemed to be effective for participants with a wide variety of backgrounds and experiences. The findings from this evaluation build on the results of prior evaluations of MITM and provide further evidence in support of the potential for a train-the-trainer model to be implemented and received successfully by a diverse group of early childhood professionals. This evaluation also provides an important next step in helping us gain a better understanding of the ways in which MITM may ultimately influence the everyday experiences of early childhood professionals, young children, and families.

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Background

Research Context

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; National Research Council and Institute of Medicine, 2000). We have established that young children are not passive recipients of knowledge and experiences, but rather active participants in their own development (National Research Council and Institute of Medicine, 2000; Piaget, 1952). We now understand that children learn best when they are interested, curious, and emotionally invested in what they are learning. 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 play a salient role in children's development (Howes, 1999; National Research Council and Institute of Medicine, 2000).

More specifically, infants and very young children rely on their relationships with significant adults to support their emotional well-being, intellectual curiosity, language development, and relationships with peers. Recent research has expanded on 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 provides a foundation for children's success in school. In contrast, a pattern of problematic relationships and exchanges may lead to difficulties in children's learning and self-regulation.

All of these discoveries have had important implications for early care and education. Because young children are spending more time in child care (U.S. Department of Education, 2006), early childhood educators today play particularly important roles in children's lives. Ongoing professional development efforts, like the Mind in the Making Learning Modules for Early Childhood Teachers™ (MITM), 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; Barnett, 2004; Espinosa, 2002; Goldstein, Hamm & Schumacher, 2007; Wolfe, 1994).

Mind in the Making Overview

The Mind in the Making Learning Modules for Early Childhood Teachers™ (MITM), developed by the Families and Work Institute in 2004, is a 12-module facilitated learning curriculum and pedagogical method that helps bridge research and practice in early care and education. Using research on child 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. The modules are designed to help teachers learn about seminal research on how young children learn and develop and apply this research to their practice, while emphasizing the importance of relationships in young children's learning and development.

During each module, videos featuring well-known researchers and educators are shown and participants complete activities, 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 and Literacy Skills to Create Meaning in 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, MITM has been implemented in nine states (Pennsylvania, New Mexico, Arizona, New Jersey, Massachusetts, Florida, Illinois, North Carolina, and Oklahoma), and will be implemented in one additional state, West Virginia, in 2009.

Evaluation Background of MITM

While MITM is being implemented across the country, no large-scale evaluation efforts of MITM have taken place on a national level. However, several evaluations of MITM have been conducted at the state level. For example, in Pennsylvania, the Office of Child Development at the University of Pittsburgh conducted a study to examine directors' and teachers' experiences with MITM 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[2] in their classrooms.
- All centers that were observed improved in overall quality. Teachers made improvements to classroom quality by 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).

Over the past couple of years, Diana Abel, Director of the Early Childhood and Human Development program at Rio Salado College in Tempe, Arizona has been working with a team to plan and conduct an evaluation of MITM using a multi-methods approach. As of July 2007, the evaluation team planned to use interviews, observations, focus groups, and knowledge assessment questionnaires to assess participants' satisfaction, change in knowledge, and

[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).

[2] While the Families and Work Institute does not use the word "training" in reference to MITM, for easier reading and consistency with the language used in the larger ECE field, the word "training" is used periodically throughout this report to refer to the MITM learning modules.

implementation of MITM in their work (D. Abel, personal communication, July 16, 2007). Over the past year, the learning modules have been rolled out and participants have completed the knowledge assessment questionnaire. Data have been collected, but not yet analyzed as of August 2009 (D. Abel, personal communication, August 25, 2009). Results, when they are available, 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.

Finally, in the winter of 2007, the Harvard Achievement Support Initiative (HASI) began delivering MITM to three cohorts of family child care providers in the Boston area. With the cooperation of HASI, Connected Beginnings Training Institute (CB) conducted a pilot evaluation of one cohort that received training from November 2007 to March 2008. The primary findings from the pilot evaluation (Swartz & Zimmerman, 2008) were as follows:

- Participants had very positive experiences with MITM.
- Participants said they gained knowledge from participating in MITM, which they could apply to their work with children and families.
- Participants' perceived knowledge of how children learn and develop increased.
- Participants' perceived confidence in their skills and abilities in supporting children's learning and development increased.
- Survey instruments were deemed easy to use, of reasonable length, and reliable.

The present evaluation built on these results, by adapting and using the measures that were piloted, and is described in more detail in the following section.

Present Evaluation

Catholic Charities is a large non-profit Boston-based social service provider that offers 140 programs across Massachusetts, including child care services. In the spring of 2008, Catholic Charities Child Care Division trained 23 MITM facilitators from nine program sites, including program directors, assistant directors, education coordinators, family child care home coordinators, and two lead teachers. In the fall of 2008, these facilitators began teaching MITM to nine cohorts of early childhood teachers[3] from center-based and family child care programs affiliated with the agency. The modules began in September of 2008 and were completed in May of 2009. With the cooperation of the United Way of Massachusetts Bay and Merrimack Valley (UWMB&MV) and Catholic Charities, Connected Beginnings Training Institute conducted an evaluation of MITM as it was implemented with these nine cohorts.

Overview of Report

The purpose of this report is to describe the evaluation. First, we describe the evaluation design and evaluation questions. We then describe the evaluation methods including participant characteristics, data collection procedures, and survey instruments. Next, we describe the evaluation findings. Finally, we summarize results, highlight their implications for the implementation of MITM, and offer recommendations for future evaluation efforts.

[3] The terms "teacher" and "provider" are used interchangeably throughout this report to refer to individuals who care for and teach young children in early care and education settings.

Evaluation Design and Questions

The MA MITM Catholic Charities Evaluation had a pre-post without comparison group design. Participants were given a battery of survey measures both before and after participating in MITM. Facilitators were also asked to complete a survey after the training to capture their perspectives of how participants experienced the training and how comfortable facilitators were in presenting the material. Evaluation questions were as follows:

1. To what extent does MITM increase participants':
    a. Perceived knowledge of how children learn and develop?
    b. Perceived confidence in their abilities to support children's learning and development?
    c. Knowledge of how to apply MITM principles to their everyday work with children?

2. To what extent does MITM influence participants' beliefs about how children learn and develop?

3. How do participants experience MITM?

Because the evaluation had a pre-post without comparison group design, there was no comparison (i.e., control) group. Therefore, it is not possible to directly attribute the findings to participation in MITM. However, we were able to examine changes in participants' confidence, knowledge, and beliefs in relation to demographic characteristics (e.g., experience level, educational background) as well as facilitators' experience and comfort with presenting the material. These findings will be discussed in the Results section. The following section describes the implementation of MITM, the group of early childhood professionals who participated in the evaluation, the survey instruments that they completed, and the procedures that were used to collect the survey data.

Evaluation Methods

MITM Learning Module Implementation

MITM was implemented with nine cohorts of early childhood professionals in the greater Boston area. These cohorts consisted of providers from both center- and family-based child care settings affiliated with Catholic Charities. Six cohorts had a mix of family child care and center providers. Three cohorts consisted of center-based providers only. Cohorts ranged in size from 16 to 29 participants, with an average size of approximately 18 participants.

The training took place on-site at the Catholic Charities child care centers and were facilitated by 19 leadership staff members at the centers. While facilitators were not asked to specify the type of trainings that they had facilitated in the past, on average, they had 6.84 years of experience facilitating trainings (range 0 – 30 years). Twelve (63.2%) had facilitated trainings in the past, while 7 (36.8%) had not. MITM took place on Saturdays and weekday evenings from September 2008 to May 2009.

Participant Characteristics

A total of 194 providers participated in MITM. Overall, 163 providers participated in the evaluation. Thirty-seven providers participated before the training (Time 1) only, 6 participated after the training (Time 2) only, and 120 providers participated both before and after the training. Only providers who participated at both time points were included in the majority of the analyses for this report.[4,5] Of the 120 providers who participated at both time points, 34.2% worked in family-based child care programs ($N = 41$) and 62.5% worked in child care centers ($N = 75$). One provider indicated that she worked in both a family- and center-based child care setting. Three providers did not respond to the question.

Attendance

The number of modules that evaluation participants completed ranged from 8 to 12 with a mean of 11.7 ($SD = .68$). The majority of participants (80.0%) completed all 12 modules ($N = 96$). Fourteen participants attended 11 modules (11.7%), and 6 participants attended 10 modules (5.0%). Of the remaining participants, one participant attended eight modules, and one attended nine. We did not have attendance data for two of the participants.

In order to earn continuing education credits, participants were required to attend all module sessions. In cases where participants were unable to attend a module with their home cohort (the cohort where participant began MITM training), they were permitted to make up this module with a different cohort. Ninety percent of participants attended 10 or more modules with their home cohort, and the majority (60.8%) completed all 12 modules with their home cohort ($N = 73$).

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[4] The six participants who participated only at Time 2 were included in the analysis for Research Question #3.

[5] No significant statistical differences were found between the group that participated at Time 1 only and the group that participated at both time points based on years of experience in the early care and education field, educational background, job tenure, age, language, or race/ethnicity. These groups also did not differ in their pre-training scores for knowledge, confidence, or beliefs about child development and learning.

We found only two differences between the group that participated at Time 1 only and the group that participated at both time points. First, curiously, there was a bit of a difference in the groups based on gender. The vast majority of the participants were women and there were only four men who participated in the evaluation. Of these four, three participated only at Time 1, but not at Time 2. One of these men only participated in 3 modules, however the other two participated in 10 and 12 modules. It is not clear why they did not complete the evaluation forms at Time 2. Second, the two groups differed on the number of modules attended. Not surprisingly, providers who participated in the evaluation only at Time 1 attended significantly fewer trainings ($M = 9.67$) than participants who participated at both time points ($M = 11.72$) ($t = 6.39$, $p < .001$).

One more curious finding is worth mentioning. Over half (51%) of the participants who dropped out of the evaluation (i.e., completed forms at Time 1, but not at Time 2) came from two cohorts. One cohort lost half of its sample; participation in the evaluation went from 19 at Time 1 to 9 at Time 2. The other lost about one-third; participation dropped from 28 to 19. We have ruled out that this attrition was caused by poor attendance, as attendance was high throughout the training for those providers in these cohorts who participated in the evaluation at Time 1 only. In addition, there did not seem to be any language or other differences that would have made it difficult for participants to complete the forms at Time 2. It is possible that the attrition rate had to do with inconsistencies in the data collection procedures (see Evaluation Methods section for more details).

Age, Gender, Race, and Language

Participants ranged in age from 21 to 68 years old with a mean age of 40.8 years (*SD* = 12.9). All participants but one were female. The breakdown of participants' race/ethnicity is shown in Table 2. As shown, the largest group of participants (47.5%) was White, followed by Hispanic participants who made up approximately one-fifth of the group (19.2%).

Table 2. Participants by Race/Ethnicity

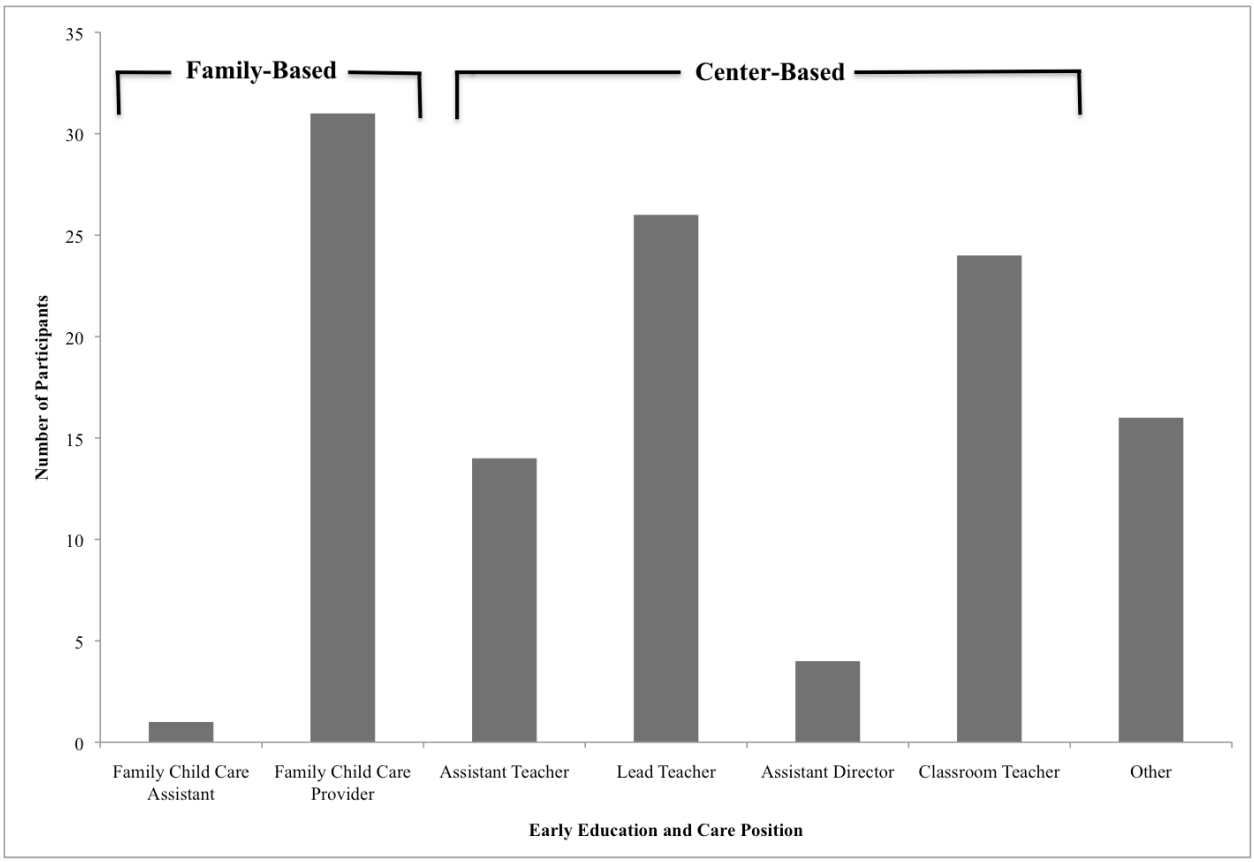
Race/Ethnicity	Percentage (Frequency)
White	47.5% (57)
Hispanic	19.2% (23)
Black or African American	14.2% (17)
Asian	2.5% (3)
American Indian or Alaska Native	0.8% (1)
Multi/Bi-Racial	0.8% (1)
Other	4.2% (5)
Missing	10.8% (13)

Participants were asked to list all languages that they spoke fluently. Of the 116 participants who answered the question, 98 (84.5%) indicated that they were fluent in English, and 21 (18.1%) indicated they were fluent in Spanish. Twenty-seven (23.3%) of the participants indicated they spoke another language fluently with French Creole being the most commonly mentioned (*N* = 11). Examples of other languages spoken included Arabic, Chinese, French, and Portuguese.

Experience in Field

Participants were asked to indicate how long they had been working in the early care and education field and how long they had been working in their current positions. Participants' years of experience ranged from less than 1 year to 41 years with a mean of 11.6 years (*SD* = 8.8). Participants had been working in their current early education and care position for less than 1 year to 33.5 years with a mean of 6.7 years (*SD* = 6.9). The breakdown of early education and care positions held in both family-based and center-based child care programs is shown in Figure 1. Of the family-based providers who reported their positions (*N* = 32), almost all identified themselves as Family Child Care providers (*N* = 31). Of the center-based providers who reported their positions (*N* = 70), most (*N* = 26) were Lead Teachers or Classroom Teachers (*N* = 24). Sixteen participants held other positions such as Administrator, Case Manager, Family Child Care Coordinator, Receptionist, and Social Worker.

Figure 1. Participants' Current Early Education and Care Positions.

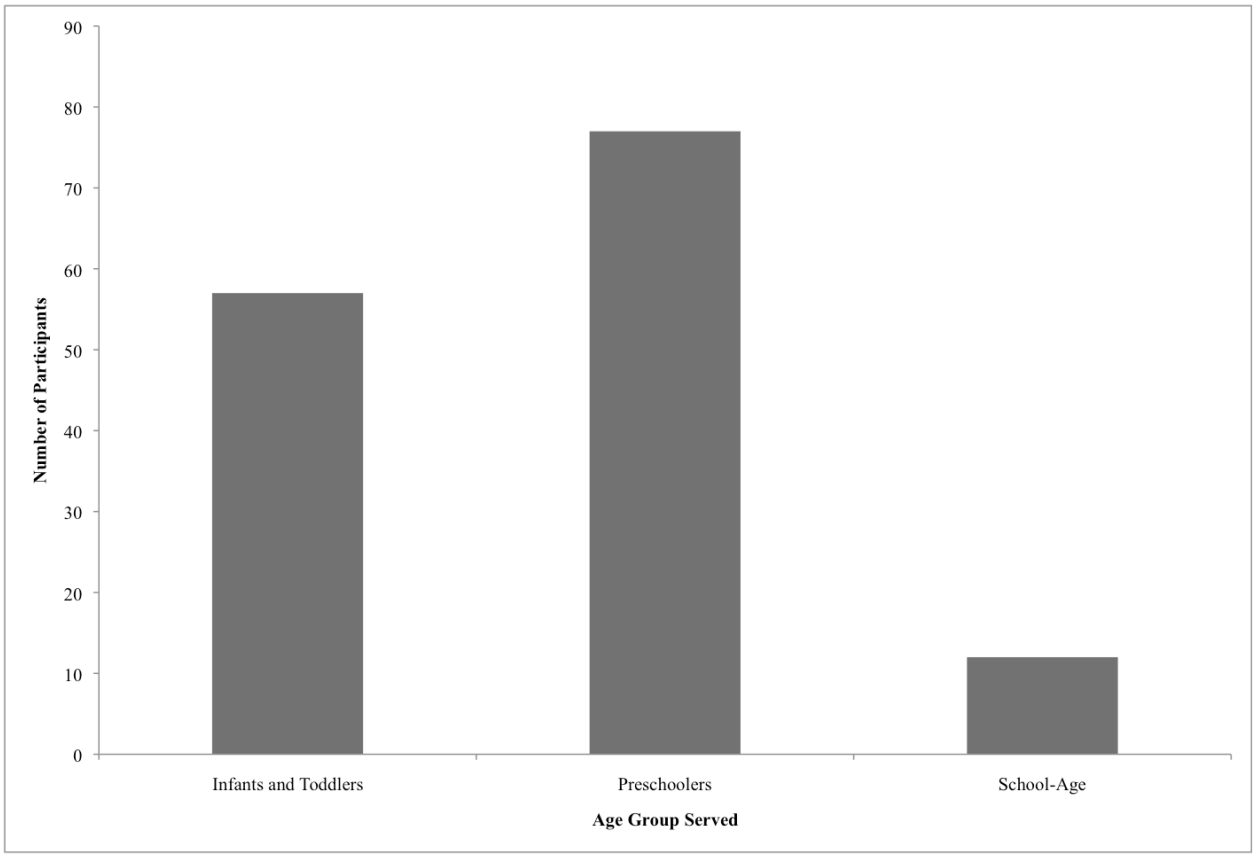


Participants served anywhere from 0 to 102 children with a mean of approximately 13 children (*SD* = 12.4). This large range is due to the fact that some participants held positions that did not require them to interact directly with children (e.g., receptionists), while other positions involved interactions with many children on a day-to-day basis (e.g., program directors). Participants also reported the hours they spent on a weekly basis with children, which ranged from 1.5 to 55 hours with a mean of 32.6 hours per week (*SD* = 14.5).

Age Range of Children Served by Participants

Participants were asked to indicate the age ranges of the children they served in their direct care. Responses were grouped into three categories: infants and toddlers (birth to 2 years, 11 months), preschoolers (3 – 5 years old), and/or school-age (6 years and older). The breakdown of the age ranges of children is shown in Figure 2. Of the 103 participants who answered the question, the majority (74.8%, *N* = 77) had preschoolers in their direct care. Over half (55.3%, *N* =57) served infants and toddlers. Twelve participants (11.7%) indicated that they provided direct care for school-age children. Most participants served multiple age groups.

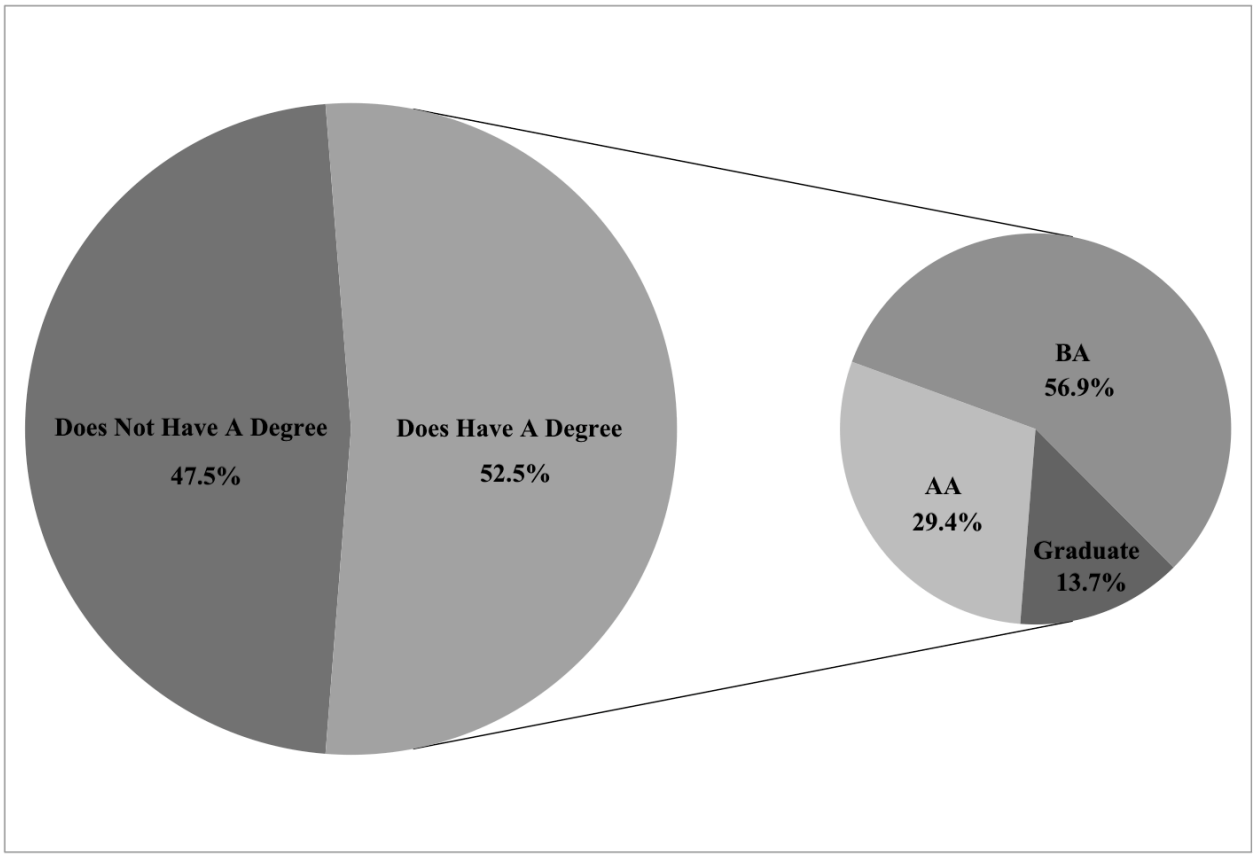
Figure 2. Participants by Ages of Children Currently Served.



Education and Training Background

The breakdown of participants' educational background is shown in Figure 3. Of the 101 participants who answered the question about whether they had a college degree, slightly over half (52.5%, *N* = 53), had a college degree. Of those participants that did have a college degree, the majority (56.9%, *N* = 29), had Bachelor's degrees. Approximately one-third of the group (29.4%, *N* = 15) held Associate's degrees. Only 13.7% (*N* = 7) held graduate degrees. Two participants did not specify the type of degree held. Nearly half of participants (*N* = 28) who had a college degree majored in early childhood education.

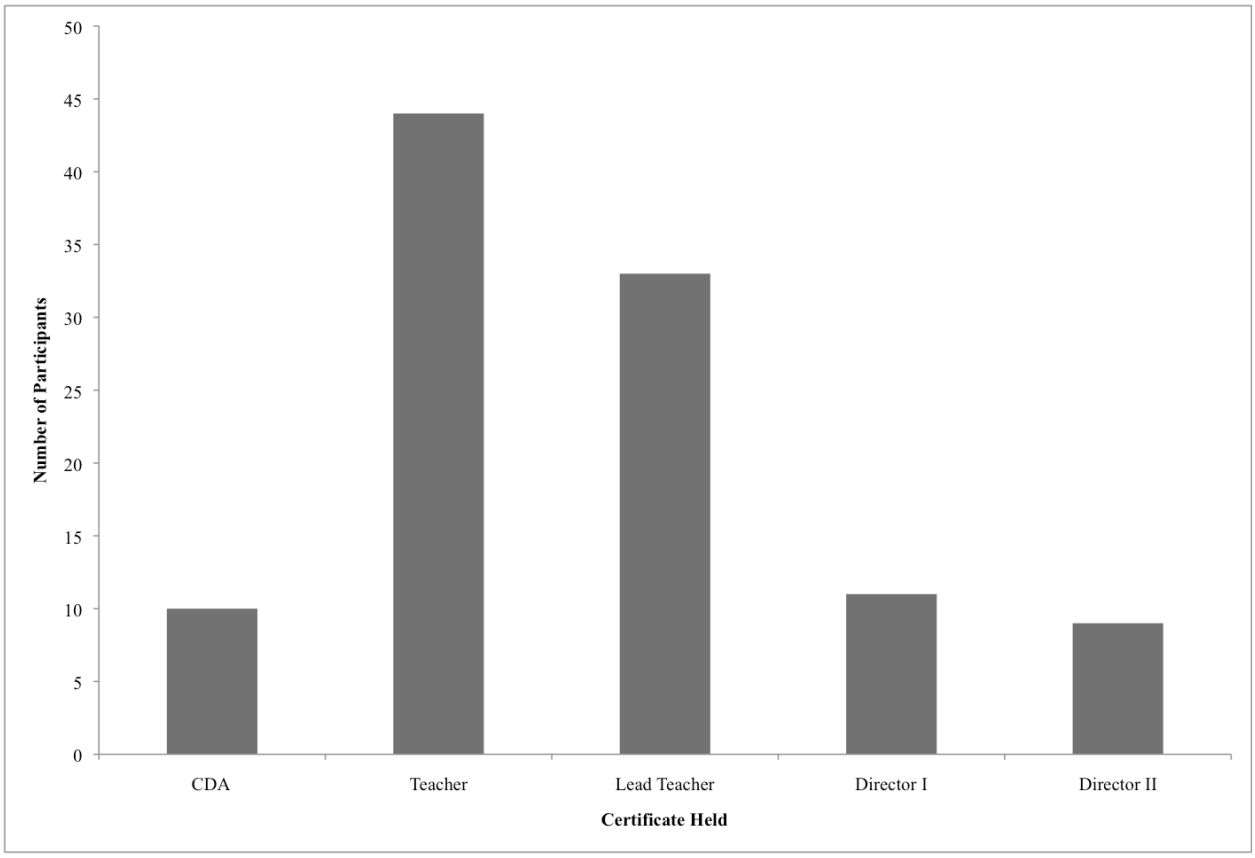
Figure 3. Participants by Education and Degree Type.



We also asked participants to indicate: (a) whether they had ever taken a college course, and (b) whether they were currently working toward a college degree. Of the group who participated in the evaluation (*N* = 120), 89 participants (74.2%) indicated that they were currently taking a college course or had taken a college course in the past. Of the 100 participants who answered the question about whether or not they were currently working on a degree, 41 (41.0%) indicated that they were working toward a degree. Of these, 14 said that they were working toward an Associates degree, 18 said they were working toward a bachelors' degree, and 1 was working toward a graduate degree. (Eight did not specify the type of degree toward which they were working.) Thirty-one participants indicated that they were working toward a degree in early childhood education.

Participants also reported on the early childhood training certificates they held. The breakdown of participants' certifications is shown in Figure 4. Of those participants who held certifications, 44 were certified as Teachers and 33 as Lead Teachers. Participants were also asked to report on prior training experiences. The data for these questions were sparse and unreliable. However, of particular interest to this evaluation was prior participation in the Touchpoints training.[6] Of the entire evaluation group, only 13 participants had previously participated in Touchpoints training.

Figure 4. Participants by Training Background.



Summary of Participant Characteristics

Overall, the group of providers that participated in MITM was a diverse one. Participants spoke a variety of languages and almost half of the group identified themselves as minorities. They also came from a range of educational backgrounds and varied in their experience in the early childhood education field.

[6] The Touchpoints training program is built upon an approach that emphasizes the importance of building collaborative relationships between parents and providers in order to support children's early development. For more information about Touchpoints, please go to http://www.touchpoints.org/index.html. Participation in Touchpoints was particularly relevant to this evaluation for two reasons: (1) because Catholic Charities had offered it to its staff three years prior and (2) because of its emphasis on relationships-based practice, which is closely related to the content of MITM.

Data Collection Procedures

Because of the timeframe in which Connected Beginnings Training Institute became involved in the evaluation, we were unable to collect data from all of the cohorts before Module 1 took place. A CB evaluator contacted all facilitators and arranged to drop off evaluation packets in early October. She dropped off packets with instructions for how participants were to complete the forms and arranged to pick them up 7 to 10 days later. In most cases, this was possible, however, some cohorts took additional time to fill out the forms.

At Time 1 (pre-training or, in some cases, before the second module), 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 (b) complete the enclosed set of forms (if they chose to participate in the evaluation), place them back in the folder, and return the folders to the facilitators. Facilitators were instructed to remind the participants that their answers would be kept confidential and would only be seen by the CB evaluation team. Participants completed a second packet of surveys immediately following the completion of the learning modules (Time 2). Facilitators were asked to set aside a half-hour at the end of the last module for participants to do so. In most cases, a CB evaluator was able to attend the last module to distribute and collect the forms. In three cohorts, the forms were given to facilitators with instructions on how participants should complete the forms, because a CB evaluator could not attend. Several participants requested extra time (because English was not their first language) and ended up taking forms home to complete. These participants sent their forms back to the centers and the evaluator was able to pick them up with the rest of the completed forms. Facilitators were also asked to complete a survey directly following Module 12.

Instruments[7]

Six survey instruments were used in the present evaluation. These surveys included: the *MA MITM Registration Form*, *Knowledge and Confidence Survey*, *Beliefs about Child Development and Learning Survey*, *Scenarios Survey*, *Post-Training Survey*, and *Facilitator Survey*. Table 3 summarizes the constructs measured and the associated instruments and times they were administered. Each instrument is described in more detail following the table.

[7] Connected Beginnings Training Institute would be happy to share more information about these instruments with interested parties. Please contact Mallary I. Swartz at mswartz@connectedbeginnings.org for further information.

Table 3. Instruments Used for Data Collection

Construct	Instrument	Time Point
Provider Background (Demographics, Education, Experience)	*MA MITM Registration Form*	Time 1[a]
Knowledge of how children learn and develop	*Knowledge and Confidence Survey*	Time 1, Time 2
Confidence in abilities to support children's learning and development	*Knowledge and Confidence Survey*	Time 1, Time 2
Knowledge of how to apply MITM principles to everyday work with children	*Scenarios Survey*	Time 1, Time 2
Beliefs about how children learn and develop	*Beliefs about Child Development and Learning Survey*	Time 1, Time 2
Participants' experiences with MITM (e.g., satisfaction, usefulness of MITM components)	*Post-Training Survey*	Time 2
Facilitators' training experience and perceptions of delivering MITM modules (e.g., comfort, success, etc.)	*Facilitator Survey*	Time 2

Notes:
[a]In three cohorts, participants had already filled out registration forms prior to the Time 1 data collection. Therefore, packets for these participants did not include registration forms.

MA Mind in the Making Registration Form

This measure was developed by CB in collaboration with HASI and UWMB&MV. It included questions regarding participants' demographic characteristics, experience in the field, education and training, and the populations of children and families they serve.

Knowledge and Confidence Survey

The *Knowledge and Confidence Survey* was developed by the evaluation team at CB. It was divided into two sections: Knowledge and Confidence. Questions on both sections were drawn primarily from the MITM facilitator and participant guides (Galinsky, Sprague, O'Donnell, & Dombro, 2006a, 2006b).

Seven 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 knowledge of language development in early childhood? What best describes your current 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).

Ten questions focused on participants' perceived confidence in their abilities to support various aspects of children's development and learning relevant to MITM (e.g., What best describes your current confidence in developing learning activities that engage children by building on their interests? What best describes your current confidence in your ability to help children learn to manage stress?). 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).

Scenarios Survey

The *Scenarios Survey* presented participants with three scenarios typical of child care and asked how they would respond. The scenarios were adapted from the *Knowledge Assessment Questionnaire* scenarios used in the University of Pittsburgh evaluation of MITM (Zajac, et al., 2006). Scenarios revolved around children of different ages (4 months – 3 years) and covered different aspects of children's development and learning (e.g., emotional development, language development).

Beliefs About Child Development and Learning Survey

The *Beliefs about Child Development and Learning Survey* was also developed by the CB evaluation team. Participants were asked to either agree or disagree with various statements about learning and development based on content related to MITM. The survey contained eight items and participants were asked to respond on a Likert scale (1 = strongly disagree, 6 = strongly agree).

Post-Training Survey

After completing MITM, participants were asked to complete the *Post-Training Experiences Survey*. CB evaluators developed the first part of this survey; the second part was adapted from the University of Pittsburgh evaluation's *Single Module Evaluation* form (Zajac et al., 2006). 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.), their familiarity with 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. Participants were also asked to name two things that they learned from MITM that they felt they could apply to their work.

Facilitator Survey

The *Facilitator Survey* was adapted from the *Director Module Log* used in the University of Pittsburgh evaluation of MITM (Zajac et al., 2006). Facilitators were asked to rate their experiences in presenting the modules 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 modules overall. They were also asked to provide information regarding their prior experience as training facilitators.

Results

The evaluation instruments allowed us to collect both quantitative and qualitative data and to analyze it using several different methods. For the quantitative data, we employed several statistical analyses that allowed us to compare participants' responses before and after MITM, and the extent to which changes in their responses varied with regard to their backgrounds and experiences in the field. To analyze the qualitative data from the *Scenarios Survey*, the CB evaluation team developed a coding scheme. This process and the findings from all analyses will be discussed in the following sections.

Evaluation Question 1a: To what extent does MITM increase participants' perceived knowledge of how children learn and develop?

Findings suggest that the MITM modules were effective in helping providers from many different backgrounds enhance their knowledge about 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 ($M = 2.62$, $SD = .65$) to after the training ($M = 3.11$, $SD = .55$), $t(117) = -9.44$, $p = .00$. This finding was consistent across all participants; there were no significant differences based on participants' age, race/ethnicity, fluency in English, education, position, or experience in the field. There were also no differences based on participants' satisfaction with and attendance at the MITM modules (i.e., whether they attended some vs. all of the modules), whether or not they had completed the Touchpoints training, or facilitators' experience, level of comfort, or rating of success in presenting the material.

Evaluation Question 1b: To what extent does MITM increase participants' perceived confidence in their abilities to support children's learning and development?

Findings suggest that the MITM modules were effective in helping providers from many different backgrounds become more confident in their abilities to support 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 ($M = 2.95$, $SD = .51$) to after the training ($M = 3.23$, $SD = .46$), $t(116) = -7.46$, $p = .00$.) As was the case for perceived knowledge, this finding was consistent across all participants. There were no significant differences based on participants' age, race/ethnicity, fluency in English, education, position, or experience in the field. There were also no differences based on participants' satisfaction with and attendance at the MITM modules (i.e., whether they attended some vs. all of the modules), whether or not they had completed the Touchpoints training, or facilitators' experience, level of comfort, or rating of success in presenting the material.

We also compared participants' average knowledge and confidence scores before and after the training. Before the training, participants who had higher perceived knowledge scores also had higher perceived confidence scores ($r = .69$, $p < .01$). This was also the case after the training ($r = .69$, $p < .01$). In addition, we examined the relation between how much participants' knowledge and confidence scores changed from before the training to after the training. Not surprisingly, when participants' perceived knowledge increased, so did their perceived confidence ($r = .51$, $p < .01$).

Evaluation Question 1c: To what extent does MITM increase participants' knowledge of how to apply MITM principles to their everyday work with children?

Based on their responses to the Scenarios Survey, on average, participants' knowledge of how to apply MITM principles to their everyday work with children did not change significantly from before to after the training.

In order to inform our analysis of the qualitative data from the *Scenarios Survey*, we conducted a focus group and follow-up online survey with MITM facilitators. Five facilitators participated in the focus group; four completed the follow-up survey. Based on the data we collected, we came up with a list of "codes" or behavioral themes to use in the data analysis.

Ninety-seven participants responded to all three scenarios at both Time 1 and Time 2. This is the group that was used for the final analysis. Before beginning the official coding process, we worked to finalize codes to be used in the analysis. (For a full list of these codes, see Appendix A.) After coding a practice set of scenario responses together (for examples of coded responses, see Appendix B) we moved on to establish inter-rater reliability on another set of responses. Disagreements were discussed until we reached consensus.[8]

A total score for each scenario was determined by calculating the total number of MITM strategies that were present for each participants' response to that scenario. A total score for the survey was created by adding the totals for each scenario at Time 1 and Time 2. We were then able to compare the number of MITM strategies that participants used at Time 1 to the number they used at Time 2. Based on their responses to the *Scenarios Survey*, on average, participants' knowledge of how to apply MITM principles to their everyday work with children did not change significantly from before to after the training. Table 4 shows a summary of the number of MITM strategies/behavioral themes participants used for each scenario and for the survey overall both before and after the training.

[8] Inter-rater reliability checks were conducted on 20% of the data. Intraclass correlation coefficients for the scenarios ranged from .76 to .87, which is considered very good inter-rater reliability (Landis & Koch, 1977).

Table 4. Summary of MITM Strategies for Scenario Data

	Time point	Minimum	Maximum	Mean	Standard Deviation
Scenario 1	Pre-Training	1	7	3.61	1.47
	Post-Training	0	8	3.47	1.51
Scenario 2	Pre-Training	0	6	2.65	1.27
	Post-Training	1	6	2.59	1.13
Scenario 3	Pre-Training	0	5	1.77	.91
	Post-Training	0	4	1.68	.76
Total *Scenario Survey* Score	Pre-Training	3	15	8.03	2.57
	Post-Training	3	15	7.74	2.40

Evaluation Question 2: To what extent does MITM influence participants' beliefs about how children learn and develop?

Findings suggest that the MITM modules were effective in helping to shift the thinking of providers from many different backgrounds about how children learn and develop.

In order to answer this evaluation question, we averaged participants' responses across all eight items of the *Beliefs about Child Development and Learning Survey*. This resulted in each participant receiving an average score for before the training and after the training. The higher the score, the more aligned their beliefs were with MITM principles. The highest possible score was 6.00 (i.e., beliefs were directly in line with MITM principles), while the lowest possible score was 1.00 (i.e., beliefs were completely opposite of MITM principles).

Before the training, participants' average scores ranged from 4.13 to 6.00. After the training, participants' average scores ranged from 3.63 to 6.00. On average, the extent to which participants' beliefs were in line with MITM principles, increased from before the training (M = 5.42, SD = .48) to after the training (M = 5.54, SD = .52), $t(113) = -3.01$, $p = .00$. This finding was consistent across all participants. There were no significant differences based on participants' age, race/ethnicity, fluency in English, education, position, or experience in the field. There were also no differences based on participants' satisfaction with and attendance at the MITM modules (i.e., whether they attended some vs. all of the modules), whether or not they had completed the Touchpoints training, or facilitators' experience, level of comfort, or rating of success in presenting the material. While the change itself was small in magnitude, it was statistically significant. Therefore, these findings suggest that the MITM modules were effective in helping to shift the thinking of providers from many different backgrounds about how children learn and develop.

We also compared participants' average knowledge, confidence, and beliefs about child development and learning scores before and after the training. Before the training, participants who had higher perceived knowledge scores held beliefs about child development and learning that were more in line with MITM principles ($r = .22$, $p < .05$). This was also the case after the training ($r = .43$, $p < .01$). Participants' perceived confidence scores were also correlated with their beliefs about child development and learning scores after they participated in the training ($r = .29$, $p < .01$).

There were also significant relations between participants' change in beliefs scores and two other variables. First, as participants' beliefs became more in line with MITM, they also changed more in the number of MITM strategies they said they would use in response to the *Scenarios Survey* ($r = .26$, $p < .01$). In other words, as their thinking about child development and learning shifted, so did their knowledge of how to apply MITM principles to their everyday work with children – and in the same direction. When beliefs did not change as much, neither did their *Scenarios Survey* scores. Participants' beliefs also changed less when facilitators were more comfortable presenting the information ($r = -.19$, $p < .05$). While this finding seemed puzzling at first, one possible explanation is that because the facilitators who were teaching MITM were the participants' supervisors, participants may have already had exposure to the content and ideas that the facilitators felt comfortable teaching. Therefore, their beliefs may have already been in line with the material that was presented and may not have had much room to change. In contrast, when facilitators were not as comfortable with the material, participants may not have been exposed to the content in their everyday work, therefore leaving more room for growth and change in their beliefs as a result of the training. This finding is worth further exploration in future evaluations.

Evaluation Question 3: How do participants experience MITM?

Overall, participants had very positive experiences with MITM.

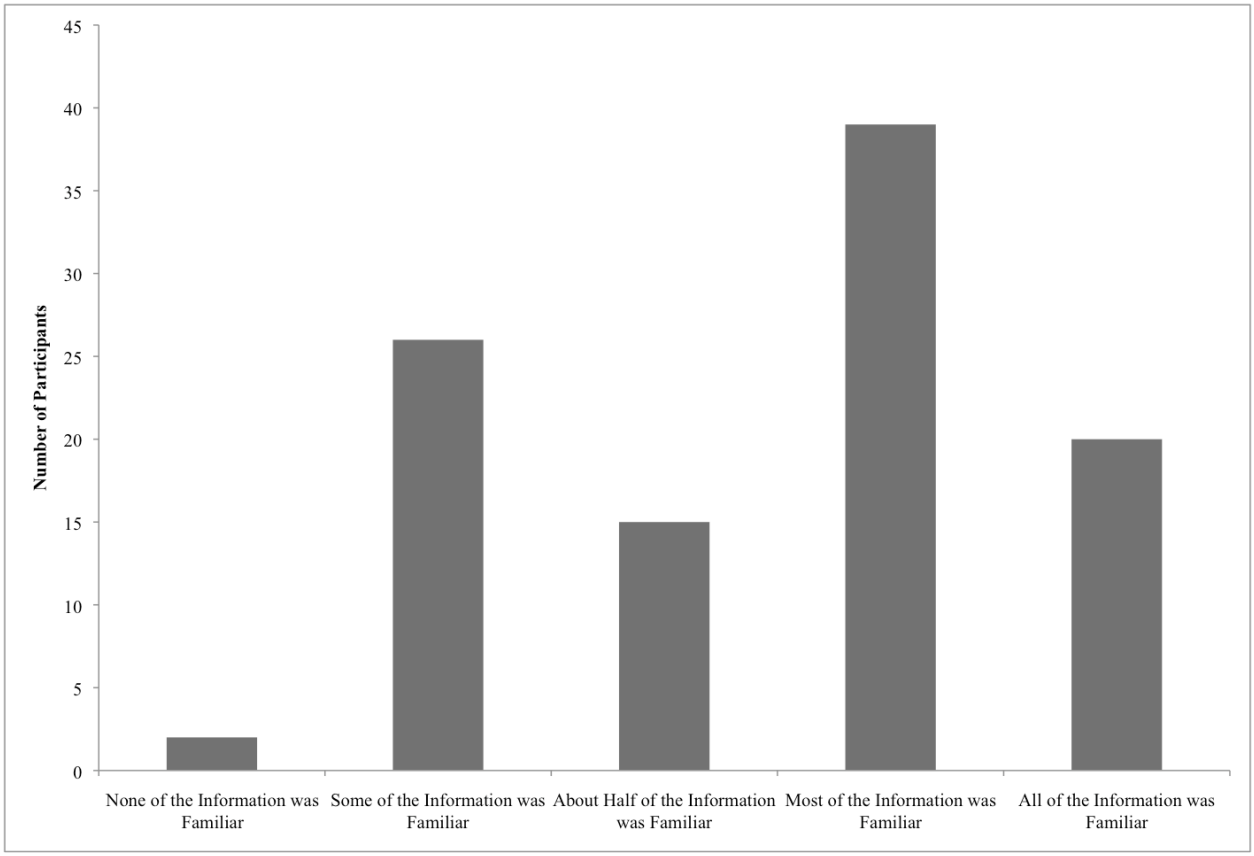
Usefulness of and Satisfaction with Training

Results from the *Post-Training Survey* indicated that participants found most of the components to be very useful and were very satisfied with the training. The majority of participants (over 60%) found many components of the training to be "very useful." In particular they found the interactive activities, learning partner activities (written and spoken), learning table activities (written and spoken), and the videos to be very useful. Fewer participants (slightly under half) found the journal pages (42.1%) and "Moving On" homework activities (46.0%) to be very useful. The majority of participants (over 80%) were "very satisfied" with the organization and content of the training and with the training overall.

Participants' Familiarity with the Information Presented

Participants were also asked to rate their familiarity with the module information before participating in MITM. Answers ranged from *none of the information was familiar* to *all of the information was familiar.* The breakdown of participants' answers is shown in Figure 5. Of the 102 participants who answered this question, the majority (57.8%, N = 59) felt that most or all of the information was familiar to them before attending MITM.

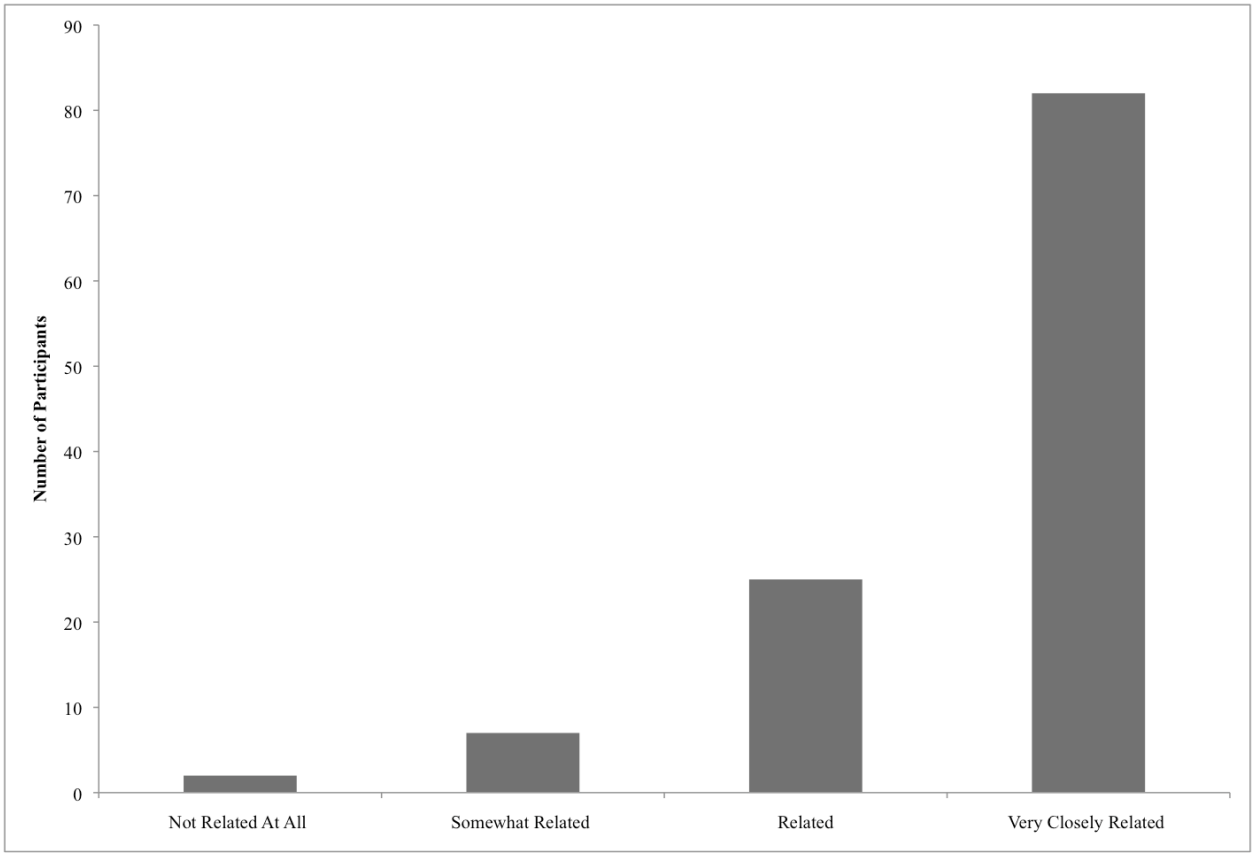
Figure 5. Participants' Familiarity with Information Presented.



Relation of the Information to Participants' Work

Participants were asked to rate how related they felt the MITM information was to their work with children. Answers ranged from *not related at all to my work with children* to *very closely related*. The breakdown of responses is seen in *Figure 6*. Of the 116 participants who answered this question, the majority of participants ($N = 82$; 70.7%) believed that the MITM information they learned was very closely related to their work with children.

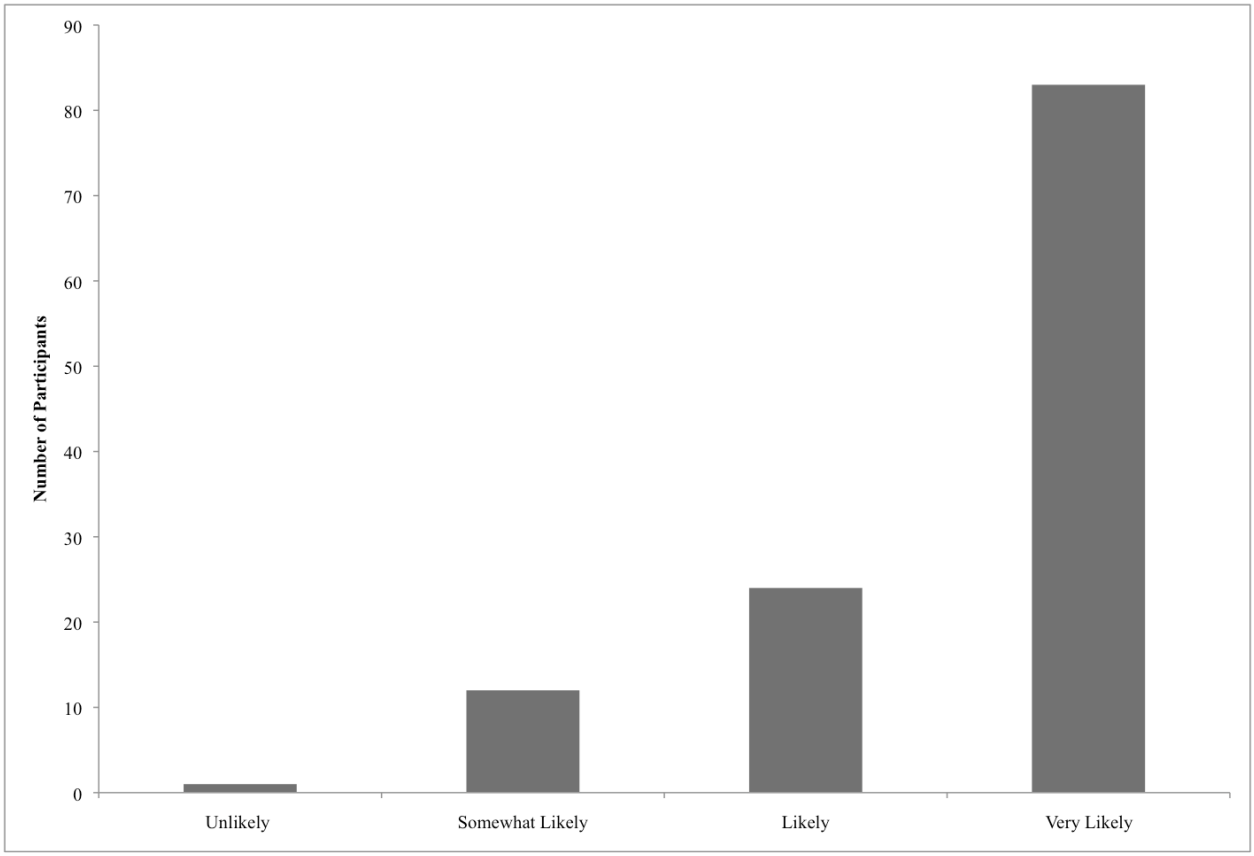
Figure 6. Relation of Information in Modules to Participants' Work with Children.



Likelihood of Putting New Knowledge into Action

Participants were asked to predict their abilities to put the knowledge they learned from the MITM modules into action in their work with children. Answers ranged from *unlikely that I can put this knowledge into action* to *very likely*. The breakdown of responses is seen in Figure 7. Of the 120 participants who answered the question, the majority (N = 83; 69.2%) believed that they would be very likely to put MITM knowledge into action in their work.

Figure 7. Participants' Likelihood of Putting the New Knowledge into Action.



Relations among Participant Perceptions of MITM Modules and Participant Characteristics

We found the following relations among participants' perceptions of the modules:

- Not surprisingly, participants who were more satisfied with the training also found the various components of the training to be more useful ($r = .68$, $p < .01$).
- When participants found the training to be more useful ($r = .23$, $p < .05$), they felt that they would be more likely to put the knowledge they gained into practice.
- When participants were more satisfied with the training ($r = .43$, $p < .01$), they felt that they would be more likely to put the knowledge they gained into practice.
- Participants who felt that the information that was presented related better to their work with children also felt that they would be more likely to put the knowledge they gained from MITM into practice ($r = .45$, $p < .01$).

- Participants were more satisfied with the training when they felt the information related better to their work with children ($r = .29$, $p < .01$).
- Participants who were more familiar with the material presented also felt that the information related better to their work with children ($r = .21$, $p < .05$).

We also ran several analyses to determine whether participants' perceptions of the modules were related to any aspects of their background or experience in the early care and education field, and found the following results:

- Participants with less experience in the field were more satisfied with the training ($r = -.35$, $p < .01$) and found it to be more useful ($r = -.20$, $p < .05$) than participants with more experience.
- Family child care providers were also more satisfied with the training ($M = 4.00$, $SD = .00$) than center-based providers ($M = 3.70$, $SD = .67$), $t(87) = 3.46$, $p < .01$.
- Participants who held a degree felt that the training related better to their work with children ($M = 3.75$, $SD = .56$) than participants who did not hold a degree ($M = 3.43$, $SD = .82$), $t(98) = -2.25$, $p < .05$.

Knowledge Learned in Training

The *Post-Training Experiences Survey* also asked participants 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 eight primary themes. The most frequently mentioned theme was related to the *management and identification of stress in both children and providers*; 36 participants mentioned this theme. A summary of themes and examples are provided in Table 5.

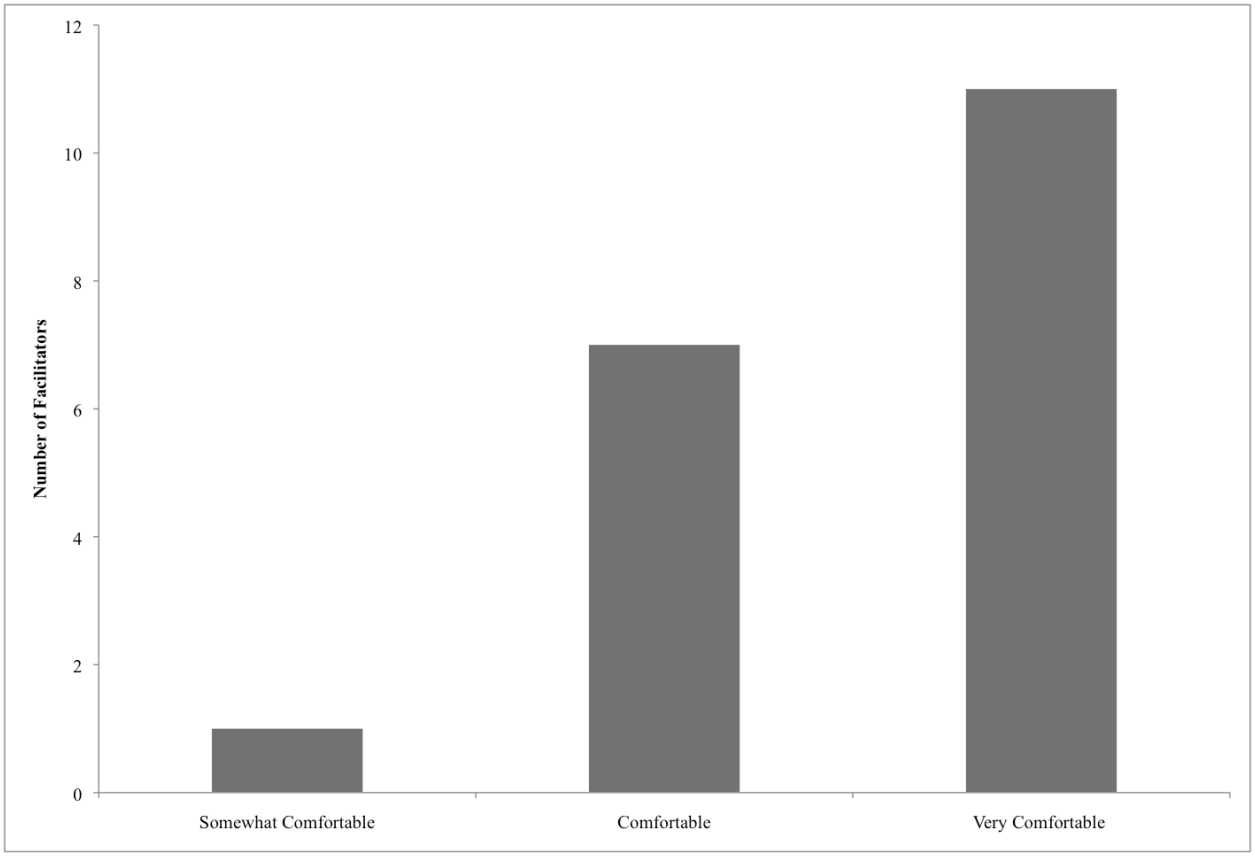
Table 5. Participant Responses to the Question: "What are Two Things that You Learned from the Mind In The Making Training that You Can Apply to Your Work?"

What was Learned	Example	Number of Participants
Management and identification of stress in children and providers	*"Recognize my stress level and how it affects children."*	36
Children's temperament	*"Understanding temperament in children."* *"Temperament of child and teacher and goodness of fit are closely related to how a child is learning."*	23
New ways of teaching and guiding children's learning	*"Take the time to try a different approach if the initial one fails."* *"Allow children freedom to explore situations by guiding them."*	22
Importance of making connections and/or building relationships with children	*"Importance of building quality relationships with all the children in the classroom."*	19
How children learn and/or develop	*"How important the theory of mind is in relation to their learning"* *"Trial and error is one way children learn"*	18
Connection between social, emotional and intellectual learning ("SEI")	*"S.E.I. together - social, emotional, and intellectual learning are inextricably linked."*	16
How to work with other teachers	*"Communicate with other teachers more often."* *"Network with others and other sites."*	11
Communicating and/or building relationships with parents	*"Make connections with parents and how important that is."*	10

Facilitators' Perspectives on the Training

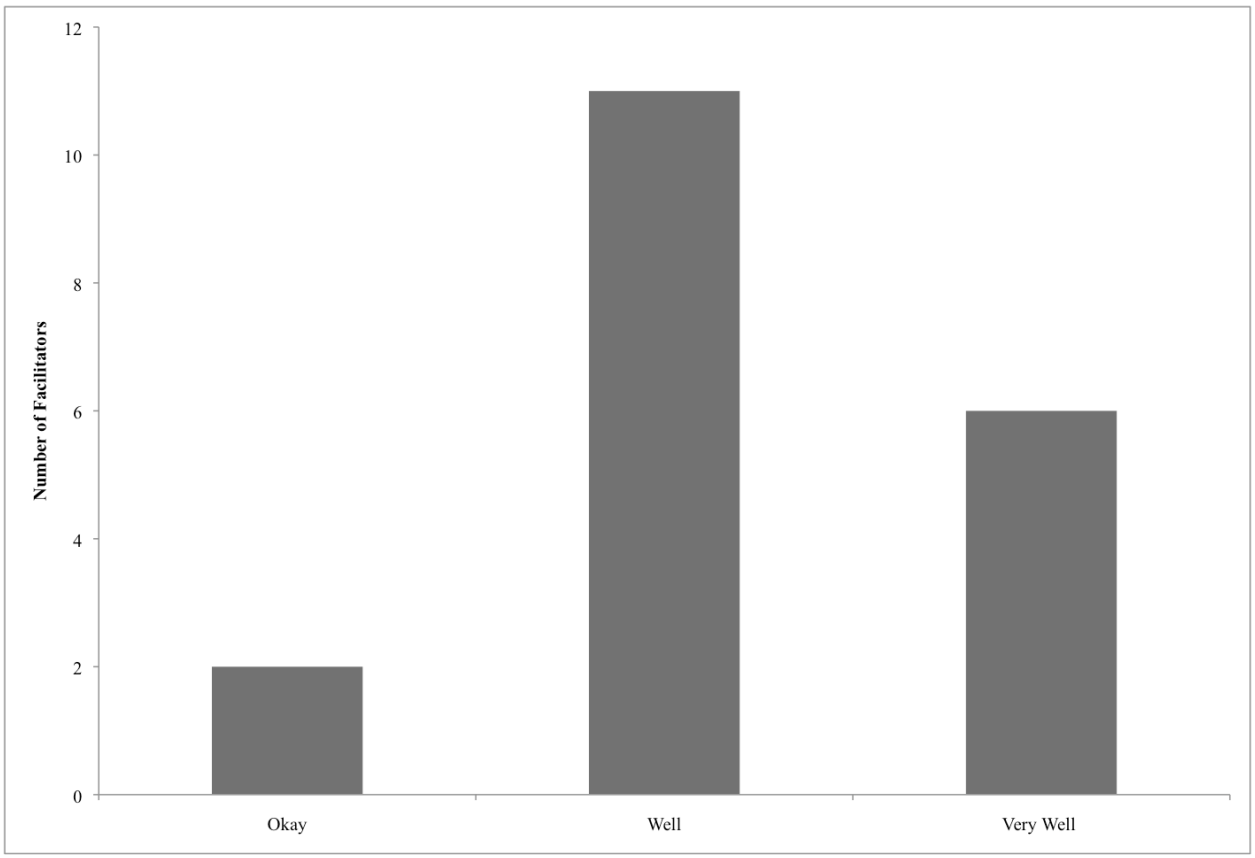
Facilitators' comfort. Facilitators were asked to rate their comfort level in presenting the MITM material to their participant group (N = 19). Results from this question are presented in Figure 8. The majority of the facilitators (N = 11; 57.9%) responded that they were very comfortable presenting the information. No facilitators indicated that they were uncomfortable presenting the material.

Figure 8. Facilitators' Comfort Presenting the Material.



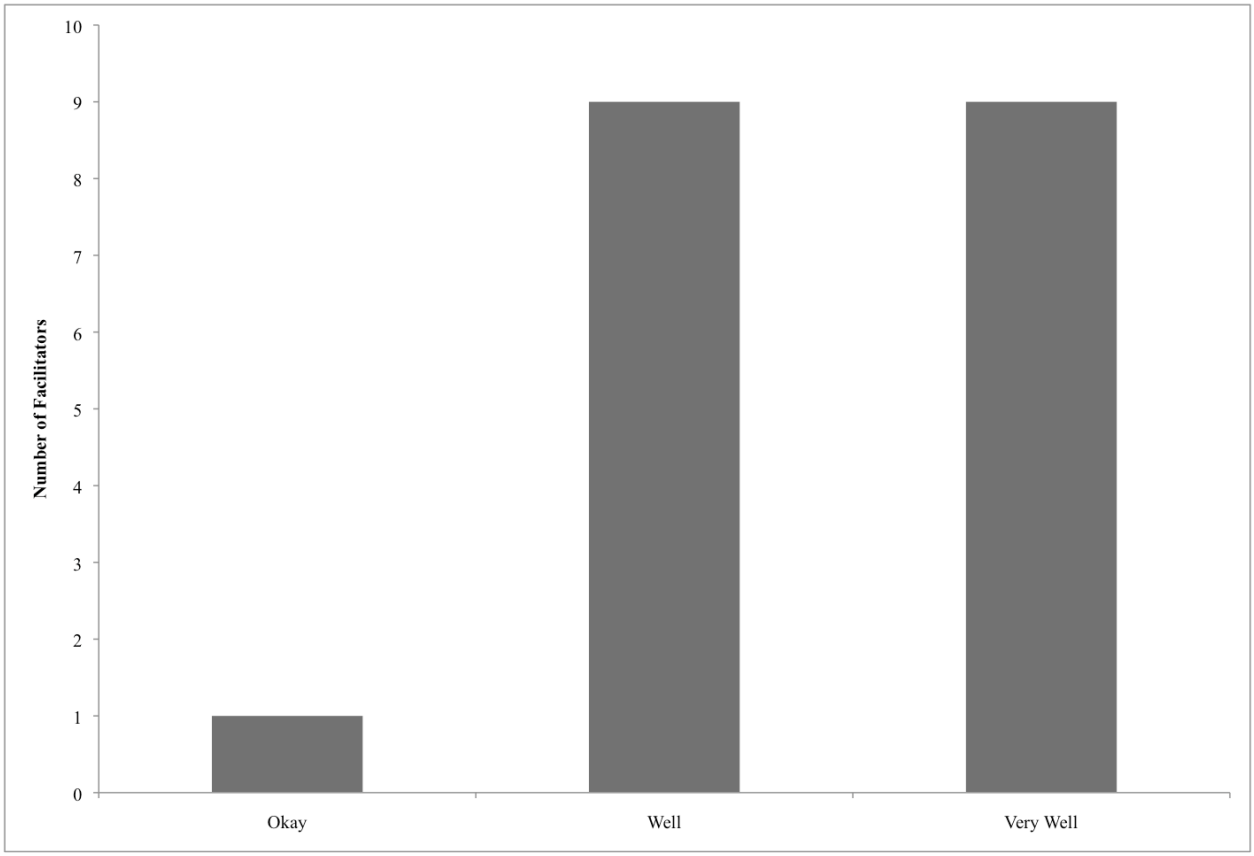
Explaining new terms. Facilitators were asked to rate how well they felt they explained new terms to their participant group. Results from this question are presented in Figure 9. Of the 19 facilitators, the vast majority (N = 17; 89.5%) felt that they explained the new terms well or very well.

Figure 9. Facilitators' Perceptions of Explaining New Terms.



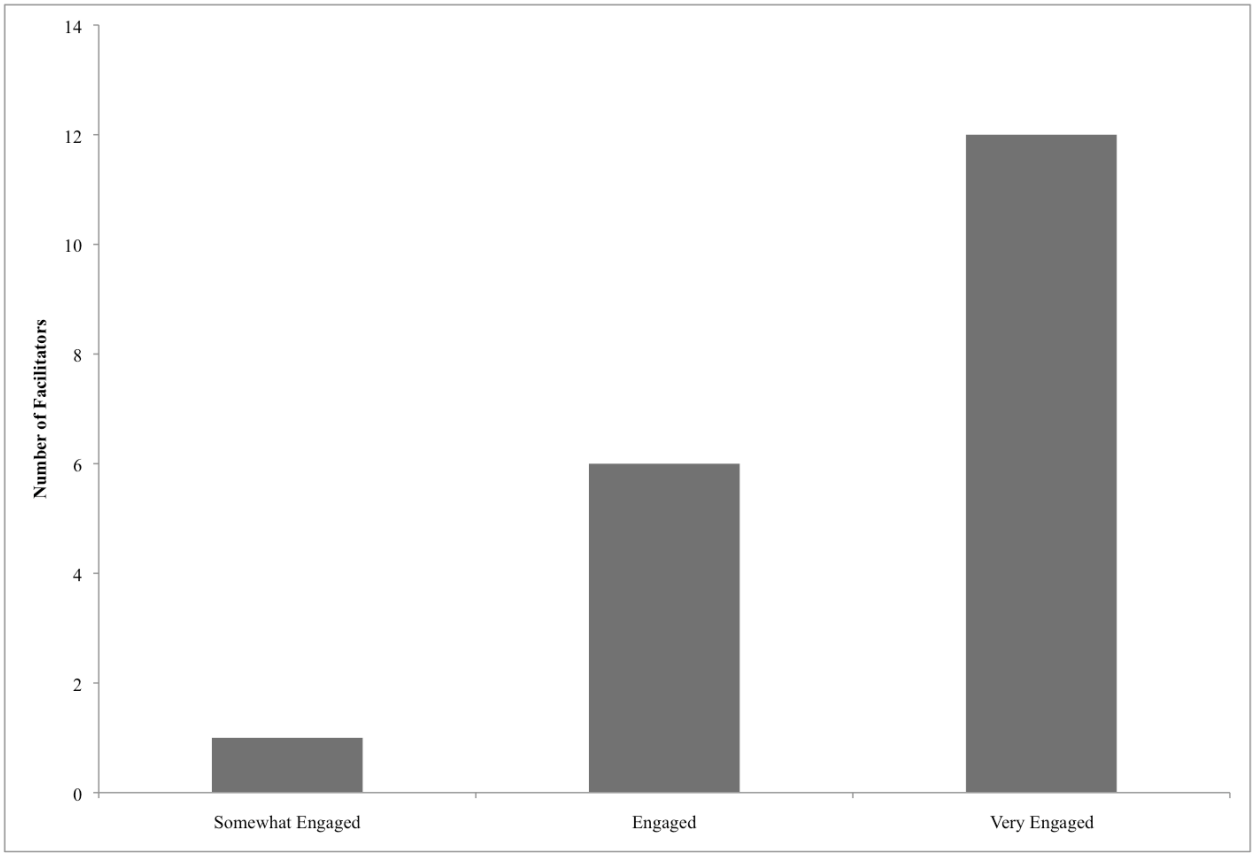
Explaining new concepts. Facilitators were asked to rate how well they felt they explained new concepts to their participant group. Results are shown in Figure 10. Of the 19 facilitators, a total of 18 facilitators (94.8%) responded that they presented new concepts either well or very well.

Figure 10. Facilitators' Perceptions of Explaining New Concepts.



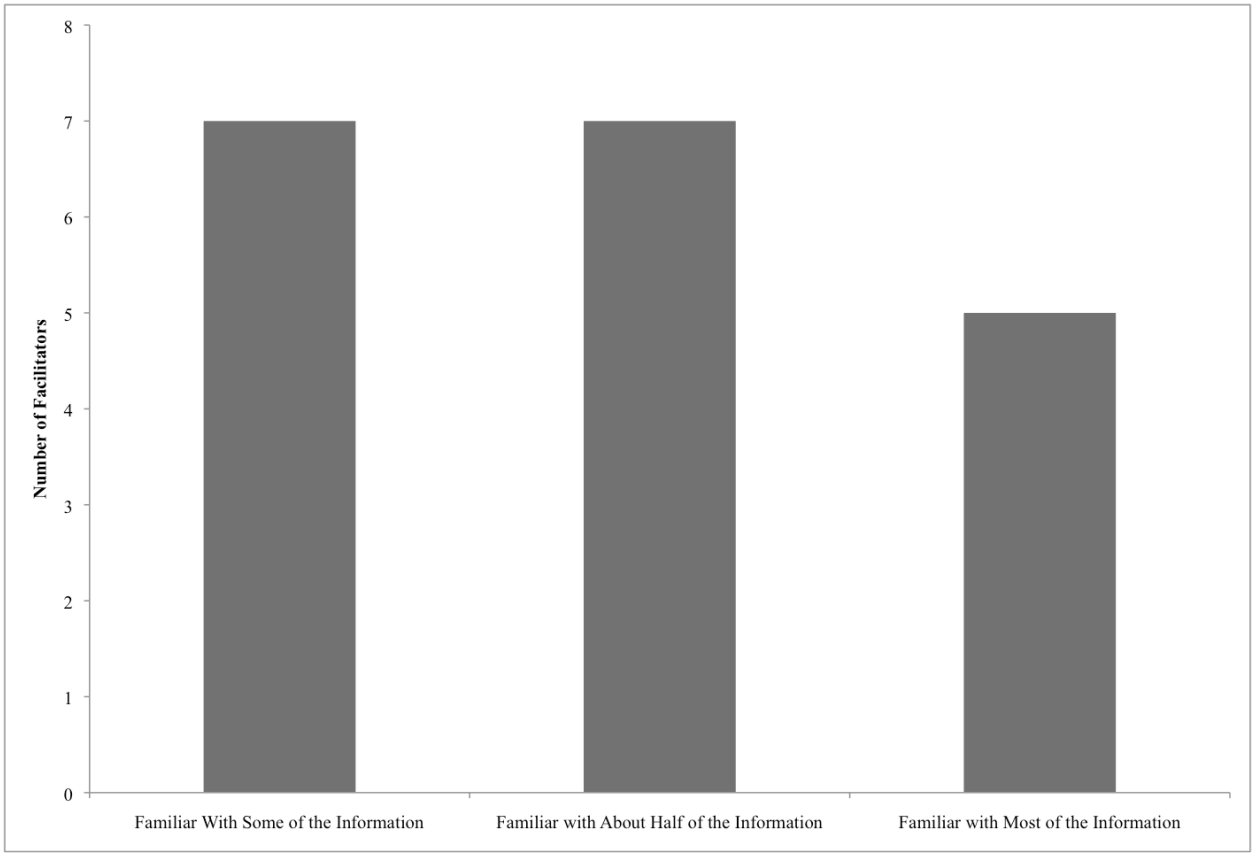
Participant engagement. Facilitators were asked to rate how engaged their participant groups were with the MITM material. Results are presented in Figure 11. The vast majority of facilitators (N = 18; 94.7%) felt that, overall, participants were either engaged or very engaged with the MITM material.

Figure 11. Facilitators' Perceptions of Participants' Engagement with Material.



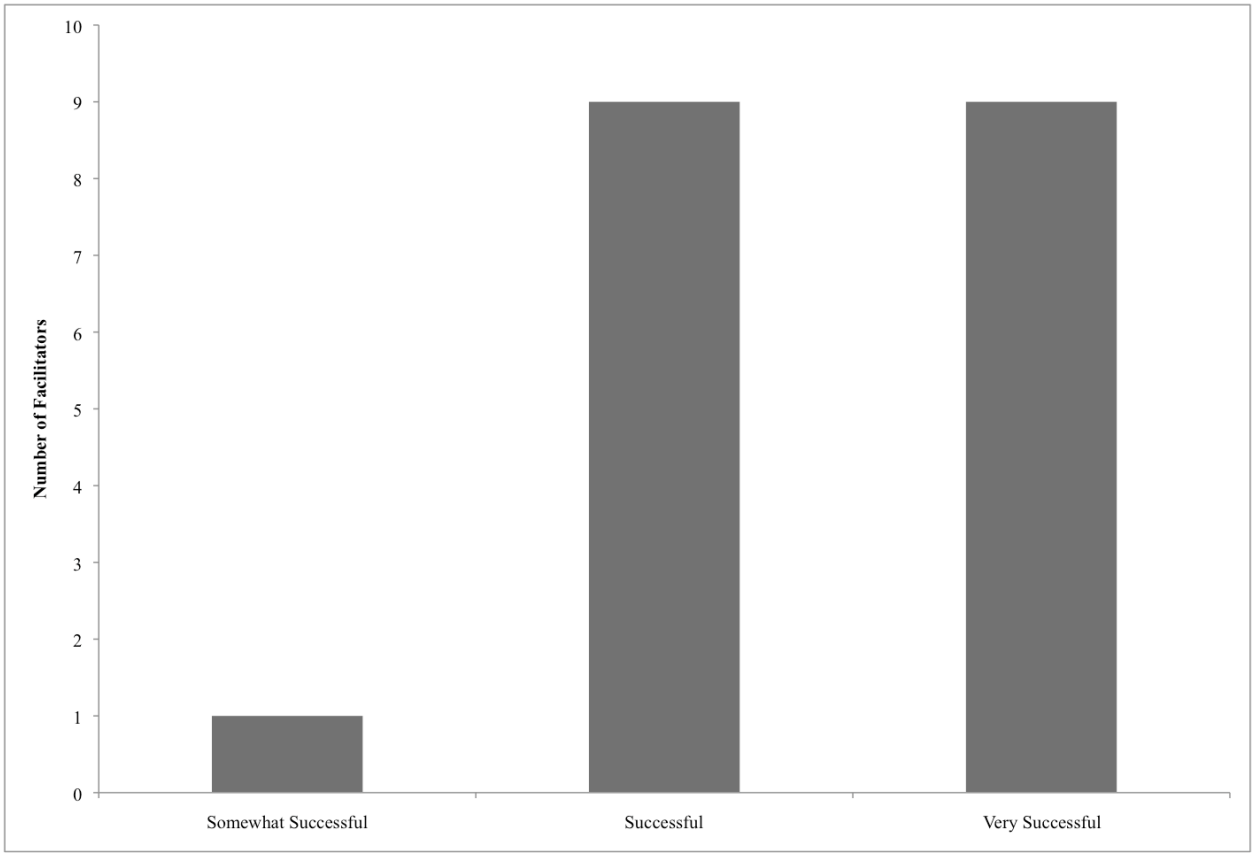
Participants' familiarity with the information presented. Facilitators were asked to rate, on average, how familiar their participant group was with the MITM information presented. Results are presented in Figure 12. Equal amounts of facilitators (N = 7; 36.8%) felt that their participant group was either familiar with some of the information or familiar with about half of the information. Five facilitators (26.3%) felt that their participant group was familiar with most of the MITM information presented.

Figure 12. Facilitators' Perceptions of Participants' Familiarity of Information Presented.



Overall success. Facilitators were asked to rate their overall success in presenting the MITM information to their participant group. Results from this question are presented in Figure 13. The vast majority of facilitators (N = 18; 94.7%) felt that they were either successful or very successful in presenting the information to their participant group.

Figure 13. Facilitators' Perceptions of their Overall Success in Presenting Material.



Relations among Participant Perspectives and Facilitator Characteristics and Perspectives about MITM

In order to examine the relations among participants' and facilitators' responses on the post-surveys, including their experience as facilitators, we averaged the facilitators' responses for each cohort. In most cases, there were two facilitators per cohort; however two cohorts had three facilitators respond to the post-survey, and one cohort had just one facilitator respond. We found the following relations among participants' and facilitators' perceptions of the modules and facilitators' experience as trainers:

- Participants found the training to be more useful overall when facilitators had more years of experience as facilitators (r = .26, p < .01).
- Facilitators who had more experience were more comfortable presenting the material (r = .20, p < .05).
- When facilitators were more comfortable presenting the material, they felt that they did a better job explaining new terms (r = .41, p < .01), that participants were more engaged

with the material ($r = .84$, $p < .01$), and that they were more successful in presenting the material overall ($r = .27$, $p < .01$).

- When facilitators felt they did a better job explaining new concepts, they also felt that participants were more engaged ($r = .27$, $p < .01$) and that they were more successful overall in presenting the modules ($r = 84$, $p < .01$). Participants also said they would be more likely to put the knowledge they gained from the modules into practice when facilitators felt they had done a better job explaining new concepts ($r = .18$, $p < .05$).
- When facilitators felt they did a better job explaining new terms, they also felt they did a better job explaining new concepts ($r = .29$, $p < .01$), that participants were more engaged ($r = .60$, $p < .01$), and that they were more successful in presenting the modules overall ($r = .36$, $p < .01$).
- When facilitators felt that participants were more engaged, they also felt that they were more successful in presenting the modules overall ($r = .64$, $p < .01$).

Discussion and Recommendations

The primary purposes of this evaluation were:

1. To examine the extent to which participating in MITM increased early childhood professionals' perceived knowledge of how children learn and develop, perceived confidence in their abilities to support children's learning and development, and knowledge of how to apply MITM principles to their everyday work with children,
2. To examine the extent to which MITM influenced participants' beliefs about how children learn and develop, and
3. To examine how participants experienced MITM.

Results from the evaluation were largely positive and have implications for both future implementations of the MITM modules and future evaluation efforts. These results and their implications will be summarized and discussed in the following sections.

Summary of Findings and Implications for Future Implementations of MITM

Overall, the results of this evaluation illustrate that participants' perceived knowledge, confidence, and beliefs about child development and learning changed in positive ways. These results were consistent across all participants, showing that the training seems to be effective for participants with a wide variety of backgrounds and experiences. These findings support those of the MITM pilot evaluation conducted by CB in 2008 (Swartz & Zimmerman, 2008), which also found that participation in the MITM modules led to increases in providers' knowledge about and confidence in supporting young children's development. The findings from the present evaluation also support the results from the University of Pittsburgh evaluation (Zajac et al., 2006) by providing further evidence that a diverse group of early childhood professionals may be successfully taught via a train-the-trainer model.

Implication: *Organizations who wish to offer the MITM learning modules to their staff should consider using the train-the-trainer model.*

While we did find many positive results and participants seemed generally satisfied with the modules, we did not find any change in participants' knowledge of how to apply MITM principles to their everyday work with children, as measured by the *Scenarios Survey*. This was evidenced in survey responses by the lack of change in the number of MITM strategies mentioned, before and after the MITM training. There are several possible explanations for why there was not a significant change in the number of strategies that participants mentioned. One possibility is that the coding scheme that was used to analyze the qualitative data was not sensitive enough to capture change. Another possibility relates to the circumstances under which participants completed the post-training evaluation forms. While participants had 7 to 10 days to fill out the pre-training evaluation forms, most of the participants completed the post-training forms in the 30 minutes directly following the last module. Furthermore, the *Scenarios Survey* was the last form in the packet. Participants may have been anxious to leave the training, and therefore, may not have spent as much time completing the *Scenarios Survey* as thoroughly as they did before the training or as they might have under other circumstances that allowed for more time. A third possibility is that it is not the number of strategies used that matters, but the types of strategies used. More specifically, the use of more strategies might not be equivalent to a "better" response.

A final possibility is that while the training may be successful in increasing participants' perceived knowledge and confidence and in shifting their thinking about young children's development and learning, without ongoing mentoring, these positive effects may not be likely to carry over into their everyday work with children and families. While some participants may have received ongoing mentoring based on what they learned in MITM from their directors or facilitators, many others likely did not receive such mentoring, as this was not an institutionalized part of the training model. Evidence-based practice tells us that ongoing mentoring is critical to the success of professional development initiatives in the early childhood field (Bagnato, 2009; Pennsylvania BUILD Initiative, 2004). Therefore, ongoing mentoring following the MITM modules may be a particularly effective way to help ensure that providers implement what they have learned.

Implication: *Future implementations of MITM should consider building in a mentoring or coaching component—both for facilitators and participants.*

Despite the fact that participants' use of MITM strategies did not increase, one interesting finding lends credence to the fact that the modules may still influence participants' practice with young children. As participants' beliefs became more aligned with MITM, they also changed more in the number of MITM strategies they said they would use in response to the *Scenarios Survey*. So, as their thinking about child development and learning shifted, so did their knowledge of how to apply MITM principles to their everyday work with children. Therefore, while on average, participants did not increase in the number of strategies they mentioned from before to after the training, their beliefs about child development and knowledge of *how* to practically apply what they learned in their work did change in similar ways.

Implication: *Future implementations of MITM should consider additional emphasis on self and shared reflective practices in order to help participants think more deeply about how their beliefs about child development and learning may influence their work with young children and families and vice versa.*

Participants also largely felt that the MITM information they received was very closely related to their work and that they would be very likely to use this knowledge in their practice with children. These findings are consistent with those of the University of Pittsburgh Evaluation (Zajac et al., 2006), which found that almost all of the participants indicated that they were likely to use what they learned from the MITM training in their classrooms. This also lends support to the theory that knowledge is most useful when it can be made practical and relevant to providers' work (Beardslee, Avery, Ayoub, & Watts, 2009).

Implication: *MITM seems to be successful in its efforts to link the content of the modules to participants' everyday work with children and families. Facilitators should continue to encourage participants to make these connections to their work.*

While most participants had positive experiences with MITM, there were some differences in how the modules were received based on participants' experience in the field and educational backgrounds. More specifically, participants who held a college degree felt that the training related better to their work with children than participants who did not hold a degree. This finding provides important information for future implementations of MITM. Perhaps there is something about the content and/or presentation of material that resonates better with participants who have more academic-based knowledge of early childhood education. It is also possible that participants who have not attended college may not feel as comfortable with the MITM curriculum's emphasis on applying theory and research to practice in early care and education settings.

In addition, participants with less experience in the field were more satisfied with the training and found it to be more useful than participants with more experience. This may indicate that while the knowledge gained by participants during the training was generally practical and relevant to their work, participants who had been working in the field longer may not have had as much need for this type of practical knowledge, as they may have already gained similar knowledge through their everyday work with young children.

Family child care providers were also more satisfied with the modules than center-based providers. It is not clear to us why this was the case. One possibility is that participation in MITM gave family child care providers a chance to connect and share their experiences with others, opportunities which they may not get on a regular basis (as compared to center-based providers). This finding merits further exploration in future evaluations of MITM.

Implication: *In planning for future implementations of MITM, facilitators should take steps to ensure that the content and presentation of the material are relevant and appropriate for participants with varying levels of experience and education. Mentoring, peer supervision, and other opportunities to engage in reflective practices with other MITM facilitators may help facilitators learn effective ways to tailor their presentation of the MITM curriculum to diverse audiences.*

Two other findings are worth mentioning. The first is that participants found the training to be more useful overall when facilitators had more years of experience facilitating trainings. The second is that facilitators who had more experience as trainers were more comfortable presenting the material. While facilitators were not asked to specify the types of trainings that they had facilitated in the past, these findings lend support to the notion that prior training experience is important in teaching the MITM modules. Furthermore, even though the train-the-trainer model seems to be successful in enhancing the knowledge and confidence, and shifting the beliefs of most participants, the training was better received by participants who were taught by more experienced facilitators.

Implication: *Future implementations of MITM should consider pairing more experienced facilitators with less experienced facilitators.*

Challenges with Current Evaluation and Recommendations for Future Evaluations

Using the University of Pittsburgh Evaluation (Zajac et al., 2006) and the CB pilot evaluation (Swartz & Zimmerman, 2008) as starting points, the present evaluation provides a next step toward a larger scale evaluation of MITM in Massachusetts. While the evaluation went smoothly overall, we did face several challenges along the way. Future evaluations should address the following challenges by considering the associated recommendations.

Challenge: The first set of challenges was related to data collection. Because the evaluation was not included in the original plans with the organization offering MITM, data collection logistics proved difficult at times. We were not able to collect data from all of the cohorts before the modules began. In addition, CB staff was not able to attend all of the final modules to distribute and collect evaluation forms. Therefore, many post-training forms were either never received or did not include participants' names. It is possible that participants were not comfortable putting their names on the forms when they had to return them to facilitators, who were, in many cases, also their supervisors. Forms without participants' names were not able to be matched with pre-training data, and therefore, had to be excluded from the analysis.

Recommendation: *Evaluation should be built in from the beginning for future implementations of the MITM modules.*

Challenge: At the time of the evaluation, surveys were only available in English. While there were no differences in results based on English language fluency, we learned anecdotally that several participants had difficulties filling out the forms in English.

Recommendation: Since the time that this evaluation took place, we have translated MITM evaluation forms into Spanish. This should be useful in future evaluation efforts. *We also need to consider the wide range of languages that are spoken in the Boston area and how to address the needs of those participants who speak neither English nor Spanish.*

Challenge: Finally, we had some problems with missing data, especially from the registration form. Due to the large amount of missing data, we were unable to complete complex statistical analyses, such as those that would allow for exploration of the relationships between many variables simultaneously.

Recommendation: *Careful consideration needs to be given to the content, ordering, and format of the questions and length of the registration form in order for all data to be considered reliable in future implementations and evaluations of MITM.*

Additional Recommendations

In addition to these recommendations that directly follow the challenges we faced, we have several other recommendations for future evaluation efforts. First, while we did follow through with the recommendation from the Connected Beginnings Pilot Evaluation (Swartz & Zimmerman, 2008) to involve MITM facilitators in the further development of the *Scenarios Survey*, more work is needed in the design, administration, and scoring of this measure. More specifically, we recommend developing a standardized scoring system and/or using a subset of the behavioral responses to create multiple-choice responses for the survey in order to make the analysis more straightforward and the results more meaningful. Next, while it is clear that participants experienced the modules in positive ways and felt that they were likely to implement what they learned in their classrooms, we did not directly assess this implementation in the present evaluation. Future larger scale evaluations should include classroom observations to examine whether the content is actually influencing providers' practice with children. Evaluators should also consider conducting a process evaluation to directly assess the content that is actually being delivered in the modules and its specific relevance to participants' work. Finally, in order to determine whether the evaluation is truly having an effect on participants' knowledge, confidence, beliefs, and practice, it will be necessary to include a comparison group of participants who have not participated in the training. These are important next steps in evaluating MITM and helping us gain a clear understanding of the ways in which it affects the everyday experiences of early childhood professionals, young children, and families.

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Appendix A

List of Behavioral Themes and Responses

Scenario 1

- *Comfort the child:* Comfort the child by telling him that it will be okay (e.g., let the child know you are there for him, make the child feel secure and safe)

- *Reassure the child that mom will return:* Reassure the child that his mother will return to pick him up (e.g., tell the child that mom was late for work and that she will be back to pick him up later)

- *Promote the parent-child relationship:* Focus on and promote the child's relationship with the parent (e.g., by telling him that his mom loves him, suggesting that he make a picture for mom, tell the child that his mom would have liked to stay longer and that she will miss him very much)

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

- *Stay close to the child:* Approach child or ask the child if he wants to sit near you

- *Connect to and/or validate the child's feelings:* Acknowledge the child's feelings or talk to the child about his feelings (e.g., tell Charlie that he looks upset, acknowledge that Charlie is upset because his mom left in a rush)

- *Let the child express his feelings:* Allow child to talk about what he is feeling

- *Touch and/or hug the child:* Physical contact with the child (e.g., hold the child's hand, give the child a hug, ask if the child wants to sit on your lap)

- *Make a connection with the child:* Mention (explicitly or implicitly) making a connection with the child (e.g., open a discussion with the child to see if he understands the mom's rushed behavior, ask the child what would make him feel better)

- *Recognize the needs of the child:* Recognize what the child needs to feel better and respond accordingly (e.g., recognize that Charlie may need a hug, give him the comfort he needs)

- *Ask the child to describe his feelings:* Start a discussion with the child by asking him how he feels or what is wrong

- *Redirect the child to another activity:* Redirect child's attention to another activity (e.g., reading a book, looking at fish tank, telling him stories)

- *Talk to parent:* Call or talk to the parent in person about what is going on with the child (e.g., talk to mom about developing a new routine, let mom know Charlie was upset when she left)

- *Acknowledge the parent's feelings:* Describe to child what mom is feeling (e.g., let child know his mom is nervous about starting a new job)

- *Understand the impact a change in routine can have on a child:* Recognize the effect of Charlie's mom leaving in a rush (e.g., understand that mom's stress and anxiety have spilled onto Charlie)

- *Spend some one-on-one time with child:* Spend time with the child, such as doing an activity together (e.g., read a book with Charlie, go for a walk with Charlie)

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

- *Give the child space and/or time alone:* Provide the child with time or space to deal with his emotions

- *Do not openly judge the child's parent:* Recognize that the parent is not intentionally leaving in a rush

Scenario 2

- *Babble back to the child:* Respond by babbling back to the baby, repeat his sounds/babbles

- *Invite exploration:* Extend learning by singing, rhyming words, playing with baby, etc.

- *Respond to the child non-verbally:* Respond nonverbally by holding his hand, smiling, giving him a toy

- *Point out and name objects to the child:* Use props in the room to point and name objects

- *Let the child keep babbling:* Allow the child to continue to babble to himself

- *Talk back to the child:* Respond to the baby by talking back to him (e.g., repeat words over and over to Max, say "Hey Max, I see you're trying to tell me something")

- *Listen to the child and/or follow his lead:* Try to understand what the baby is saying and/or listen to his babbles to repeat back (e.g., pay attention to the child's babbles, try to understand what child is saying and repeat his babbles back to him)

- *Engage in a give and take conversation with the child:* Talk/babble to baby and wait for his response

- *Make eye contact with the child*

- *Read to the child:* Use picture books and/or word books (e.g., read the child some stories, show the child pictures of animals in a picture book)

- *Talk to parent(s):* Call or talk to the parent in person about what is going on with the child (e.g., tell Max's parents that he was talkative today, share with parents the different language development milestones to expect)

- *Involve other children and/or child's siblings:* Have other children listen to and talk to baby (e.g., sit Max with the other babbling children, tell the class that Max is babbling)

- *Praise and/or encourage the child:* Provide words and/or symbols of praise and encouragement (e.g., smile a lot to encourage more babbling, tell Max that he is smart)

- *Make a connection with the child:* Mention (explicitly or implicitly) making a connection with the child (e.g., try to find things to say so Max can feel like you understand him, pretend I understand what Max is saying, show Max that I am interested in what he is babbling)

- *Observe the child:* Specific mention of observing child or child's behavior (e.g., watch Max babbling to himself, look to see Max's reaction to my voice)

- *Document the child's behavior:* Specific mention of documenting baby or baby's behavior (e.g., keep a log of Max's babbling, write that Max is babbling in his daily journal)

Scenario 3

- *Expand upon what the child said:* Add more words, add new sentences, and/or ask the child close-ended questions (e.g., ask the child, "Do you want the bear? Here is the bear," say to the child, "The bear is up there, let me get it down for you," say to the child, "Do you want to play with the bear?)

- *Encourage the child to use more words:* Ask open-ended questions to the child in order to encourage him to respond with more words (e.g., ask the child, "What is your favorite animal?" try to have the child put words together, ask the child, "What about the bear? What would you like to do with the bear?")

- *Praise and/or affirm the use of the child's words:* Provide words and/or symbols of praise and/or acknowledge the child's word (e.g., let the child know that it is great that he is using his words, be excited for the child that he said the word "bear," say to the child, "I like the fact that you are using your words" and reinforce him that he is correct about the name of the object)

- *Talk to parent(s):* Call or talk to the parent in person about what is going on with the child (e.g., let the parents know that Dante said a new word, remind parents that children develop at different rates)

- *Extend the child's learning:* Introduce an activity that encourages more learning (e.g., read a book about bears)

- *Make a connection with the child:* Mention (explicitly or implicitly) making a connection with the child (e.g., recognize that the child is interested in the bear, engage the child with what he enjoys)

- *Observe the child:* Specific mention of observing child or child's behavior (e.g., look to see what Dante does next)

- *Document the child's behavior:* Specific mention of documenting baby or baby's behavior (e.g., write in Dante's journal that he said the word "bear")

Appendix B

Examples of Scenarios Survey Responses and Associated Behavioral Responses

Scenario	Survey Response	Behavioral Response
#1: *Mom brought 3-year old Charlie in 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 room, 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 will get Charlie's attention by establishing my relationship as a teacher with him. Create an attachment. Acknowledge his feelings and how I think he might be feeling. Describe/ask how he feels, get him to talk, respond, or express his feelings. Talk about the situation and assure him that he will be fine. "Charlie I know you might be sad to see mom leave for work but she will be back." Then offer him something to do.*	• Make a connection with the child • Connect to and/or validate the child's feelings • Ask the child to describe his feelings • Let the child express his feelings • Comfort the child • Reassure the child that mom will return • Redirect the child to another activity
	I would comfort him and tell him mommy will be back to pick him up later.	• Comfort the child • Reassure the child that mom will return
	I would go over to Charlie and offer a hug. "I see you're sad. Mom had to leave in a hurry." I would try to help Charlie understand why that happened. Ask how he is feeling about the situation. What can I do to help him feel better? "Maybe we can draw mom a picture." Reassure him mom loves him and will be back later to get him.	• Stay close to child • Touch and/or hug the child • Connect to and/or validate the child's feelings • Promote the parent-child relationship • Ask the child to describe his feelings • Redirect the child to another activity • Reassure the child that mom will return

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 talk back to him.*	• Talk back to the child
	I would make eye contact with Max so he knows I am paying attention to him. I would repeat his babbling and I would try to talk about what I think he is trying to express. I would use a special book for him or his favorite puppet and talk and talk to him as long as he permits me.	• Make eye contact with the child • Babble back to the child • Listen to the child and/or follow his lead • Talk back to the child • Read to the child
	I might tell Max that he is in a very talkative mood today. I might also try singing some songs with Max or reading him some stories to him to see his reaction. Also, mention to Max's parents how much of a babbler he was today.	• Talk back to the child • Invite exploration • Read to the child • Talk to parent(s) • Observe the child
#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."*	*I would say "Dante, you want the bear, I will get it for you." I would get the bear and continue to engage in conversation with Dante - maybe ask him open questions about the bear. Later I would mention it to parents and talk about how children learn through conversation. We could watch and document his language skills.*	• Expand upon what the child said • Encourage the child to use more words • Talk to parent(s) • Observe the child • Document the child's behavior
	I would respond to Dante by asking, "Do you want the bear? What color is he? What does a bear do? Where does a bear live?" Read a book about animals and bears. Add to his vocabulary and he will respond.	• Expand upon what the child said • Encourage the child to use more words • Extend the child's learning
	I would ask him to use his words more to find out what he wants with the bear.	• Encourage the child to use more words