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# Variables Influencing Frequency of Preschool Teachers' Communication with Families about Children's Learning and Development: Teacher Preparation, Structural Supports, and Self-efficacy

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Michelle Lynn Levy, PhD

University of Connecticut, 2017

Both families and teachers play an important role in preschool children's learning and development and research has shown that both high quality preschool and family engagement in children's learning at home improve children's social and academic outcomes. However, it is not clear that teachers are adequately prepared or supported to communicate with families about children's learning and development. This survey research involving 143 preschool teachers working in state or federally funded preschool programs examined the relationship between teacher preparation specific to family engagement, structural supports that provide teachers with opportunities to communicate with families, teacher's feelings of self-efficacy related to communicating with families, and the frequency of communication. Surveyed teachers reported communicating more frequently about program events than about learning and development and engaged in in-person communication more frequently than remote methods of communication. Teacher preparation related to family engagement was correlated with higher ratings of self-confidence and self-competence, as well as higher frequencies of communication about learning and development. The number of structural supports was also correlated to self-confidence and self-competence and frequency of communication about learning and development; however, these correlations were weaker than those associated with teacher preparation. Further research into the role of different methods of communication, increasing understanding regarding the

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varieties of types of communication about learning and development, and examining these variables with a larger sample size will further the understanding of the complex relationship between these factors. Greater understanding of how to best support teachers to engage families in meaningful discussions about children's learning and development should result in increased communication with families and ultimately improve children's social and academic outcomes.

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Children's Learning and Development:

Teacher Preparation, Structural Supports, and Self-efficacy

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APPROVAL PAGE

Doctor of Philosophy Dissertation

Variables Influencing Frequency of Preschool Teachers' Communication with Families about  
Children's Learning and Development: Teacher Preparation, Structural Supports, and  
Self-efficacy

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2017

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## **Chapter One**

### **Introduction**

The importance of the early years in determining long term outcomes has been established through research across a variety of fields (Shonkoff & Phillips, 2000), including seminal research examining the impact of early language exposure on language development and IQ scores (Bradley, Corwyn, McAdoo, & Coll, 2001; Fernald, Marchman, & Weisleder, 2013; Hart & Risley, 1995) and the effects of exposure to trauma on brain development (Center on the Developing Child at Harvard University, 2007). Effective efforts to improve long term outcomes by influencing children's early experiences have included the provision of preschool services (Barnett, Jung, Youn, & Frede, 2013; Campbell, Pungello, Miller-Johnson, Burchinal, & Ramey, 2001; Clements, Reynolds, & Hickey, 2004; Schweinhart, et al., 2011) and interventions designed to increase family support for children's learning at home (The Chicago Parent Program, 2013; The National Center on Parent, Family, and Community Engagement, 2015; Webster-Stratton & Reid, 2010).

Despite the promise of these practices, broad implementation of high quality intensive preschool services and home-based interventions has proven challenging and the achievement gap between white students and black and Hispanic students has persisted over time (Bohrnstedt, Kitmitto, Ogut, Sherman, & Chan, 2015; Miksic, 2014; National Center for Education Statistics, 2011). National efforts to improve early childhood systems and increase access to services through grants such as the Race to the Top Grant, the Preschool Development Grant, and the Maternal Infant and Early Childhood Home Visiting Program represent broad efforts to leverage both school-based and home-based services to improve outcomes for children. Recently, there has been an increased focus on family engagement in early childhood as a means to improve outcomes for children at risk for school failure, including the release of a joint position statement

from the United States Department of Health and Human Services and the United States Department of Education (2016). This focus on engaging families aims to leverage and connect both home and school environments to improve outcomes for children.

Family engagement in their children's education has been considered from various theoretical standpoints and has been operationalized in many different ways. The construct of family engagement has generally been characterized in the literature as multidimensional and although current evidence has not clearly converged upon one clear set of factors that comprise the construct of family engagement, most recent models supported by research include school- and home-based involvement as separate types of family engagement (Epstein & Dauber, 1991; Fantuzzo, Tighe, & Childs, 2000; Grolnick & Slowiaczek, 1994; Kohl, Lengua, & McMahon, 2000; McWayne, Hampton, Fantuzzo, Cohen, & Seking, 2004; McWayne, Melzi, Schick, Kennedy, & Mundt, 2013; Waanders, Mendez, & Downer, 2007). Recent models specifically addressing family engagement in preschool programs tend to focus on three main factors: family participation in school-based activities, support for children's learning at home, and communication or relationship-building between home and school (Fantuzzo et al., 2000; Waanders et al., 2007). Based upon the importance of home-school communication when children are young and the potential to leverage a variety of communication strategies as a means of increasing the frequency of behaviors related to home and school based family involvement (Ames, de Stefano, & Sheldon, 1995), this study focuses specifically on one family engagement factor: preschool teachers' communication with families related to their child's learning and development.

There is a strong body of research connecting family engagement in children's education with short and long term educational and social outcomes (Mapp & Henderson, 2002; McWayne

et al., 2004; Wilder, 2014). Several studies specifically link higher rates of family engagement during preschool to better cognitive or academic outcomes (Arnold, Zeljo, Doctoroff, & Ortiz, 2008; Mantzicopoulos, 2003; Marcon, 1999; Powell, Son, File, & San Juan, 2010); later school adjustment (Taylor & Machida, 1994) and social skills (Powell et al., 2010). Fantuzzo, McWayne, Perry, and Childs (2004) found home-based family engagement in children's learning to be associated with higher educational achievement than school-based involvement. This finding is of particular interest in light of other research showing that lower income and/or racial minorities have higher levels of in-home involvement in their children's learning (Boethel, 2003; Henderson & Mapp, 2002; McWayne et al., 2013). Current models of family engagement stress the importance of bi-directional communication and the need to link family engagement to children's learning (U.S. Department of Health and Human Services, Administration for Children and Families, Office of Head Start, 2011; Mapp & Kuttner, 2013), both strategies that have the potential of bolstering home support for children's learning.

### **Statement of the Problem**

Despite strong evidence that family engagement in children's education has positive effects on long-term outcomes for children, there is little research to guide specific strategies to engage families or to link family engagement efforts to children's learning. Because patterns of family engagement vary across socioeconomic status and race (Crozier, 1997; Griffith, 1998; Keith, et al., 1998; Lamb-Parker et al., 2001; Lareau, 1987) and ecological systems are unique to each child and family (Bronfenbrenner, 1979) it is generally recommended that schools and teachers employ flexibility regarding their use of communication strategies. In one of the few studies specifically addressing teacher-family communication, Walker and Dotger (2012) used expert input to develop a coding scheme to assess the effectiveness of parent-teacher conferences,

resulting in a conceptualization of high responsiveness and low teacher structure as effective practice in teacher-family communication.

Unfortunately, research suggests that teachers may not have the support they need to engage in such effective practices. Not only is there a lack of sufficient research to guide communication strategies, there is evidence that teachers do not receive strong preparation in family engagement practices through their higher education experience (Flanigan, 2007; Katz & Bauch, 1999; Shartrand, Weiss, Kreider, & Lopez, 1997; Wilson, 2009). After teachers enter the workforce, early childhood program policies and practices may serve to either facilitate or deter effective communication between teachers and families, depending upon time and focus allotted to such practices (Policy Studies Associates, 1997). Findings suggest that teachers' communication with families improves with experience and practice (Wilson, 2009); however, if higher education does not adequately prepare teachers and structural barriers prevent opportunities to communicate with families, teachers are not likely to be able to practice skills related to communicating with families. In keeping with the social learning theory guiding this research, a lack of mastery experiences due to either a lack of preparation or a lack of structural support is hypothesized to result in lower self-efficacy and, in turn, a lower frequency of communication with families about children's learning and development. Although not specifically focused on communication about children's learning and development, Garcia's (2004) findings support this hypothesis. In this study, lower scores on a measure of teachers' judgements about their abilities related to family engagement were correlated with lower rates of family engagement practices.

Research supporting the importance of family involvement in children's education and current models of family engagement on communication about children's learning and

development are currently not complemented by teacher preparation programs or strong program practices that support family engagement practices. This study seeks to better understand the relationship between teacher education, structural supports, teacher self-efficacy, and the frequency of communication about children's learning and development in order to inform further steps in research and ultimately improve teacher preparation programs, decrease barriers to family engagement, and increase the frequency of communication that is linked to children's learning. The following literature review examines the research that has informed this study.

## Chapter Two

### Literature Review

This literature review first examines the vast body of research related to family engagement, including efforts to impact family engagement and child outcomes. It then focuses on the rather limited body of research specifically addressing teacher communication with families about their child's learning and development. In addition, it considers those factors hypothesized to influence the frequency of teachers' communication with families about their child's learning and development: teacher preparation related to family engagement, program supports for family-teacher communication, and teacher self-efficacy related to communicating with families.

The education system in the United States began with strong local and parental control over all aspects of education but beginning in the middle of the nineteenth century there was a shift toward a more bureaucratic system including the professionalism of teachers and required attendance at school (Hiatt-Michael, 1994; Watson, Sanders-Lawson, & McNeal, 2012). Over time, families reacted to this shift and in 1897 the National Congress of Mothers, a forerunner to the current Parent/Teacher Association, was formed. Eventually there was a push toward incorporating parent involvement activities into the educational system (Hiatt-Michael, 1994). In recent years, the major models for connecting with families have shifted from use of the term *parent involvement* to the term *family engagement*, due to the implication of a deeper process (U.S. Department of Health and Human Services Early Childhood Learning and Knowledge Center, 2012) and a shift to widen the perspective from those in parenting roles to the broader family (Souto-Manning & Swick, 2006).



For parents of children with disabilities, a key point in the history of family engagement in education was the passage of the Education for All Handicapped Children Act in 1975, at which point children with disabilities were afforded the right to a public education and families' rights to advocate on behalf of their children were established (Mead & Paige, 2008). Over the following years and through most of the 1990s, Supreme Court decisions and amendments to the original act tended to strengthen the role of families in their child's education (Mead & Paige, 2008). Requirements regarding families of infants, toddlers, and preschoolers outlined in the Individuals with Disabilities Education Act (IDEA) include providing consent to assessment and interventions, participation in making decisions about children's education, and access to records; while for infants and toddlers, family priorities and resources are also assessed and addressed through the provisions of coordinated services (Bailey et al., 2006; Bailer, Hebbeler, Olmstead, Raspa, & Bruder, 2008; Turnbull et al, 2007). Families of children receiving special education services have legal rights regarding making decisions about assessment procedures and the Individualized Education Program; however, parents still may experience barriers to contributing to the content of their child's educational program (Daniel, 2000). Little historical information or research is available regarding how families of students with disabilities served in inclusive settings are involved in the engagement efforts afforded the families of the broader general education population.

The recent release of a joint position statement on family engagement in early childhood systems and programs by the U.S. Departments of Education and Health and Human Services (2016) illustrates the current focus on partnering with families to support children's learning and development. In addition, the Every Student Succeeds Acts (ESSA) includes provisions regarding family engagement. Although these requirements are very similar to the original

Elementary and Secondary Education Act (ESEA) of 1965, there are a few minor changes that reflect an evolving understanding of partnering with families. Major requirements that remain the same in ESSA include

- involvement of parents and family members through programs, activities and consultation with parents;
- written parent and family engagement plans;
- evaluation of family engagement policy and practices; and
- dedication of at least one percent of Title I funds for the purpose of parent and family engagement activities.

Minor but meaningful changes include

- a shift from “parent involvement” to “parent and family engagement;”
- the replacement of Parent Information Resource Centers (PIRCs) with Statewide Family Engagement Centers and the replacement of funding to support the centers;
- a requirement that districts provide outreach to all parents and family members in order to receive Title I funds; and
- requirements that Title I schools and districts:
  - educate all staff, not just teachers, in matters related to family engagement and
  - coordinate with public preschool programs on parent involvement programs and activities to the extent possible (Henderson, n.d.; National Association for Family, School, and Community Engagement, 2015).

In addition to the federal push for improvements in family engagement, most state preschool programs require some type of family engagement practices, although the precise

nature of these requirements varies (Dahlin, 2016). This push toward increased family engagement on the part of the federal and state government is based on strong research evidence that family engagement is tied to greater achievement for students.

Research in the field of family engagement has generally fallen into three broad categories: research examining the connection between family involvement and student achievement, research on effective strategies for family engagement, and research related to organizing efforts to improve schools (Mapp & Henderson, 2002). This paper first reviews research regarding the relationship between family engagement and child outcomes. Next, research providing evidence of specific factors related to family engagement and the complex interplay between families, children, and professionals is reviewed. Finally, specific family engagement interventions aiming to improve student outcomes are reviewed, including efforts to increase family engagement at schools and specific interventions designed to support families in fostering children's learning at home.

Prior to a review of the literature, it is first necessary to address terminology. The literature reviewed uses a variety of terms to describe the practices used by schools and the relationships between educators and families including *family engagement*, *parent involvement*, and *family-centered practices*. Descriptive definitions of these terms often articulate a set of ideal practices that, when taken together, indicate a certain level of quality. For example, the National Association for the Education of Young Children (NAEYC) supports a definition of family engagement that encompasses six factors:

- families' participation in decisions related to their child's education,
- two-way communication that meets the needs of the family in terms of format and language,

- the exchange of knowledge between programs and families,
- a supportive home environment,
- involvement of families in program decision making and advocacy, and
- ongoing system for promoting family engagement in the program (Halgunseth, Peterson, Stark, & Moodie, 2009).

The U.S. Department of Health and Human Services and U.S. Department of Education policy statement on family engagement does not define this term per se, but instead focuses on ten principles of effective family engagement intended to help establish a positive culture and inform specific family engagement practices (U.S. Department of Health and Human Services and U.S. Department of Education, 2016). These principles and practices associated with family engagement are typically generated by drawing from existing research and serve as important guidance for programs seeking to implement or improve family engagement practices. However, individual studies tend to focus on specific aspects of family engagement or use a variety of tools to operationalize this construct. In their synthesis of research related to family-school-community connections, Mapp and Henderson (2002) found that six types of involvement were commonly used in operationalized definitions of family engagement: parenting, communicating, supporting school, learning at home, decision-making, and collaborating with the community.

This paper reviews a body of literature related to how families and the professionals charged with supporting the growth and development of children interact and/or collaborate and uses the term *family engagement* to refer broadly to this relationship between families and schools. This may include practices referred to in the literature as *family engagement* or *parent involvement*. This review will also consider research on *family-centered* practices, a term commonly used to refer to “an approach to working with families that honors and respects family

values and choices and included the provision or mobilization of supports necessary to strengthen family function” (Dunst, Trivette, & Hamby, 2008, p. 2). While Dunst et al. (2008) report that *family-centered practices* are used broadly across many fields, including education, the term and the vast body of research in this area was only occasionally referenced in the literature reviewed that was concerned with family engagement practices in educational settings. However, since the specific practices and the theoretical foundations of family-centered practices focus on strengthening families in order to promote children’s development, this body of research provides valuable information which could inform efforts to improve current family engagement efforts for high need preschoolers. Therefore research addressing family-centered practices is considered under the umbrella of *family engagement* in this paper. Within the paper, the terms *parent involvement* and *family-centered practices* will be used when a particular study or line of research has used this terminology; however, to the extent possible, discussion will focus on the specific constructs measured.

### **Family Engagement and Child Outcomes**

There is a vast body of evidence linking higher levels of family engagement with positive child outcomes across settings, family demographics, and age ranges. Individual studies are often limited to specific family engagement practices, populations, or grade levels; however, a number of meta-analyses and syntheses on family engagement in education have been conducted and provide an effective mechanism for reviewing the broad literature base. Following a review of the broader context of family engagement across ages and grade levels, this paper will consider individual studies specifically addressing family engagement for preschoolers, including high need children and children with disabilities.

One influential research synthesis, which paved the way for a renewed focus on family engagement practices, was the 2002 synthesis *a New Wave of Evidence* (Mapp & Henderson, 2002). This synthesis reviewed 51 studies meeting quality standards regarding methodology, theoretical foundations, and conclusions drawn from the data. Mapp and Henderson (2002) conclude that, "Taken as a whole, these studies found a positive and convincing relationship between family involvement and benefits for students, including improved academic achievement" (Mapp & Henderson, 2002, p. 24). Overall, findings from across studies indicate that children with involved families had higher levels of achievement on measures including grades, test scores, and enrollment in advanced programming. Students with involved families were also more likely to graduate and enroll in post-secondary education, attend school more regularly, have fewer behavior problems, and exhibit better social skills.

In a more recent meta-synthesis on the effects of family engagement on academic achievement, Wilder (2014) examined the results of nine meta-analyses, finding that across all definitions and measures of achievement, effects were positive. The type of involvement found to have the strongest relationship to achievement was parental expectations, while the weakest was homework assistance. Ages and grades of research participants for the studies reviewed in the meta-analyses were not consistently reported; however, at least one of the meta-analyses reviewed included preschool in its selection process. Despite the variation and inconsistency in reporting age levels, this meta-synthesis adds to the body of research providing evidence of a strong relationship between family engagement and child outcomes.

In addition to considering the strength of the relationship between family engagement and outcomes, it is important to consider whether this relationship is similar for high need children. Unfortunately, the evidence regarding the relationship between family engagement and child

outcomes for specific populations with known risk factors is slightly less convincing, with differing conclusions across authors. Mapp and Henderson (2002) reported that trends associating family engagement with positive outcomes held true across incomes and backgrounds and that, although there was a tendency for white, middle-class families to be more involved at the school setting, families across income and education levels were engaged in supporting children's learning and development at home. However, a follow-up research synthesis focused specifically on diversity concluded that there was limited research and inconsistent findings linking increased family engagement with academic outcomes for minority and low income populations (Boethel, 2003). It was concluded that although some research demonstrated promising outcomes based on family engagement interventions, overall there were few methodologically rigorous studies supporting a connection.

One meta-analysis discussed in Boethel's (2003) synthesis investigated 21 studies examining the impact of parent involvement on academic achievement for children in K-12 education from various racial minorities. Jeynes (2003) determined effect sizes for parental involvement in general, as well as for specific components of parental involvement on a variety of outcomes, including overall academic achievement (based on all components), standardized test results, grades, and measures such as teacher ratings. Results indicated that parental involvement does generally affect the academic achievement of minority groups included. Unfortunately, this meta-analysis does not include sufficient information about the individual studies to fully support its conclusions. It refers to a causal relationship; however, it is unclear from the information provided in the meta-analysis, whether or not all of the studies conducted were experimental or quasi-experimental in nature. Because experimental research on family engagement tends to focus on specific interventions instead of a broad construct or

characteristics of family engagement, it seems highly possible that the studies reviewed were correlational, comparing outcomes from students with higher and lower levels of parent involvement. Possible methodological challenges such as these, as well as the challenges inherent in breaking down the complex ecological systems at play in family-school relationships, make it difficult to draw strong conclusions across cultures, incomes, and education levels. More research examining the link between family engagement and outcomes across a variety of populations is needed.

One example of such research is a study conducted by McWayne et al. (2004), which found a link between parental involvement and academic and social functioning for a sample of 307 minority kindergarteners. In a more recent study, Chang, Choi, and Kim (2015) found differences in patterns of involvement across socio-economic and racial groups, and demonstrated that different types of involvement had differential effects across groups. More research is clearly needed in this area, but the current body of research indicates a need for a flexible approach to family engagement that takes into account cultural differences and preferences related to participation in children's educational activities.

The research syntheses described above span across various ages and grades. There is a need for caution in generalizing the results of research involving students in elementary and secondary schools to other age ranges; however, there is some justification for considering the results of these studies in relation to preschool practices. Although family engagement in schools tends to decrease as children get older (Murray, McFarland-Piazza, & Harrison, 2015; Rimm-Kaufman & Pianta, 1999), at least one study has found family engagement in the early years of school to be associated with higher levels of engagement in middle school (Marcon, 1998). It stands to reason that family engagement beginning in the earlier years sets a foundation



of involvement and is likely to be associated with similar or more significant child outcomes than family engagement that begins or increases when children are in higher grades. Despite the relevance of the broader body of research, the few studies specifically linking family engagement during preschool to positive child outcomes offer the most compelling evidence for the purposes of this paper.

Early studies of the efficacy of preschool programs often included family engagement as a central component; however, systemic investigation of the impact of the family engagement components was not typically undertaken. The Chicago Parent-Child programs involved a high level of family engagement, but it is evident that data regarding family engagement was not collected, given the multiple attempts to include family engagement as a factor through later data collection. Although they have provided some valuable information and add to the overall body of research, the methodological challenges with these studies mean that overall these studies fall short of demonstrating a clear connection between family engagement in preschool and child outcomes. In one study, parent engagement during the elementary grades was found to mediate the impact of the overall preschool intervention on outcomes seven years after the preschool program ended (Reynolds, Mavrogenes, Bezruckko & Hageman, 1996). A later analysis of longer-term outcomes found that family support, which included both parent involvement from ages eight to twelve and avoidance of maltreatment, mediated the effects of the Chicago Parent-Child program on school completion and juvenile arrest (Reynolds, Ou, & Topitzes, 2004). Graue, Clements, Reynolds, and Niles (2004) also examined the impact of family engagement, as assessed by first grade teachers' ratings, but attempted to use this measure as an indication of involvement during the preschool years. They justified the use of first grade involvement with the statement, "Our use of a first grade measure is supported by findings that parent involvement

in school is relatively stable from preschool to the early school grades” (Graue et al., 2004, p.12). The authors did not provide any research evidence to support this claim, and, as previously discussed, other research has shown that while early involvement is predictive of later involvement (Marcon, 1998), the amount of involvement decreases when children transition to kindergarten (Murray et al., 2015; Rimm-Kaufman & Pianta, 1999). Despite the challenges in claiming that first grade involvement is directly analogous to preschool family engagement, the finding that higher levels of school readiness and word analysis skills were associated with higher levels of family engagement after controlling for instructional model and background variables adds to a body of literature linking family engagement to child outcomes. In the only study found associated with the Chicago Parent-Child Centers that directly addressed parent involvement during preschool, Miedel and Reynolds (1999) collected data through parent interview a decade after the programming was provided, thus calling the accuracy of the data into question. Keeping this limitation in mind, the results of this study suggest that more frequent parent involvement in school activities was associated with higher reading achievement, less grade retention in eighth grade and lower rate of special education for this group of high need students.

Several other studies linking family engagement in preschool to child outcomes provide more robust information specific to preschoolers, linking higher rates of family engagement to cognitive or academic outcomes (Arnold et al., 2008; Mantzicopoulos, 2003; Marcon, 1999; Powell et al., 2010); later school adjustment (Taylor & Machida, 1994) and social skills (Powell et al., 2010). All of these studies focused on high need children, either by virtue of a sample of children enrolled in Head Start or a focus on inner-city programs with a high proportion of ethnic minorities. This body of research, although limited, also demonstrates areas for further research,

including potential gender differences based on Marcon's (1999) finding that while girls outperformed boys overall, boys demonstrated even more significant differences in performance when family engagement was high. Powell et al. (2010) found a specific component of the parent-teacher relationship, parental perception of teacher responsiveness, to be independently predictive of reading and social skills and negatively associated with challenging behaviors. Fantuzzo et al. (2004) also considered different dimensions of parent involvement: home-based support, school-based support and home-school conferencing across a sample of 144 children enrolled in Head Start. Home-based involvement in children's learning was the strongest predictor of child outcomes, with clear associations to vocabulary, low levels of behavioral issues, and approaches to learning.

Overall, the body of research examined here provides rich evidence that family engagement in children's education is associated with improved outcomes for children. In order to engage families effectively in communication about children's learning and development as a mechanism for improving family engagement and ultimately impacting child outcomes, it is important to better understand the complex relationship between professionals and families. This literature review will consider the various dimensions of family involvement and will examine contextual factors that impact levels of family engagement. In addition, this literature review will consider malleable factors that impact the relationship between family engagement practices and desired outcomes and therefore have the potential to serve as a target for intervention.

### **Factors Related to Family Engagement**

This section will review multiple factors relevant to family engagement. First research into the various dimensions of family engagement will be discussed. Demographics and other factors related to families which are not likely to be specific targets of family engagement efforts

are next discussed. Finally, factors which might serve as mechanisms of change, to enhance family engagement in their child's education will be discussed.

**Dimensions of family engagement.** Family engagement has been considered from various theoretical standpoints and has been operationalized in many different ways. Research supports family engagement as a multidimensional construct and, although current evidence has not clearly converged upon one clear set of constructs that comprise family engagement, most recent models include school- and home-based involvement as separate constructs (Epstein & Dauber, 1991; Fantuzzo et al., 2000; Grolnick & Slowiaczek, 1994; Kohl et al., 2000; McWayne et al., 2004; McWayne et al., 2013; Waanders et al., 2007). Table 1 outlines various dimensions of family engagement examined over the years with various populations. It begins with early conceptualizations involving a broad age range of students which were influential in the evolution of the notion of a multidimensional construct (Epstein & Dauber, 1991; Grolnick & Slowiaczek, 1994). The chart then focuses on more recent models specific to the early childhood years (Fantuzzo et al., 2000; Kohl et al., 2000; McWayne et al., 2004; Waanders et al., 2007). The recent models addressing family engagement in preschool programs tend to focus on three main constructs: family participation in school-based activities, support for children's learning at home, and communication or relationship-building between home and school (Waanders et al., 2007; Fantuzzo et al., 2000). In particular, home-based involvement seems to be a dimension which is independent of school-based involvement or the relationship between parents and teachers (Waanders et al., 2007).

It remains uncertain; however, if these dimensions are the most salient for all cultures or populations. While most of the studies examining various dimensions of family engagement

have involved high need populations, thus promoting generalizability across some populations, there is emerging evidence of unique patterns of family engagement in Latino families

Table 1

*Dimensions of Family Engagement across Different Studies*

| <u>Study</u>                                       | <u>Study Participants</u>   | <u>Family Engagement Constructs</u>   |
|--|---|---|
| Epstein & Dauber (1991)                            | 171 teachers from five elementary and three middle schools in inner-city districts                | <ul style="list-style-type: none"> <li>• Basic child rearing obligations of families</li> <li>• Schools' basic obligations for communication</li> <li>• Parent involvement at school</li> <li>• Parent involvement in learning activities at home</li> <li>• Parent involvement in decision making</li> </ul> |
| Grolnick & Slowiaczek (1994)                       | 302 6 <sup>th</sup> to 8 <sup>th</sup> graders in a predominantly Caucasian middle-class district | <ul style="list-style-type: none"> <li>• Behavioral involvement</li> <li>• Exposure of child to cognitive and intellectual activities</li> <li>• Personal involvement or interest in children's school and learning</li> </ul>  |
| Kohl, Lengua, & McMahon (2000)                     | 387 kindergarteners from high-risk neighborhoods  | <ul style="list-style-type: none"> <li>• Parent-teacher contact</li> <li>• Parent involvement at school</li> <li>• Quality of the parent-teacher relationship</li> <li>• Teacher's perception of the parent</li> <li>• Parent involvement at home</li> <li>• Parent endorsement of the school</li> </ul>      |
| Fantuzzo, Tighe, and Childs (2000)                 | 641 preschool, kindergarten and 1 <sup>st</sup> graders from a large urban district               | <ul style="list-style-type: none"> <li>• Home-based involvement</li> <li>• School-based involvement</li> <li>• Home-school conferencing</li> </ul>  |
| McWayne, Hampton, Fantuzzo, Cohen, & Seking (2004) | 307 low-income, ethnic minority families  | <ul style="list-style-type: none"> <li>• Home learning environment</li> <li>• Direct school contact</li> <li>• Inhibited involvement (barriers to involvement)</li> </ul>   |
| Waanders, Mendez, and Downer (2007)                | 154 Head Start families   | <ul style="list-style-type: none"> <li>• Home based involvement</li> <li>• School-based involvement</li> <li>• Parent-teacher relationships</li> </ul>  |
| McWayne, Melzi, Schick, Kennedy, & Mundt (2014)    | 650 Latino Head Start families  | <ul style="list-style-type: none"> <li>• Foundational education</li> <li>• Supplemental education</li> <li>• School participation</li> <li>• Future-oriented teaching</li> </ul>  |

(McWayne et al., 2013). The four distinct dimensions of family engagement found by McWayne et al. in a study involving 650 Latino families of children enrolled in Head Start were foundational education, supplemental education, future-oriented teaching, and school participation (2013). Latino families may have cultural views of education and learning that differ from the typical school system in the United States and constructs that fit naturally with the school system may not appropriately capture the ways in which they support their children (Hill & Torres, 2010). Further research into family engagement in children's education across cultures and populations may provide insights that will help in building stronger partnerships between families and schools on behalf of high need children. Because the research regarding differing patterns of involvement across various ethnicities and cultures is in the early stages, the remainder of this paper will focus on the three dimensions of parent engagement commonly documented in preschool settings: school-based involvement, home-based support for learning, and school-home communication.

Another variation in examining dimensions of family engagement is consideration of the level of active participation on the part of families. Two studies provide evidence that more active engagement is associated with improved outcomes. Marcon (1999) explored passive types of family engagement in preschool versus more active types of participation in a study of 708 preschoolers. Family engagement practices considered to be passive included communicating, parent-teacher conferences, and home visits; while volunteering, class visits, and assisting with class activities were considered to be active types of engagement. The active types of engagement were associated with more positive outcomes, including mastery of basic skills and improved adaptive development. Dunst, Trivette, and Hamby (2007) have theorized two types of help-giving used as a part of family-centered practices: relational and participatory.

Relational help-giving practices are actions typical of a clinical relationship such as active listening, strengths-based supports, respect and empathy, while participatory help-giving practices actively engage families in working toward responsive and individualized goals and outcomes. In a meta-analysis of research, participatory help-giving practices were found to be more strongly related to positive outcomes than relational help-giving practices, although relational help-giving practices were more strongly related to satisfaction measures.

This study examines preschool teachers' communication with families about their children's learning and development, which is in keeping with the dimension of home-school communication prevalent in early childhood literature. While sharing and gaining valuable information regarding children's learning and development is one reason for engaging in bi-directional communication with families, this dimension of family engagement is also intended to coordinate efforts to support children's learning across the home and school settings. Asking families for input about the skills and behaviors observed at home may also increase the level of home-based engagement. While Marcon (1999) considered communicating and conferencing as passive on the part of families, communication strategies that actively engage families in constructing an understanding of children's learning and development, planning goals, and working to foster further learning may align well with what Dunst et al. (2007) refer to as participatory help-giving practices. Such active engagement holds promise as a strategy for improving child outcomes. Because teacher communication with families about children's learning and development is the focus of this research, a later section will focus more thoroughly on this dimension of family engagement.

**Family factors related to family engagement.** Families vary across many factors including family composition, race, culture, socio-economic status, mental health status, and

education. Many of these factors are likely to influence the level or type of family engagement, as certain life circumstances present barriers to family engagement while other circumstances facilitate ongoing positive interactions with schools. For example, Lamb-Parker et al. (2001) found the most common barriers to involvement in Head Start to be schedules conflicting with school hours, having other younger children to care for at home, or symptoms of depression. While a great deal more research is needed to better understand how specific family factors relate to various dimensions of family engagement, some research has examined this relationship, with a few studies considering overall levels of engagement and others examining specific dimensions of family engagement. In this section, the relationship between specific family characteristics and family engagement are examined. These relationships provide information which may assist in planning or targeting specific family engagement practices, including planning the most viable ways to engage families in ongoing communication about children's learning and development.

In some studies, lower SES status has been associated with lower levels of family engagement in elementary (Griffith, 1998) and secondary school (Crozier, 1997; Keith, et al., 1998), although Marcon (1999) found no differences in family involvement for preschoolers across income levels. Research does suggest that barriers faced by lower income families may limit their ability to participate in the manner commonly expected by teachers (Lamb-Parker et al., 2001; Lareau, 1987). In addition to differing patterns of involvement for various SES and racial-ethnic groups, the linkages between family engagement and student outcomes appear to vary across both race-ethnicity and income levels (Dearing, Kreider, Simpkins, & Weiss, 2006; Desimone, 1999).



Because many state and federally funded preschool programs specifically target low income families, resulting in a lack of heterogeneous groups within similar settings, examining the relationship between SES and family engagement is even more challenging for this age group than it is in the broader school population. Arnold et al. (2008) included five centers that served differing populations in a study of preschool family engagement which found that SES status was positively associated with levels of family engagement. However, because the families experienced different situations, with low income families concentrated in three centers and middle to high SES families concentrated in another two centers, it is hard to draw conclusions from this research. In addition, no measures of the level or quality of family engagement efforts across the various centers were included, making it difficult to compare the experiences of the families from the SES groupings. Waanders et al. (2007) found that economic stress and neighborhood disorder, as reported by families, was associated with lower levels of parent involvement; however, the participants in this study were all enrolled in Head Start programs targeting low-income families. Again, without comparable groups and a diversity of income levels represented within the study, it is difficult to draw conclusions regarding the relationship between SES and family engagement for preschoolers.

Parental education levels have also been found to be predictive of family engagement in a broad school-based population. Grolnick and Slowjaczek (1994) found that maternal education was related to exposure to cognitive and intellectual activities and to a personal involvement or interest in children's school and learning in a sample of middle school students. Paternal education was also related to exposure to cognitive and intellectual activities and weakly to behavioral involvement at school. In a sample of kindergarten students, Kohl et al. (2000) found parental education levels to be associated with parent-teacher contact, parenting involvement at

school, teacher's perception of parent and parent's involvement in children's learning at home. Powell et al. (2010), however, found no differences in family engagement based on differences in maternal education in a study of inner-city preschool families.

Additional family factors considered in the research include marital status and maternal depression. Single-parent status has been found to be associated with lower levels of involvement in middle school (Grolnick & Slowiaczek, 1994) and preschool (Arnold et al., 2008). Single parent status acted as a mediator of the effects of SES on family engagement in a study conducted by Arnold et al. (2008). Kohl et al. (2000) found single parent status to be specifically associated with involvement at school, the quality of the parent-teacher relationship, and teacher perception of the parent. Findings regarding the relationship between family engagement in early childhood and maternal depression were mixed with Arnold et al. (2008) finding no relationship and Kohl et al. (2000) finding a relationship between maternal depression and five different dimensions of family involvement (parent involvement at school, the quality of parent-teacher relationship, teacher's perception of parent, parent involvement at home and the parent endorsement of the school).

Despite research support family engagement as a multidimensional construct, some of these studies examining the relationship between engagement and family factors focused on school-based involvement, making it difficult to draw strong conclusions from the current body of research. Indeed, there is evidence that patterns of involvement differ across income and racial-ethnic groups (Chang et al., 2015; Fan, 2001), with higher levels of in-home involvement in lower income and/or racial or ethnic minority populations (Boethel, 2003; Henderson & Mapp, 2002; McWayne et al., 2014). More research on patterns of family engagement across dimensions for various populations is needed. The study conducted by Kohl et al. (2000) offers

methodological strengths which might inform future research in this area including the use of a multidimensional definition of family engagement that includes home-based involvement and the use of both teacher and parent reports of involvement.

While research has addressed many family factors related to both school-and home-based engagement and guidelines and suggestions for family engagement with culturally and linguistically diverse populations exist (National Association for the Education of Young Children, 1995), little information exists about engaging families of children with special needs in general family engagement efforts. Winton and Turnbull (1981) found that parents of preschoolers with special needs in both specialized and inclusive settings varied in their preferences for family activities. All families involved in the study appreciated opportunities for informal contact, a type of contact which may be limited for students with disabilities who are provided with transportation as a part of their special education services. In addition, Winton and Turnbull (1981) found that 19% of parents liked the opportunity to decline involvement if they so preferred and suggested that anecdotal evidence from the study pointed to families having evolving needs and preferences related to family engagement.

A limited number of studies have considered home-based family engagement for children with special needs. One strategy for addressing home-based family engagement focuses on training parents to implement specific interventions at home (Matson, 2009); however, other studies have considered family engagement in types of home-based activities common to the broader population. Marvin and Miranda (1993) found that when compared to families enrolled in Head Start programs, families of children receiving preschool special education services had generally lower expectations regarding literacy and participated in fewer home-based literacy experiences with their children. In a study considering the home literacy experiences of children

with single or multiple disabilities, Marvin (1994) found that fewer than half of all the children with disabilities experienced being read to on a daily basis or had opportunities for writing or drawing on a regular basis. Marvin also found that families of children with multiple disabilities had lower expectations regarding their child's reading and writing skills. More research and targeted efforts to improve both school- and home-based family engagement for children with disabilities is needed.

What is clear from the current body of research is that SES, race-ethnicity, marital status, children's needs, and other social context factors interact to form a complex constellation of family engagement patterns and child outcomes. A study by Weiss et al. (2003) provides an example of the complicated nature of these relationships, with findings that low-income mothers who worked or attended school full time were less involved than other mothers, while low-income mothers who worked or attended school part-time were more involved than other mothers. The intricacies of the various factors impacting any individual family's engagement indicates a need for flexibility in family engagement practices and the employment of mechanisms to connect home-based support for learning with school-based education.

**Potential mechanisms of change.** In the previous section, family variables related to family engagement in children's learning and development were examined. These variables included factors that are fixed or unlikely to be influenced by family engagement efforts, such as race/ethnicity, income, and education levels. Consideration of the influence of these family variables is crucial for planning effective family engagement strategies; however, it is also important to understand more malleable factors which may form the mechanism by which family engagement strategies ultimately impact behavior. While this study focuses on the influences on teachers' communication with families about children's learning and development, the ultimate

goals are increased family engagement and improved child outcomes. Potential mechanisms for meeting these goals include support for families' self-efficacy beliefs, relationship-building, and role construction.

***Parental self-efficacy.*** Self-efficacy refers to the belief that one is capable of acting in a manner that has an impact on specific outcomes that are desired. In the field of education, parental self-efficacy refers specifically to the belief that one's actions as a parent will impact educational outcomes. In Bandura's (1997) theory of behavioral change, expectations regarding efficacy play a crucial role in determining behavior and there are multiple influences on efficacy expectations, including experiences with mastery, modeling others' behaviors, persuasion, and emotional responses to situations. Teacher self-efficacy related to communicating with families about children's learning and development will be discussed in a later section devoted specifically to study variables.

Parental self-efficacy is associated with higher levels of family engagement (Hoover-Dempsey, Bassler, & Brissie, 1992; Hoover-Dempsey & Jones, 1997; Pelletier & Brent, 2002; Waanders et al., 2007). In an early study examining the relationship between self-efficacy and family engagement, Hoover-Dempsey et al. (1992) found that self-efficacy beliefs and levels of school-based involvement were correlated; however, the study did not determine the direction of influence. It could be theorized that parents with stronger self-efficacy beliefs opted for participation because they felt that their involvement would make a difference. Alternatively, in line with Bandura's mastery experience theory (Bandura, 1997), parents who were successful in participating in the school setting might have higher levels of self-efficacy based on their experiences. Perceptions of self-efficacy may also be affected by child factors, including the presence of a disability (Rogers, Wiener, Marton, & Tannock, 2009).

Engagement activities that directly involve children are associated with higher parental self-efficacy beliefs than activities that indirectly involve children (Gettinger & Guetschow, 1998). This finding also fits well with Bandura's mastery experience theory (Bandura, 1977), as family members typically have a great deal of experience with their own children and therefore have had opportunities for successful experiences to build a sense of self-efficacy. Waanders et al. (2007) also found a close association between self-efficacy and direct involvement with children, with parents who were more educated and reported higher perceptions of self-efficacy having higher levels of home-based involvement. In addition to influencing the level of family engagement along both school-based and home-based dimensions, self-efficacy beliefs influence the quality of family-child interactions and may, in turn, have a significant impact on children's outcomes (Guzell & Vernon-Feagans, 2004; Teti & Gelfand, 1991; Trivette, Dunst, & Hamby, 2010). There is also evidence that self-efficacy mediates the impact of family interventions, as even when with minimal overall effects, self-efficacy served as a predictor of parenting skills as measured by parent self-report and responses to vignettes (MacPhee & Miller-Heyl, 2003).

Several lines of research have examined parental self-efficacy as a part of a larger theoretical model. One relevant line of research has examined self-efficacy in conjunction with family-centered practices. Family-centered practices are most often associated with early intervention services; however, these practices are used across many other fields, including education (Dunst et al., 2008; Trivette et al., 2010) and may be especially relevant to preschool due to the common early childhood developmental period and the relative significance of the home environment. While preschool programs tend to be more professionally centered and treat families as allies, rather than using family-centered practices (Dunst, 2002), family-centered practices may offer a means for supporting families to provide home-based support for learning

and development. This line of research has shown that family-centered help-giving practices affect parenting behaviors directly, impact self-efficacy beliefs, and influence parenting behaviors indirectly, with self-efficacy beliefs playing a mediating role (Dunst et al., 2008; Trivette et al., 2010). In one meta-analysis of family-centered practices research, Dunst et al. (2007) outline three specific areas for which families' sense of control is related to self-efficacy beliefs: general life events, practitioner help-giving, and program resources. Findings from this meta-analysis indicate that a sense of control of practitioners and programs were more strongly related to parent, family, and child outcomes than were beliefs regarding control over life events not related to the family-professional relationship.

Another line of research has examined self-efficacy in relationship to how families become and stay engaged in education or intervention. Nordstrom, Dumas, and Gitter (2008) examined whether parental self-efficacy beliefs were predictive of engagement in a supplementary preventive parent program offered at preschools. This study found that parents with higher beliefs of self-efficacy were more likely to initially enroll in the preventive program, but that parents with lower levels of self-efficacy were more likely to continue participation in the program. This study seems to indicate that there may be a need for some minimal level of self-efficacy belief in order to become involved, but that continued involvement may have been more rewarding for those with more to gain from the intervention. Additional research in this area has specifically focused on self-efficacy in relationship to parental role construction and will therefore be further discussed in the following section.

***Role construction.*** The decisions that families make regarding participation in their child's education are often considered within the context of role construction. One influential theoretical model was developed by Hoover-Dempsey and Jones (1997) after an examination of

role construction in relation to family engagement. This theory has shifted over time, benefitting from improvements based upon further research. Hoover-Dempsey and Jones's 1997 study examined multiple variables including parental childrearing values (favoring either child conformity or child uniqueness), beliefs about responsibility for education related to day-to-day event, and beliefs related to major decisions about their child's education. Findings indicated that involvement in day-to-day education activities and involvement in major decisions represent distinct domains of role construction. Parental self-efficacy was negatively related to school-focused behavior and was not correlated to partnership-focused behavior; however, it was positively correlated with parent-focused behavior. Although some research has linked self-efficacy to school-based involvement, overall this finding aligns with the body of research suggesting a stronger linkage between self-efficacy and parent child interactions at home or at school. The results of this study led to the development of a model of the parent involvement processes which included construction of the parental role, self-efficacy beliefs, and opportunities and demands for involvement as influences on families' decisions to become involved.

In an extension of this work aiming to test this theoretical model, Reed, Jones, Walker, and Hoover-Dempsey (2000) found that the combination of role construction, self-efficacy, and perceptions of invitations for involvement accounted for a full third of the variance in family involvement. In further exploration of the relationship between these variables, role orientations that were parent-focused or partnership-focused were found to mediate the effect of self-efficacy on family involvement. Overall, the findings in this study indicated that self-efficacy influenced families' decisions; however, role construction and teacher invitations were more proximal in decisions to become involved in their child's education.



In 2005, the original model (Hoover-Dempsey & Sandler, 2005) was revised based on findings from efforts to construct scales to measure the various constructs in the model. The new model incorporated both self-efficacy and role construction as a part of a larger construct of parents' motivational beliefs while still including perceptions of invitations as contributing to the various forms of parent involvement (Walker, Wilkins, Dallaire, Sandler, & Hoover-Dempsey, 2005). This model also included perceived life context (e.g. time and energy, skills and knowledge) as an influence on involvement. Findings from Anderson and Minke (2007) contradict some of the 2005 revisions to the Hoover-Dempsey and Sadler model, indicating that self-efficacy and role construction are indeed unique and separate factors. However, this study suffered from some methodological difficulties which limit the ability to draw conclusions, including significant restraints on survey protocols by school leaders. In a more recent study related to this model of parental involvement, Whitaker and Hoover-Dempsey (2013) found that parents' current experiences with the school were more influential than prior experiences with schools in determining involvement. This study also found that parent perceptions of the school's expectations about involvement, the school climate, and student invitations all predicted role beliefs (Whitaker & Hoover-Dempsey, 2013). This finding points to the importance of strong relationships between schools and families that encourage engagement.

It remains unclear whether these theoretical models hold true for families of children with disabilities. In one study examining many of the constructs in the Hoover-Dempsey and Sadler model, Rogers et al. (2009) found that parents of children with Attention Deficit Hyperactivity Disorder (ADHD) reported lower perceptions of self-efficacy despite role beliefs that were similar to parents with children without ADHD. In addition, these parents felt less welcome at school and reported having less time and energy to devote to involvement activities. In general

agreement with the Hoover-Dempsey and Sadler model, Yotyodying and Wild (2016) found that role construction was a predictor of home-based involvement for children with learning disabilities. Further research of the additional constructs in this model across ages and types and severity of disabilities is needed to further understand how families become and remain involved in the education of young children with disabilities.

***Family-school relationships.*** In addition to family variables related to self-efficacy and role construction, relationships between families and schools influence family engagement in education (Powell et al., 2010; Waanders et al., 2007; Whitaker & Hoover-Dempsey, 2013). Waanders et al. (2007) found that, in particular, relationships between teachers and families specifically influenced the level of school-based involvement, but not levels of home-based involvement or home-school conferencing. Despite a great deal of focus on building positive relationship in documents outline best practice (Division for Early Childhood, 2014; National Association for the Education of Young Children, 2005), research specific to family-school relationships is limited. Those studies that do examine relationships have typically included this as one variable in a study focused on other aspects of family engagement, resulting in a somewhat disjointed body of research on this topic. This paper highlights some of what has been found regarding family-school relationships including the role of program structures, school climate, trust, and responsiveness.

Dunst, Johanson, Trivette, and Hamby (1991) describe 4 varying program models that reflect differences in the types of relationships shared between professionals and families. While used to describe human services programs, early care and education programs easily fit into this conceptualization, which focuses on how programs frame the respective roles that professionals and families take in relationship to each other. In professionally-centered program models,

teachers and programs take a leading role as an expert. In family-allied program models, families are viewed as implementers of what professionals deem important. In early care and education settings, this model aligns to practices such as sending home specific activities for families to implement with children to support a school-focused goal. Family-focused models recognize families as consumers and allow for choice. Finally family-centered models are driven by individual needs, with professionals acting on behalf of family priorities. These general models reflect differing philosophies regarding how families and professionals relate to each other and are useful in considering how assessment of child progress and goal setting is conducted in early care and education settings. These models and the philosophy behind them are also likely to influence other factors related to family-school relationships such as school climate, the level of trust shared between professionals and families, and family perceptions of the teacher.

A positive school climate helps to build strong relationships and is important to engaging and involving both children and families. Positive school climate is associated with improved student outcomes (Stewart, 2008) and families that feel welcome in schools are more likely to participate in school-based activities, due to the perception of invitations to be involved. Hoover-Dempsey and Sandler's (2005) theoretical model includes parent perceptions of invitations for involvement, including invitations from the school, teacher, and student, suggesting that strong relationships that stress involvement result in increased engagement. In a study of school variables that influence parent beliefs about their role in their child's education Whitaker and Hoover-Dempsey (2013) found varying results across two schools, with student invitations to participate at school, expectations for involvement on the part of the school, and school climate all predicting parental beliefs that they should be involved in their child's

education in one school, and school climate predicting such role beliefs in the other school.

Benson, Karloff, and Siperstein (2008) found that, similarly, school involvement of parents of children with autism was influenced by the extent to which their involvement was encouraged by school personnel.

Powell et al. (2010) examined perceived teacher responsiveness to children as a component of parent teacher relationships in 13 state-funded preschool classrooms. In this study, the parent-school relationship was conceptualized as including two dimensions: parental school involvement and perceived teacher responsiveness to children. This study found parents' perception of the teacher's responsiveness to their child to be independently predictive of reading and social skills and negatively associated with challenging behaviors; and found school involvement to be predictive of mathematical and social outcomes. This study controlled for the quality of the relationship between teachers and children, as well as for home involvement, education levels, and race/ethnicity. This study added to the knowledge base in the area of family engagement; however, the conceptualization of involvement as one component of the parent-school relationship is not in keeping with previous research. It would have been valuable if the authors had examined the relationship between parental involvement and perceived teacher responsiveness, as well as considering how these factors impacted student outcomes.

Trust is another important aspect of the relationship between families and teachers. Trust is associated with higher quality relationships between teachers and families (Adams & Christenson, 2000), improved student outcomes (Adams & Christenson, 2000; Santiago, Garbacz, Beattie, & Moore, 2016), and higher levels of overall family engagement (Santiago et al., 2016). Overall studies indicate that parents tend to trust teachers more than teachers trust parents

(Adams & Christenson, 2000; McGrath, 2007) and that families experiencing risk factors may have lower levels of trust in teachers and schools (Santiago et al., 2016).

Adams and Christenson (2000) found that parental satisfaction with their interactions with teachers was more predictive of trust than the frequency of these interactions. Quantitative studies such as Adams and Christenson (2000) and Santiago et al. (2016) provide valuable information about family-school relationships; however, the nature of this type of research makes it difficult to capture the complex interplay between teachers and families. An ethnographic case study conducted by McGrath (2007) provides rich information about the nature of relationships between early care and education providers and parents. Although this information cannot be generalized to other settings, it provides a sense of the complexities of interactions between early care and education providers and families and points to some general themes that emerge in such relationships. This study characterized the relationship as one in which power and trust were key factors which were at an imbalance. Power was distributed unevenly, with parents holding a type of power due to family choice and voice within the program and, in some instances, due to their own higher professional status. Teachers also held a type of power over classroom practices and programmatic policies. McGrath (2007) found that parents trusted teachers out of necessity as they needed to leave their children and this required them to feel a sense of trust in those caring for their children. Teachers, however, displayed less trust of families, possibly related to instances when teachers applied center policy in a flexible manner, which ironically then influenced their own view of families as trustworthy.

**Factors related to family engagement for children with special needs.** While the factors and potential mechanisms of change addressed here may apply to families in general, differences in the interplay between these constructs may exist for families when their child has a

disability. Parental sense of self-efficacy may be impacted by challenges associated with meeting children's needs, potentially impacting decisions about involvement, regardless of role beliefs (Rogers et al, 2009). Additional barriers to participation in school-based and/or home-based engagement may exist based upon the existence of challenging behaviors (Benson et al, 2008), the perception that children are difficult (Grolnick et al., 1994), and/or expectations for children's outcomes (Marvin & Miranda, 1993).

The setting in which a child receives the special education services may also impact family engagement, as there is some evidence that setting impacts family engagement behaviors. Yotyodying and Wild (2016) found that when children were in inclusive settings the use of parental controlling behaviors during family engagement activities was mediated by parent's educational aspirations for their child and their sense of shame regarding their child's disability, both of which the authors conjectured were related to the setting. In inclusive settings, there may also be a mix of professionals interacting with families; however, it is not clear that these professionals are always well prepared to meet the unique and multi-faceted needs of families of children with special needs. In a study reviewing implementation of IDEA, only one half of schools reported that special education teachers were prepared to work toward increased parent involvement and even fewer reported that general education teachers were prepared for such efforts (Misra, 2006). In addition, teachers trained in supporting families of children with disabilities may not be prepared to address those typical parental concerns that are common to all parents (Royster & McLaughlin, 1996).

Despite a strong focus on family engagement in general education and the procedural safeguards protecting the rights of families of students with disabilities in regard to the least restrictive environment, little information or research is available regarding the effectiveness of

general family engagement practices for families of children with disabilities. These isolated findings are often from studies that are very appropriately focused on specific disability and age groups. At present, this body of research provides some insights into how the complexity of constructs related to family engagement are further complicated by the various factors related to a child's disability; however, a great deal more research is needed in this area in order to leverage these potential mechanisms of change to increase family engagement and affect outcomes for students with disabilities.

The various factors related to family engagement in early care and educations discussed in this section provide potential mechanisms to leverage in efforts to increase or improve involvement. Based upon the research to date, interventions that build families' sense of self-efficacy, support the construction of a strong and active role in education, and/or foster positive, trusting relationships seem most likely to improve family engagement and support positive child outcomes. Special consideration of how these factors might be influenced by child characteristics, including the presence of a disability or challenging behaviors, are also important for planning family engagement strategies and/or research. The following section discusses current research on specific strategies or interventions that seek to improve family engagement.

**Family engagement interventions.** Efforts to improve family engagement include strategies to increase the frequency or type of school-based involvement, specific interventions that seek to improve or increase family support for learning and development at home, and strategies to improve home-school communication. In the *Compendium of Parenting Interventions* compiled by the National Center on Parent, Family and Community Engagement (2015) potential theories of change used by various parenting interventions are discussed, including:

- Building self-efficacy by empowering families, building on strengths and promoting mastery experiences,
- Promoting traditions, beliefs and parenting practices associated with families' culture,
- Providing information about learning and development,
- Modeling interactions with children,
- Shifting attitudes or beliefs, and
- Promoting family health and well-being by reducing stress or promoting parent education.

This paper focuses specifically on interventions that are used in conjunction with preschool programs; however, the various approaches discussed draw upon differing theories of change.

***Interventions targeting school-based involvement.*** Few well-defined interventions specifically targeting school-based involvement have been evaluated. Instead, in keeping with the recommendations of professional organizations and governmental agencies, programs or schools tend to employ a variety of family engagement strategies (Division for Early Childhood, 2014; National Association for the Education of Young Children, 2005; U.S. Department of Health and Human Services, 2011), which tend to be evaluated as a part of overall program improvement efforts instead of as a part of rigorously designed research.

In one study examining self-efficacy, cultural diversity and teacher strategies in a specific preschool-based program, Pelletier and Brent (2002) report that the most commonly used strategies to promote school-based involvement were invitations to participate in specific activities, creating a positive and culturally sensitive environment, information about special



events, and parent education workshops. Challenges to school-based involvement include the level of family resources, staff resources and training related to family engagement, and family and staff cultural values (Hamilton, Roach, & Riley, 2003). Overall program structure may also promote or inhibit the amount of school-based involvement. Dunst, Bruder, and Espe-Sherwindt (2014) report that even early intervention services which employ family-centered practices have lower levels of parent involvement when offered in settings other than a family's home. This finding suggests that setting plays a key role in the nature of the services provided. Hilado, Kallemeyn, Leow, Lundy, and Israel (2011) found that the provision of social resources had a positive and large effect on levels of family involvement; however, a great deal of the variance in family involvement was attributed to other factors.

O'Donnell and Kirkner (2014) implemented a family engagement intervention collaboratively developed with, and for, Latino families of elementary school students. This intervention involved weekly educational opportunities for families, annual staff training and consultation, and monthly social events. This intervention precipitated improvements in family-teacher contact as well as in the rated quality of family-teacher relationships. In addition, this intervention was successful at increasing school-based involvement; however, home-based involvement remained higher than school-based involvement following intervention. Based upon research suggesting the home-based involvement is more predictive of child outcomes (Fantuzzo et al., 2004) than other types of involvement, this outcome seems highly desirable as it indicates potentially improved connections between the preschool and home, while maintaining an existing strength in the area of family engagement.

***Interventions targeting home-based involvement.*** Interventions targeting home-based involvement typically occur as a stand-alone program or as a unique component of an existing

school-based program. Therefore, these interventions lend themselves to more rigorous evaluation than the multiple strategies typically employed to enhance school-based involvement. As a result, a wide variety of programs to enhance home-based involvement have been studied. The National Center on Parent, Family, and Community Engagement developed the *Compendium of Parenting Interventions* (2015) to assist professionals in selecting evidence-based family engagement interventions. This compendium provides information about the number of peer-reviewed publications providing evidence of effectiveness that exist for each intervention. Four interventions are listed as having extensive evidence and ten interventions, some with multiple versions, are listed as having adequate evidence. Clearly, there is ample evidence that specific interventions to support home-based family engagement can be effective at improving child outcomes. Two interventions from the compendium employ a design to be used in conjunction with a preschool program: the Chicago Parent Program and the Incredible Years Preschool Program. The Chicago Parent Program involves the use of videos to illustrate parenting challenges and provide a basis for discussion about problem solving and strategies to support children's social-emotional development. This intervention is provided in two-hour parent groups over the course of 11 weeks, with a follow-up session one to two months following the completion of the program. Outcomes from numerous studies of the Chicago Parent Program include decreases in behavioral issues that continue over time, improvements in parents' skills in dealing with challenging behavior, and increases in parental self-efficacy (The Chicago Parent Program, 2013). The Incredible Years Preschool Program includes three dimensions: a teacher training component, a parent component, and a child curriculum (Webster-Stratton & Reid, 2010). Teacher training focuses on classroom management strategies while the parent component addresses the parent-child relationship, communication between home and

school, children's social skills and self-regulation, and the development of a supportive network. Finally, the child component addresses social-emotional skills through a classroom-wide curriculum and a more targeted, small group intervention. This intervention has had four randomized control trials that have demonstrated its effectiveness (The National Center on Parent, Family, and Community Engagement, 2015) and has been shown to improve children's social and emotional skills, including self-regulation; decrease issues related to conduct problems; and increase family involvement in children's learning (Webster-Stratton & Reid, 2010).

In addition, a number of interventions target family support of specific child outcomes. This brief review of such interventions focuses on interventions for families of high need preschool children which have been studied using experimental or quasi-experimental research. Two studies examined the effectiveness of interventions aimed at enhancing parent-child interactions in order to improve social-emotional outcomes (Brassart & Schelstraete, 2015; Sheriden, Knoche, Edwards, Bovaird, & Kupzyk, 2010), two examined the effectiveness of a shared (dialogic) reading strategy (Lonigan & Whitehurst, 1998; Zevenbergen, Whitehurst & Zevenbergen, 2003) on measures of language and/or literacy, and one examined an intervention aiming to increase home support for mathematical development (Starkey & Klein, 2000). All five studies demonstrated some positive outcomes for children. Sheriden et al. (2010) found improvements in interpersonal confidence, but did not find effects for measured items associated with behavioral concerns, while Brassart and Schelstraete (2015) showed a decrease in externalizing behaviors. One study that focused on language and literacy found moderate effect sizes for the use of specifically outlined evaluative devices (Zevenbergen et al., 2003) while the other found overall effect sizes (combining all treatment groups) on expressive language (Lonigan & Whitehurst, 1998). Unfortunately, the studies targeting language and literacy

outcomes had some methodological issues, with Zevenbergen et al. (2003) relying heavily on researcher-developed measures of child outcomes and Lonigan and Whitehurst (1998) suffering from a significant issue with fidelity of implementation, leading them to analyze results differentially across compliance levels. Starkey and Klein (2000) investigated the effects of a family mathematics curriculum provided during a parent-child mathematics course along with access to a math library. This study showed improvements in children's mathematical development for those who participated in the intervention; however, it is difficult to illustrate that these shifts were due to home-based supports or the actual participation in the course activities. Families did borrow items from the math library, but little information is known about whether they were used at home and whether home-based involvement impacted mathematical development over and above the school-based intervention.

Despite some variations in program design and targeted outcomes, this body of research supports that intervention programs that target family support of high need children's learning and development at home can be effective in improving outcomes for preschool children. One potential strategy for increasing family support of learning and development at home is to increase teacher communication with families. Consistent and ongoing discussion about children's learning and development can provide a mechanism to support families to engage with their children in learning activities during the course of daily routine, provide scaffolded support as they work to determine current skill levels, and use their increased understanding of their child's skills to support next steps. Swanson, Raab, and Dunst (2011) demonstrated the efficacy of similar capacity-building strategies with preschoolers with developmental delays in a multiple-baseline study involving four families. This intervention approach focused on building families' capacity to draw upon children's interests, support children's participation in everyday

learning opportunities, and respond to children's current skills in order to build on strengths and support new behaviors. While further research in this area is needed, there is a clear foundation for such efforts within the current literature.

***Interventions targeting home-school communication.*** Despite the stress placed on communication between home and school (Division for Early Childhood, 2014; National Association for the Education of Young Children, 2005; U.S. Department of Health and Human Services, 2011) and a push to orient family engagement toward children's learning (Mapp & Kuttner, 2013), few studies specifically examine interventions designed to improve communication about preschool children's learning and development. The Incredible Years Preschool Program targets home-school communication as one aspect of a much larger program design, as discussed in the previous section of this paper (Webster-Stratton & Reid, 2010). Although communication and/or conferencing were not specifically addressed, O'Donnell and Kirkner (2014) found that as a result of an intervention designed to increase engagement of Latino families, parents had increased contact with teachers and that the quality of their relationships improved. Efforts to improve home-school communication must address potential barriers to participation and communication. Barriers to parent involvement include time and financial constraints, having a baby or young child at home, access issues and lack of awareness of the importance of involvement (Lamb-Parker et al., 2001; Williams & Sanchez, 2013). For example, Winton and Turnbull (1981) found that families of children with disabilities had a preference for informal contact; however, structural barriers to this type of communication might exist, especially for children with disabilities who receive transportation services that limit family contact with the teacher. Clearly, additional research is needed in the area of home-school communication and potential interventions to leverage this aspect of family engagement

to improve child outcomes. This study specifically examines teachers' communication with families about their child's learning and development with the goal of providing information that might lead to successful interventions in this area.

This section has focused on research in the broad area of family engagement, including the relationship of family engagement to child outcomes, factors influencing family engagement, and specific interventions that enhance one or more forms of family engagement. Throughout this section, discussion has touched upon how this research relates to the more specific dimension of family engagement that is the focus of this study: teacher communication with families about their child's learning and development. The Dual-Capacity Building Framework (Mapp & Kuttner, 2013) outlines potential family capacity outcomes, several of which would be supported by engaging families as partners in co-constructing an understanding of children's learning and development. These specific roles include supporting children's learning and development, improving learning opportunities, encouraging a positive sense of self as a learner, and collaborating with school staff. (Mapp & Kuttner, 2013, p. 11). Research and general professional literature specific to communication strategies and the sharing of information regarding children's learning and development with families is extremely limited; however the following section addresses what literature is available that addresses communication with families regarding children's learning and development.

### **Communication with Families Regarding Children's Learning and Development**

Teacher communication with families was previously discussed as one dimension of family engagement in children's education (Fantuzzo et al., 2000; Kohl et al., 2000) and as a potential focus of intervention. Improvements in home-school communication may serve as a mechanism for enhancing trust (Adams & Christenson, 2000), improving relationships, and

increasing overall family engagement (Ames et al., 1995) as discussed in previous sections. Home-school communication has been found to influence how families view their child as a learner (Ames et al., 1995) and therefore may serve as an important factor in influencing the nature of home-based involvement in children's learning. Communication is an important factor in relationship-building and it has been recommended that establishing trust is necessary if communication is to involve meaningful and reciprocal discussions (Swick, 2003). Knopf and Swick (2008) recommend seven strategies for family communication, each with specific strengths and weaknesses: home visits, surveys, focus groups, telephone calls, email, parent conferences, and family communication journals. These various strategies may serve as different mechanisms for gaining information from families regarding their child's developmental progress.

Very few studies specifically examine teacher-family communication about children's learning and development. Policy Studies Associates, Inc. (1997) prepared a report on addressing barriers to family involvement in Title 1 schools for the National Institute on the Education of At-Risk Students based upon multiple data sources. This study included the results of questions related to home-school communication from the U.S. Department of Education, National Center for Education Statistics, National Household Education Survey conducted in the spring of 1996. In this survey, communication about children's learning and development was included within the larger topic of family involvement. Results indicate that for students from kindergarten through grade two, 64% of parents felt that schools did "very well" at letting them know how their child is doing, 50% felt that schools did very well at helping them understand what children at their child's age were like, and 56% felt that schools did very well at providing

workshops, materials or advice about helping with children's learning at home. The ratings for each of these communication topics declined as children advanced to higher grade levels.

Because little research is available that addresses teacher communication with families about children's learning and development, it is important to consider the professional literature in the area of engaging families in the assessment process. While assessment is generally considered to be a more formal or targeted process for considering children's learning and development, findings from these studies may inform the broader goal of ongoing communication about learning and development. In considering family engagement in the assessment process, it is important to weigh the goals of the particular assessment process being used, the way in which families are involved, and how the information from the assessment is used.

**Family engagement in the assessment process.** Best practice recommendations in early childhood education typically include broad guidance about collaborating with families in the assessment process (Division of Early Childhood, 2014) but offer little support for how this communication occurs or the variety of ways in which families might be engaged. When more specific guidance is offered, the focus is often on sharing data or assessment information collected by the teacher (National Center on Parent, Family, and Community Engagement, 2011). When it is discussed, the gathering of information from families is typically mentioned as a distinct action (Division for Early Childhood, 2014; National Center on Parent, Family and Community Engagement, 2011).

Crais (1993) discusses eight roles that families might take in the child assessment process that range from less to more active: receiver, observer, informant, describer, interpreter, validator, participant, or evaluator. Using a case-study methodology and school data related to



performance, attendance, and behaviors Harris and Goodall (2008) examined patterns and perceptions regarding family engagement across 30 schools. This study found that schools and families had differing views of engagement, with families viewing the purpose of engagement as support of children's learning, while teachers viewed the goal as improved behavior and the provision of support to the school. While this study focused on family engagement broadly, these findings, along with the multiple possible roles for families in the assessment process and the lack of specific professional guidance, reinforce a need for increased clarity around the purpose and role for family engagement in the assessment process. Crais (1993) points out that the primary issue may not be regarding what specific role that families take in the assessment process, but rather that the various roles are possible. Effective communication and clarity about the roles across parties is also important. Engaging families in a formative assessment process is one form of communicating about learning and development that holds promise as a way to support stronger connections, promote a vision for the purpose of family engagement in general, provide opportunities for ongoing communication about children's development, and provide clarity regarding the possible roles for families in the assessment process.

***Congruence of parent and professional reports.*** Much of the research examining the engagement of families in the assessment process to date has involved the development of specific screening tools or assessments that families complete (Ireton, Diamond, & Carney, 1993; Leung, Mak, Lau, Cheung, & Lam, 2010; Ring & Fenson, 2000; Squires, Twombly, Bricker, & Potter, 2009). These studies have often focused on the validity of parent report measures as compared to assessment by early childhood professionals. Overall, these studies find that parent reports of children's broad skills (Mengoni & Oates, 2015; Squires, et al. 2009), language skills (Ring & Fenson, 2000; Thordardottir & Weismer, 1996) and early literacy (Boundreau, 2005)

provide valuable information that coincides with information from other tools with strong validity evidence. In addition, accurate judgements have been shown in the case of low and middle income parents (Squires, Potter, & Bricker, 1998). Studies involving the concurrent validity of parental reports for children with disabilities have had mixed results with some studies showing that parents report somewhat higher skill levels than professionals. In a review of the literature Dinnebeil and Rule (1994) found that approximately half of the 23 studies examining parental and professional reports of children's development that were reviewed reported parental estimates that were higher than those of professionals. Overall, Dinnebeil and Rule found that, based upon those studies that provided the necessary information to determine effect sizes, parents' reports of children's development were approximately 3.6 months higher than the professional reports. Possible reasons for the higher ratings include a lack of knowledge of typical child development on the part of the parents (Zand, et al., 2015), overestimation of skills by professionals, or a focus on emergent skills on the part of families (Dinnebeil & Rule, 1994).

Sexton, Miller and Murdock (1987) examined factors that were correlated with higher levels of parent and professional agreement regarding skills of children with disabilities. They found that for mothers, family income had the most significant correlation to congruent scores, while for fathers the type of program model was more highly correlated with congruence, with home-based interventions correlating with higher levels of congruence. Schafer, Bell, and Spalding (1987) found that families provided higher ratings than professionals in certain areas of development; however, following training for families, initial differences in ratings were resolved, with differences in the area of cognition taking an average of 12 months to reach agreement.

Much of the literature regarding family engagement in the assessment process discussed so far focuses on the validity of parent reports as compared to professional reports, with an ultimate goal of families coming into alignment with professional assessments. Another way of considering *congruence* focuses on the similarities and difference between family and professionals in a non-hierarchical manner (Dinnebeil & Rule, 1994). Instead of a framework in which the professional judgement is considered accurate and the goal is for families to report similar information, this conceptual approach focuses on the agreement between the sources of information and the potential for discussion around points of non-convergence. This approach allows for a collaborative approach to assessment and coincides with the concept of co-constructing a mutual understanding of children's growth and development over time and across settings. Such an approach also aligns with a focus on functional skills, which might vary somewhat across contexts, and is compatible with the aim of supporting families in furthering their child's learning and development.

***Communication and information-gathering strategies.*** Stiggins and Chappuis (2005) address the need for developing effective communication systems designed to support assessment *for* learning instead of the current methods of communication that are focused on assessment *of* learning (e.g. assessment reports, report cards, parent-teacher conferences). Further exploration of communication channels for the ongoing, bi-directional sharing of information with families is needed. One challenge in soliciting family input as a part of any assessment process is determining the most effective process for gathering information. Families vary in their preferences for communication, literacy levels, and available time to devote to such endeavors. Families of high need children might have additional challenges regarding the

availability of time and resources to devote to communication and the provision of information about children's learning and development (Lamb-Parker et al., 2001).

The literature offers little empirical evidence regarding methods for engaging families in the assessment process. There are two studies that consider methods of collecting information from families. Other studies provide brief mentions of strategies used by individuals with little evidence cited in support of these decisions. Boudreau (2005) reports on the use of a questionnaire with families of preschoolers that asked for information on emergent literacy skills. Although the study clearly articulated the various types of questions that were used (closed questions, questions that asked for examples, and questions addressing frequencies), no further information regarding results related to the various question types was provided. It would have been valuable to consider family preferences or the perceived value of the information collected from the various types of questions. Long (1992) also addresses the types of questions used with family-report measures, indicating that, "parents are most reliable when assessing current functions" and "questionnaires and inventories with clear, specific directions to parents and clear statements describing the child's behavior generally yield more reliable information" (p.75). However, these findings are not clearly attributed to a specific study or validation process. Joan Stiles (1994) provides a rich, but rare, commentary discussing this issue in relation to the development of the MacArthur Communicative Development Inventories in which she describes the need for families to filter a vast amount of information about their child in order to respond to specific questions. Stiles also discussed the need to consider the types of decisions that families make in reporting and how the decision process might affect the content of the data. In this commentary, she recommended that parents report only on current behavior and respond to very specific questions instead of broad, more open-ended questions. Stiles' commentary echoes the

principles articulated by Long (1992); however, again these well-articulated and reasoned decisions are not supported with specific empirical evidence.

Bailey and Blasco (1990) offer one of the few examinations of the process of collecting information from families. In this study, the information collected was about family needs instead of children's learning and development; however, the finding that 60% of fathers and 40% of mothers preferred a written survey to discussion provides valuable information about family preferences. In addition, Bailey and Blasco found that minority mothers were slightly more likely to prefer discussion than white mothers. These findings, although related to sharing family information, suggest that it may be appropriate to allow for different modes of communication when families provide information about their children. However, less specific information is currently available about methods for families to provide information about their children's learning and development

The findings from a study by Birbili and Tzioga (2014) provide evidence regarding family participation in an authentic formative assessment process with preschool children, although, it is difficult to generalize the findings given that the study took place in a small town in northern Greece. Although SES, race, marital status, and other risk factors were not specifically addressed, the report that most families were employed in the private sector, with some farmers and free-lance professionals in the sample, seems to indicate that the sample did not include a significant number of high need children. Despite limited generalizability to the population of high need preschoolers in the United States, the findings provide a beginning foundation for additional research in this area. Birbili and Tzioga's study involved three teachers and 48 families, with teachers providing families with forms to complete in order to involve them in the assessment process. Teachers were instructed not to make families feel obliged to

participate, although reminders to return forms were encouraged. The response rate in this study was a very impressive 100%, indicating a high level of interest in providing information about children's development on the part of families. In addition to gaining family feedback on the process, three specific forms were used: an observation sheet that collected information about literacy and social skills using both open and closed questions. The reflection questionnaire required parents to reflect on past development and covered a broad range of domains in an effort to communicate the importance of learning across these areas. Finally a form was provided for recording children's utterances, with instructions to record whatever the family wanted to capture. The provided booklet asked families to record the utterance as well as when, where, and to whom the child had spoken. Families reported that they found the process very useful and no families reported finding it too demanding. The reflection questionnaire was reported as the most useful, followed by the observation form, and finally the booklet for recording utterances. When examining preferences for the types of questions, Birbili and Tzioga found that out of 46 respondents, 29 preferred the option of selecting a response from a list of answers or answering in their own words, 15 preferred to answer with just a selection, and two only wanted to respond in their own words. This provides a beginning understanding regarding family preferences, showing that options were generally desirable for these families. It would be also be valuable to examine what types of information helped teachers gain a better understanding of children's learning and development and to consider alternative formats for sharing information (e.g., oral or electronic communication).

One other example of involving families in assessment is a case study involving a family of a child with a disability collecting rich information about their child's development using a family-created portfolio as a mechanism for communication (Gregg, Rugg, & Souto-Manning,

2011). The article focused on the family's use of the portfolio to share their child's individuality, strengths, and motivations through a process they were able to control. While this study does not provide generalizable information, it provides a clear picture of one family's experience of providing information about their child. The portfolio approach had value for this family and reflects a clear family-centered approach; however, as implemented the portfolio did not provide information relative to the specific skills that may be the focus in a preschool setting. One option for involving families in the assessment process would be to adapt this approach such that families gather portfolio evidence related to specific areas of learning, focusing communication around common goals across families and teachers.

The literature on communication strategies and the sharing of information regarding children's learning and development is extremely limited. Like much of the research on family participation in the assessment process, the intent behind most of the studies that discuss the sharing of information is for parents and professionals to provide separate and unique information. Assessment with the intent to co-construct an understanding of children's learning and development and/or efforts to investigate instances of non-congruence with a goal of increasing mutual understanding may need to rely on different methods of communication. Further research involving the intended purposes of sharing information about children's learning and development and the best format for eliciting input and sharing information is needed.

The lack of research examining teacher communication with families, either addressing general strategies or specifically addressing communication related to children's learning and development, means that there is little to guide teacher preparation in this area. Adding to the challenges of providing teachers with specific and targeted guidance due to a lack of relevant

research is the fact that practicum or student-teaching opportunities are often focused on teacher-child interactions and offer little opportunity to practice communicating with families. It seems likely that based on these factors, teachers might not be well-prepared to engage in rich, bi-directional communication about children's learning and development. The following section reviews the literature available addressing teacher preparation in the area of family engagement practices.

### **Teacher Preparation Related to Family Engagement Practices**

Teachers gain knowledge and experience in communicating with families as a result of education and through their ongoing experience in the field. However, as the research reviewed in this section will show, higher education does not consistently prepare teachers in family engagement practices. Studies reviewing family engagement practices in relationship to the preparation that teachers received reveal that approximately half of special education teachers, and few general education teachers, are prepared to engage in efforts to increase parent involvement (Misra, 2006) and that teachers trained to support families of children with disabilities may not be prepared to address typical parental concerns that are common to all parents (Royster & McLaughlin, 1996). Bruder and Dunst (2005) surveyed early intervention practices covered in coursework at 155 institutes of higher education and found an absence of multiple areas, including family engagement.

Indeed, Shartrand et al. (1997) found that teacher preparation programs in a majority of states did not mention family engagement and that those who did mention family engagement did so in very vague terms. In a more recent qualitative case study of teacher preparation in Missouri, Wilson (2009) used a content analysis of courses, open-ended interviews of student teacher directors, and program observations to determine how family engagement practices were



addressed in teacher preparation programs. This study found that family engagement strategies were infused across coursework related to other content instead of being addressed in a specific course devoted to family engagement. Wilson (2009) also discussed barriers to preparing teachers to effectively engage a diversity of families that emerged from interviews with student teacher directors. These reported barriers included the difficulty associated with adding coursework to specifically address family engagement, the hesitation of cooperating placement teachers to involve families in the practicum or student teaching experience, and pre-service teacher resistance to family engagement practices. During focus groups conducted with faculty from five Illinois College of Education programs, similar issues were found including challenges related to cultural issues, pre-service teachers' negative attitudes related to parents, and a lack of opportunity to engage in parent and community partnering during pre-service education (Flanigan, 2007).

A few studies have examined the results of specific attempts to prepare teachers to engage families in their children's education. In one study, teachers were provided with a specific course in family engagement; however, teachers still expressed a need for more support to effectively engage families, despite having higher feelings of preparation than those teachers who did not take the coursework (Katz & Bauch, 1999). Mehlig and Shimov (2013) found that teachers who engaged in role-playing related to partnering with families related to assessment issues demonstrated gains in knowledge; however, application of this knowledge in practice was not examined. Walker and Dotger (2012) used videos of parent-teacher conferences as a means of assessing teacher candidate skills in communicating with families. This study, which involved students enrolled in courses taught by one of the study's authors, found that candidates had confidence in their ability to communicate with families but were unable to generate a range

of effective communication strategies. However, when scaffolding occurred through the use of a checklist, candidates were able to identify practices deemed effective based upon expert consensus. More research is needed to determine how to best prepare teachers to engage a diverse range of families and to guide institutes of higher education and state agencies responsible for credentialing and certification.

In addition, research into other influences on the frequency of teacher communication with families is needed. While teacher preparation is a key way that teachers gain knowledge and experience related to their teaching practice, teachers also gain knowledge and experience through on-the-job experience. This study explores a theoretical model in which structural (or programmatic) supports are hypothesized to increase opportunities for teachers to engage in communication with families. The next section focuses on the literature related to environmental or programmatic influences on teacher communication with families.

### **Structural Supports for Teacher Communication with Families**

Social learning theory focuses on the cognitive and social factors affecting behavior and is based upon a broader conceptualization of “triadic reciprocal causation” in which the environment plays a key role (Bandura, 1997, p. 5). In this study, programmatic features that influence motivation and/or impact the number of opportunities that teachers have to engage in communication about children’s learning and development are considered as potential environmental influences on this behavior. Practices and policies concerning conferences, family activities, program schedules, and transportation all have the potential to influence the number and variety of opportunities that exist for teachers to communicate with families. The literature in this area is limited; however, several studies point to various program or school practices which impact levels of family engagement. Dunst et al. (1991) describe four varying program

models that reflect differences in the types of relationships shared between professionals and families. While used to describe human services programs, the conceptualization of professionally-centered program models, family-allied program models, family-focused models, and family-centered models are easily applied to preschool settings. These general models reflect differing philosophies that in turn influence program practices and policies which either support family engagement or set up barriers to their involvement. Dunst (2002) found that the degree to which family-centered practices are used in schools declines as the ages of the children served increases. In addition, Dunst (2002) indicates that there is lower presumption of family-centered practices in the older grades, supporting the idea that philosophical approach influences the nature of family engagement practices.

Program philosophies, such as those discussed above, generally are operationalized through specific program practices. Invitations to participate are a seemingly simple, but important practice related to parents' beliefs about their role in their child's education (Whitaker & Hoover-Dempsey, 2013) as well as their actual level of participation (Benson et al., 2008). Of course, invitations alone will not result in participation if barriers to family involvement exist. Lamb-Parker et al. (2001) found that two of the most common barriers to involvement in Head Start programs were family schedules that conflicted with school hours and having other younger children to care for at home. In the Policy Studies Associates, Inc. (1997) report, barriers to family involvement include the lack of financial resources to promote families' engagement activities and the lack of logistical resources, such as time to make telephone calls, limits communication with families. Program policies and practices that provide solutions to these common barriers are likely to result in increased opportunities for family involvement. The Policy Studies Associates, Inc., (1997) report discussed previously also highlighted programs

that were considered to be successful at increasing family engagement. Successful strategies included finding time for communication by adding parent involvement coordinators, providing compensatory time or stipends for teacher to communicate outside of school hours, providing time during the school day, and relieving teachers from more custodial roles such as lunch duty. While these supports may have increased opportunities for family engagement in the highlighted programs, additional research on strategies to overcome barriers, and the fit of these strategies for particular families is needed. In one qualitative study involving interviews with 17 families, Swafford, Wingate, Zagumny, and Richey (2015) found differences in families' views as to whether specific practices were a barrier or a support to family engagement, suggesting that multiple types of structural supports may be necessary to reach the range of families within a given program or school.

When early childhood programs or schools provide structural supports that allow teachers to implement and practice communication strategies with families, teachers have an opportunity to experience success with their communication strategies with the families. If successful, teachers may increase and maintain these communication strategies and gain a sense of mastery and self-efficacy about their ability to communicate successfully with families (Bandura, 1997; Garcia, 2004). If the teacher can successfully and frequently communicate with families, their engagement in children's learning and development may be increased (Ames et al., 1995), ultimately improving academic and social outcomes for children (Arnold et al., 2008; Mantzicopoulos, 2003; Marcon, 1999; Powell et al., 2010).

### **Teacher Self-efficacy (Self-reported Confidence and Competence)**

Social learning theory focuses on the social and cognitive processes connected to behavior (Bandura, 1977, 1997, 2006). One of the central tenets of social learning theory is that

*mastery experiences*, or instances of successful execution of a skill or behavior, strengthen the belief that one's own actions result in a positive outcome (*self-efficacy*), thereby reinforcing and ultimately increasing the frequency of that behavior. Studies applying social learning theory to teacher behavior have used differing terminology and definitions when considering teacher belief appraisals related to the broader idea of perceived self-efficacy. Teachers' belief appraisals have been found to be related to the use of particular behaviors including developmentally appropriate practices and identified classroom and instructional practices (Trivette, Dunst, Hamby, & Meter, 2012) and efforts to engage families (Garcia, 2004). This study is focused specifically on teachers' communication with families about their child's learning and development and therefore will explore whether teacher's reported feelings of self-efficacy related to communicating with families about children's learning and development are related to the frequency of this behavior.

There are few studies to date that consider teachers' beliefs about their ability to influence the frequency and quality of interactions with families. In one study by Hoover-Dempsey, Bassler, and Brissie (1992), both parents and teachers were surveyed about family involvement in children's education, as well as family and teacher perceptions of their own efficacy. This study demonstrated a positive relationship between teacher self-efficacy and teacher reports of parent involvement in their child's education; however, the teacher efficacy measure focused on efficacy related to teaching children and not related to interactions with families. Garcia (2004) utilized a Family Involvement Teacher Efficacy Scale that included 35 items measuring perceptions related to a variety of types of family involvement practices. Teacher self-efficacy beliefs, as measured by this scale, predicted five types of family involvement practices (assistance with parenting issues, communication with parents, promoting

parent volunteering, promoting home learning, involving families in decision-making, and community collaboration) based on teacher and parent ratings. In the discussion of the results, Garcia (2004) indicates a need to examine efforts to enhance teacher efficacy related to family engagement as a part of teacher preparation.

Several studies related to teacher belief appraisals have focused more specifically on teacher confidence and/or competence related to particular strategies or skills (Bruder, Dunst, & Mogro-Wilson, 2011; Delfin & Roberts, 1980; Jarvis & Pell, 2004; Moore & Wilcox, 2006). Stewart et al. (2000) describe confidence as teacher's feelings about engaging in a particular practice, while competence reflects their appraisal of their ability to engage in a particular practice. They found that confidence was the factor that affected physician's decisions to complete a particular task. Bruder et al. (2011) found that early intervention professionals across a variety of disciplines rated themselves as having higher levels of confidence than competence, supporting these belief appraisals as separate constructs contributing to an overall sense of self-efficacy. The belief appraisals of professionals related to skills associated with their profession have also been linked to a sense of preparedness (Dunst & Bruder, 2014) and training (Delfin & Roberts, 1980). In addition, Jarvis and Pell (2004) showed that teacher confidence increased as a result of intensive in-service professional development.

This study seeks to examine the relationship between self-efficacy beliefs and the frequency of teachers' communication with families about children's learning and development, as well as the relationship of these beliefs to professional development and program structural supports. Drawing upon prior research (Bruder et al., 2011; Stewart et al., 2000), this study defines *self-efficacy* as teachers' self-reported perceptions of their confidence and competence specific to communicating with families about children's learning and development.

*Confidence* is further defined as the knowledge that a specific practice will result in an intended positive outcome and *competence* is defined as the belief that one is able to successfully implement this practice. Prior research supports these two aspects of self-efficacy as unique constructs contributing to an overall sense of self-efficacy (Bruder et al., 2011; Stewart et al., 2000). In the case of this study, *confidence* and *competence* are considered as two components comprising a teachers' overall sense of *self-efficacy* related to communicating with families about children's learning and development, or teachers' perceptions of whether or not their attempts at communicating with families about children's learning and development will result in positive outcomes.

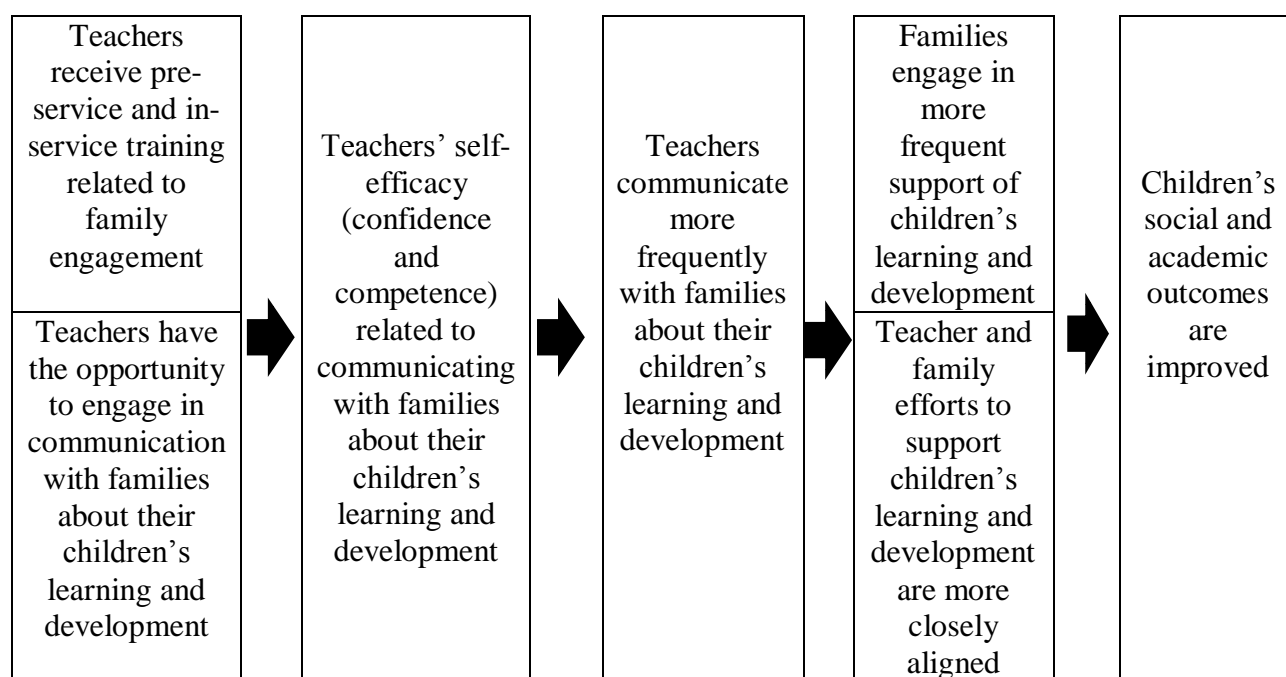


Figure 1. Theory of change related to teacher communication with families about children's learning and development

This study seeks to understand potential influences on the frequency of teacher communication with families about children's learning and development, considering the relationship between the variables described previously: teacher preparation related to family

engagement, structural supports for family engagement, and teacher self-efficacy related to family engagement. Figure 1 illustrates the overall theory of change motivating this research, which ultimately aims to inform practices so that teachers can be better prepared and more confident and competent as they communicate with families and ultimately work together to improve child outcomes. Figure 2 represents the hypothesized relationship between study variables.

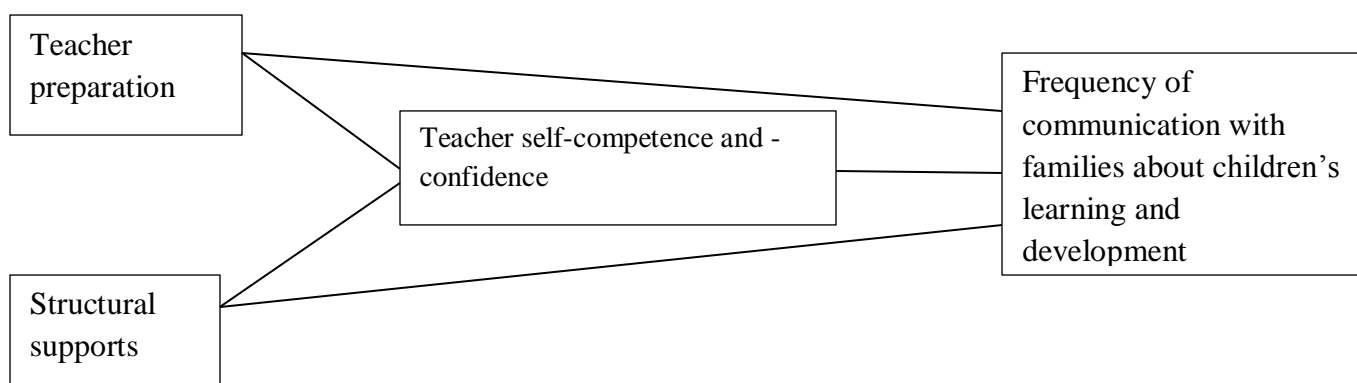


Figure 2. Theoretical Relationship between Study Variables

### Research Questions

- a. To what degree does teacher self-efficacy (self-reported confidence and competence) about family engagement practices relate to the frequency of communication with families about their children's learning and development?
- b. How does formal pre-service and in-service training about family engagement relate to preschool teachers' self-efficacy (self-reported confidence and competence) about their ability to engage families in their children's education?
- c. How do structural supports for family engagement relate to a preschool teacher's self-efficacy (self-reported confidence and competence) about their ability to engage families in their children's education?



- d. Do preschool teacher preparation and structural supports relate to the frequency of teacher communication with families about their children's learning and development?

### **Chapter 3**

#### **Methods**

This study utilized a five-section survey to collect information about preschool teachers' family engagement practices. The survey was conducted via Qualtrics, an online survey and data collection system. The link to the survey was distributed through emails from state agency program managers for the targeted funding sources. This survey comprised four sections and included questions related to each of the study variables: teacher pre-service and in-service preparation related to family engagement practices, the presence of structural supports that provide opportunities for teachers to communicate with families, teacher self-efficacy (self-reported confidence and competence), and frequency of communication with families about children's learning and development. A fifth section of the survey asked for demographic information including type of program, education level, teacher certification, and years of experience with infants and toddlers, preschoolers, and children with disabilities. Further discussion regarding the four portions of the survey measuring each of the different variables is included in the section on measurement and the entire survey is included in Appendix A.

#### **Study Variables**

- Frequency of teacher communication with families about children's learning and development
- Amount of pre-service and in-service preparation related to family engagement
- Number of structural supports for communication with families about children's learning and development
- Teachers' self-reported self-efficacy (confidence and competence) related to communicating with families about children's learning and development

**Sample**

Recruitment for this study will occur through an email with a link to the survey sent to state and federally funded early care and education programs in Connecticut by state agency program managers. The emails will specifically target state-funded Child Day Care Contracts, School Readiness, State Head Start Supplement, Preschool Development Grant, and Preschool Special Education programs and will request that the email be forward to teachers in preschool classrooms. While the precise number of preschool teachers working across these funding sources at the time of the survey is not known, it is estimated that there are at least 1644 preschool teachers based upon the number of programs and classrooms in the Connecticut Early Childhood Professional Registry (M. Gustafson, personal communication, September 7, 2017) and the number of school districts with preschoolers enrolled (Connecticut State Department of Education, n.d.).

The sample consisted of teachers working in state and federally funded preschool programs in the state of Connecticut (School Readiness, Child Day Care Contracts, Smart Start, Preschool Development Grant, and state Head Start Supplement, and Preschool Special Education). Recruitment involved targeted emails sent by state program administrators from the Connecticut Office of Early Childhood and the Connecticut Department of Education. Table 2 includes the populations served by the various targeted funding sources, as well as the requirements related to family engagement for each of the funding sources. Although the exact populations served vary somewhat, the majority of the children served by each of these programs are considered to be in need of state or federal support based upon one or more risk factors. In addition, each of these programs includes some type of requirement related to family engagement practices, ranging from accreditation through the National Association for the

Education of Young Children (which includes a program standard specific to families) to requiring family conferences and two annual home visits. While not all preschool programs have requirements related to family engagement, narrowing the sample to programs with known expectations regarding family engagement focused the study on the various practices implemented within individual programs instead of externally imposed policies.

Table 2

*Population and Family Engagement Policies of Programs Targeted for Sample Recruitment*

| Program          | Population Served   | Family Engagement Policies  |
|------------------|---|---|
| School Readiness | 3 and 4 year olds<br>At least 60% of enrolled children must be at or below 75% SMI (waiver available)   | <ul style="list-style-type: none"> <li>• Required Quality Components include: parent involvement, parenting education and outreach</li> <li>• Programs must hold or achieve National Association for the Education of Young Children Accreditation within in 3 years (NAEYC accreditation includes criteria related to Families)</li> <li>• Legislated requirement to strengthen the family through: <ul style="list-style-type: none"> <li>• Encouragement of parental involvement in a child's development and education</li> <li>• enhancement of a family's capacity to meet the special needs of the children, including children with disabilities</li> </ul> </li> </ul> |
| Smart Start      | 3 and 4 year olds in public schools. Preference for funding to programs that provide at least sixty per cent of the spaces an such preschool program are for children who are members of families that are at or below seventy-five per cent of the state median income, or fifty per cent of the spaces in such preschool program to children who are eligible for free and reduced price lunches. | <ul style="list-style-type: none"> <li>• Programs must hold or achieve National Association for the Education of Young Children Accreditation within in 3 years (NAEYC accreditation includes criteria related to Families)</li> </ul>  |

|                             |   |  |
|-----------------------------|---|--|
| Preschool Development Grant | <p>Minimum eligibility: 4 year olds at or below 200% FPL</p> <p>Priority for the following populations that meet the above minimum eligibility criteria:</p> <ul style="list-style-type: none"> <li>• Homeless</li> <li>• English Language Learners</li> <li>• Foster Care</li> <li>• Disabilities</li> </ul> | <ul style="list-style-type: none"> <li>• Programs/teachers may voluntarily participate in the <u>Parent Teacher Home Visit Project</u>.</li> <li>• Requirement of lead teachers in all funded classrooms to participate in quarterly family engagement meetings whereby communities discuss topics related to the following: <ul style="list-style-type: none"> <li>• Outreach and recruitment of priority populations</li> <li>• Strategies to deepen family engagement</li> <li>• B-3 Grade Continuum</li> </ul> </li> </ul> |
| Child Day Care              | <p>Children from families with income at or below 75% of the State Median Income. Families supported through federal funds for this program must have income at or below 200% of the federal poverty level.</p>   | <ul style="list-style-type: none"> <li>• Requirement that programs hold or achieve National Association for the Education of Young Children Accreditation within in 3 years (NAEYC accreditation includes criteria related to Families)</li> </ul>   |
| State Head Start Supplement | <p>Children and families qualify based on the Department of Health and Human Services poverty guidelines. Children from homeless families, from families receiving public assistance such as TANF, and foster children (regardless of family income) are eligible for services.</p>                           | <ul style="list-style-type: none"> <li>• Head Start Performance Standard 1302.34 outlines requirements that programs are open to parents, teachers regularly communicate with parents and hold parent conferences, family members are allowed to volunteer in classrooms, teachers conduct at least two home visits per year, and parents are involved in a discussion of results of screenings and assessments</li> </ul>   |
| Preschool Special Education | <p>Children with an identified disability or developmental delay resulting in a need for special education services. This study will only engage those special education teachers working with students receiving special education services in a preschool classroom setting</p>                             | <ul style="list-style-type: none"> <li>• Families have specific rights regarding making decisions regarding their child's education per the Individual with Disabilities Education Act (IDEA)</li> <li>• As a part of the State Performance Plan, Indicator # 8 requires states to report on parent involvement. The results indicator is the percentage of parents reporting that schools facilitate parent involvement and a means of improving services and results for children with disabilities.</li> </ul>              |

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## Measures

Initial survey development was based upon available research related to the variables included in the survey as well as expert input. The survey was constructed so that specific

methods of communication (home visits, telephone calls, email, texts, parent conferences, and written communication such as journals) were addressed across multiple survey sections, as were specific types of communication (discussions about individual children's learning and development, informing families of class or program events, sharing observations about children's progress, sharing information about successful strategies, and discussion concerns about development or behavior). In the following sections, the survey construction is described. In addition, because the self-efficacy scale portion of the survey was designed to measure personal beliefs or perceptions, a content validation process was used to provide evidence that the survey items were measuring what was intended. The other sections of the survey asked teachers to report behavior or information and were not included in the content validation process. The sections of the survey were presented to participants in a slightly different order (see Appendix A for the entire survey); however, the survey sections will be discussed in this order: frequency of communication with families, teacher preparation related to family engagement, program supports for family engagement, and the self-efficacy scale.

**Frequency of teacher communication with families.** Because very little research specifically addresses communication with families about children's learning and development there were no existing measures of teacher communication to draw from for the purpose of this study. Therefore, this study utilized a simple self-report measure of relative frequency of communication about children's learning and development as a measure. Questions in this section of the survey drew upon the recommended communication strategies from Knopf and Swick (2008) and the findings of Katz and Bausch (1999). Increasingly common electronic methods of communication such as texting were added to generate a list of communication strategies. Teachers were asked to indicate how often they engage in the following types of

communication: home visits, telephone calls, email, texts, parent conferences, and written communication such as journals. The scale included the following descriptors at scores of one through five: not at all, rarely, sometimes, frequently and very frequently. This series of questions provided data about the method of communication used with families. Participants were instructed to consider all of the above methods of communication when rating the frequency with which they engage families in the following types of communication: discussions about individual children's learning and development, informing families of class or program events, sharing observations about children's progress, sharing information about successful strategies, and discussion concerns about development or behavior. Again, frequency was rated on a five point Likert scale with the following descriptors: every month or so, every few weeks, on a weekly basis, a few times per week, and daily. While responses to items about methods of communication were analyzed, the average of individual's responses on items related to communication about children's learning and development (all types of communication except sharing informing families of class or program events) was used as the overall measure for this variable.

**Teacher preparation related to family engagement.** Information about both pre-service and in-service professional development related to family engagement was collected in this section of the survey. These questions referred to "family engagement" which is the most commonly used terminology in the field today. Although this study focuses specifically on one specific aspect of family engagement, communication with families about children's learning and development, the questions more broadly address family engagement so that teachers did not need to attempt to recall in detail the content of past educational experiences.

In order to get one overall measure of professional development related to family engagement, teacher responses to the three questions regarding professional learning about family engagement practice were translated into an approximate number of course hours. Each higher education course with family or parent in the title was considered as 45 hours of preparation based upon standard three credit course hours, each course with embedded family engagement practices was considered as nine hours of preparation (an estimated one-fifth of class time addressing family engagement for courses that embed family engagement), and each day of professional development was considered as six hours of preparation, based upon standard time allotted for a full-day professional development session. While these course hours are estimates of actual time spent on content related to family engagement practices, these estimates were applied uniformly across responses in order to provide a reflective measure of level of preparation in the area of family engagement practices.

**Structural supports for family engagement.** Teachers responded to eight yes or no questions regarding the existence of the following types of structural support that provide opportunities for communication with families about their child's learning and development in their current position:

- program philosophy or mission statement addressing families or parents,
- program policy regarding family conferences,
- program policy regarding home visits,
- program schedule or practice that results in opportunities for informal in-person contact with families,
- planned family activities that involve teachers,
- program policy or practice regarding written communication with families,



- program policy or practice regarding family members volunteering in classroom, and
- administrator encouragement of communication with families.

A simple frequency count of the number of structural supports for communication with families about children's learning and development was calculated for use in data analysis.

**Teacher self-efficacy (self-reported confidence and competence).** The questions in the self-efficacy scale portion of the survey were developed based upon Bandura's (2006) chapter on constructing self-efficacy scales, with a focus on self-efficacy specific to communicating with families about children's learning and development. The wording of items was further delineated to address confidence and competence as defined in the literature review section. Confidence questions included the same basic structure, starting with the words, "I am confident that I know about...." followed by a statement about a positive outcome and a particular behavior expected to impact the positive outcome. Positive outcomes included in the questions reflected interactions from the broader theory of change represented in Figure 1 and included helping families to support their children's learning and development, aligning school and home efforts to support children, and improving child outcomes. The specific communication practices match those addressed in the section of the survey related to the frequency of communication about children's learning and development, with the exception that sharing information about program events or activities was not included in this section because the theory of action only addresses communication specific to individual children's learning and development as a mechanism of change. The communication practices included in the confidence items include: discussing individual children's learning and development, sharing observations of children's progress, communicating about children's learning and development,

sharing observations of children's progress, sharing successful strategies, discussing concerns about children's learning, and discussing concerns about children's behaviors.

This study focused on one specific domain of behavior (communicating with families about children's learning and development); however, the survey questions addressing competence included varying circumstances (differing types of communication and differing methods of communication) and potential challenges encountered when communicating with families about children's learning and development. This variation across questions is based upon Social Learning Theory (Bandura, 2006) and is intended to differentiate between individuals who feel capable in limited circumstances and those who feel capable across circumstances, in addition to differentiating between those who are likely to persist in the face of challenges and those who may not continue to communicate with families if they encounter challenges. Questions in this section were worded with, "I am able to....." followed by a specific behavior. Types of communication included in this section were: discussing individual children's learning and development, sharing observations of children's progress, sharing information about successful strategies, discussing concerns about children's learning, and discussing concerns about children's behaviors. Methods of communication in the competence section include those listed in the section on frequency of communication and include: telephone, written communication, conferences, home visits, email, informal conversations, and text communication. Potential challenges included in the competence section include: family members who become upset, family members who disagree with the teacher, families from cultures that differ from the teacher, and families who speak a language not spoken by the teacher.

Standard self-efficacy scales ask subjects to rate their perceptions related to a specific behavior on a 100 point scale with 10 unit intervals (Bandura, 1997). The online survey format lends itself to a more truncated response range and a familiar range of responses; therefore, a six point scale was used with the following possible responses: completely agree, strongly agree, somewhat agree, somewhat disagree, strongly disagree, and completely disagree. An exploratory factor analysis, as described in the results section, determined sub-scales for final analysis of the self-efficacy

## Chapter Four

### Results

#### Sample

Preschool teachers from the population of preschool teachers working in state- and federally- funded preschool classrooms in Connecticut were recruited to complete this survey. Two weeks after the initial recruitment email went out, a reminder email was sent to programs, allowing for two additional weeks to complete the survey, at which point the online survey was closed. After eliminating surveys registered in the online system that had no individual entered values, there were 189 surveys responses; however, 46 (24.34 %) of these responses were incomplete, with no item responses past the mid-point of the survey. Item responses to the first section of the survey about frequency of communication were the only values available to determine whether there were differences between those individuals who completed the survey and those who did not. Independent sample t-tests were conducted to determine if there were statistically significant differences in the reported frequency of the different methods and types of communication between those who completed the survey and those who did not. The results of these tests indicated that there were no statistically significant differences between the reported frequency of communication for respondents who did and did not complete the survey. Based upon this finding, 46 incomplete surveys were eliminated from further analysis, resulting in a final sample size of 143.

Patterns of missing values were analyzed to assess the potential for imputing values for further analysis for each section of the survey; however, one pattern of missing data initially emerged among items related to home visiting across three sections of the survey. Home visiting was reported as being used *not at all* by 128 teachers, while another 17 teachers reported *rarely* using this communication method and had a correspondingly low mode, median, and mean. The

item in the self-efficacy section of the survey that addressed home visiting was missing 57% of the values. An independent samples t-test indicated that there was the mean frequency of home visiting was higher for those teachers who responded to this question ( $M = 2.10$ ,  $SD = 1.24$ ) than for those who did not respond to the question ( $M = 1.02$ ,  $SD = .13$ ),  $t(81) = 7.77$ ,  $p < .001$ ,  $d = .5$ . Leven's test indicated unequal variances so degrees of freedom was adjusted from 139 to 81. Based upon the infrequent use of this method of communication and the high rate of missing data, this item was eliminated from further data analysis. There were two additional items related to home visiting in the section on program supports. Within the final sample of 143, the item asking respondents if their program requires home visits had 3.50 % of values missing. The item asking if the program permits home visits had 21.67 % of values missing. The item related to requiring home visits was maintained to be included in the final measure for program support for communication with families (a total of the total number of supports). Because of the even higher number of missing values and the overlap between permitting and requiring home visits (i.e., programs that require home visits by default permit them), the item on permitting home visits was eliminated from further analysis.

The demographic characteristics of survey respondents are presented in Table 3. The number of responses on survey questions related to demographics ranged between 139 and 142. The majority of respondents had advanced degrees with 34.51 % holding a Bachelor's degree and more than half holding Master's degrees. Less than 15 % of respondents had an Associate's degree or lower. Over half of respondents reported holding state teaching certification and all but one of the endorsements reported included preschool as a part of the age range covered. The majority of survey respondents had 10 or more years of experience working with preschoolers,

with 25.17 % reporting 10-15 years of experience and 39.86 % reporting 15 or more years of experience. Less than 10 % of survey respondents had less than three years of experience.

Table 3

*Education, Experience, and Setting of Survey Respondents*

|  | N  | %     |
|--|----|-------|
| Highest Level of Education                               |    |       |
| CDA  | 2  | 1.41  |
| Associate's Degree                                       | 15 | 10.56 |
| Bachelor's Degree  | 49 | 34.51 |
| Master's Degree  | 75 | 52.82 |
| Doctorate  | 1  | 0.70  |
| Missing  | 1  | 0.70  |
| Teaching Certification                                   |    |       |
| None   | 61 | 42.66 |
| 112 Integrated Early Childhood/Special Ed., Birth –K     | 9  | 6.29  |
| 113 Integrated Early Childhood/Special Ed., N/K -Grade 3 | 43 | 30.06 |
| 01 PreK- Grade 8   | 4  | 2.80  |
| 02 PreK-Grade 6  | 10 | 6.99  |
| 03 PreK-Grade 3  | 2  | 1.40  |
| 08 PreK-K  | 2  | 1.40  |
| 065 Comprehensive special education, PreK-Grade 12       | 7  | 4.90  |
| Other  | 5  | 3.50  |
| Missing  | 2  | 1.40  |
| Years of Experience working with Preschoolers            |    |       |
| Less than 3 years  | 13 | 9.09  |
| 4-9 years  | 33 | 23.08 |
| 10-15 years  | 36 | 25.17 |
| 15 or more years   | 57 | 39.86 |
| Missing  | 4  | 2.80  |
| Program Setting  |    |       |
| Community-based  | 67 | 46.85 |
| Public School  | 74 | 51.75 |
| Missing  | 2  | 1.40  |
| Program Funding Source (multiple responses permitted)    |    |       |
| Head Start   | 15 | 10.50 |
| Preschool special education                              | 33 | 23.08 |
| State-funded program                                     | 99 | 69.23 |
| Preschool Development Grant                              | 15 | 10.49 |
| Missing  | 8  | 5.59  |

The teachers responding to the survey were divided almost evenly between working in community-based settings (46.85 %) and in public-school based programs (51.75 %). Programs receiving state preschool, Head Start, federal preschool special education, and/or Preschool Development Grant funding were recruited to participate in this survey and were asked to indicate which type(s) of funding their program received. The majority of respondents worked in programs that received state preschool funding and approximately a fifth of respondents reported working in preschool special education programs. There were fewer respondents that reported working in programs that received Head Start or Preschool Development Grant funding. Twenty programs reported multiple state and/or federal funding sources.

### **Frequency of Communication with Families**

**Methods of communication.** One section of the survey included questions about the frequency of teacher communication with families, the dependent variable in this study. This section consisted of seven items about methods of communication (telephone calls, written communication such as journals, conferences, home visits, emails, text communication, and informal conversations) and five items about different types of communication (discussing individuals children's learning and development, informing families of events, sharing observations about children's progress, sharing information about successful strategies, and discussing concerns about development or behavior). Teachers were asked to rate the frequency with which they used different methods of communication on a scale from one to five with descriptors of *not at all*, *rarely*, *sometimes*, *frequently*, and *very frequently*. Results of this section of the survey are reported in Table 4.

Teachers reported informal conversations and family conferences as the most frequently used methods of communication. Mode and median responses for the frequency of informal

Table 4

*Reported Frequency of Different Communication Methods*

| Communication Method   | Mode | Median | M    | SD   |
|------------------------|------|--------|------|------|
| Home Visit             | 1    | 1      | 1.63 | 1.07 |
| Text                   | 1    | 1      | 2.12 | 1.44 |
| Phone                  | 3    | 3      | 3.16 | 0.79 |
| Written                | 3    | 5      | 3.16 | 1.41 |
| Email                  | 4    | 5      | 3.28 | 1.47 |
| Conference             | 4    | 4      | 3.81 | 0.67 |
| Informal Conversations | 5    | 5      | 4.50 | 0.87 |

Note. Possible survey responses were on a scale of one to five, with the following descriptors: not at all, rarely, sometimes, frequently, and very frequently.

conversations was *very frequently*, while the mode and median responses for conferences were *frequently*. Email, written communication, and phone calls were reported to be used less frequently than informal conversations or conference, with modes and means varying across a range from *sometimes* to *very frequently*. The mean frequency for emails was slightly higher than for written communication such as journals and phone calls and the most common response was *frequently*. While written communication and phone calls had the same mean response, there was more variability in the use of written communication, reflected in a higher standard deviation and differing mode and mean responses. The mode and mean response for phone calls was *sometimes*. Texts and home visits were the least frequently used methods of communication and both had mode and median responses of *not at all*. The higher mean response for text messaging and the higher standard deviation indicate greater variability in the use of text messaging than in the use of home visits.

Principal Component Analysis (PCA) with a Varimax rotation was computed to determine if subcategories of the methods of communication could be used in further data analysis. The results indicated that items loaded onto two distinct factors: remote communication (telephone, written communication, email, and text communication) and in-



person communication (conferences, home visits, and informal conversations). Mean scores for remote communication methods and in-person communication methods were calculated for use in further analysis.

**Types of communication.** Teachers were also asked to rate how often they engaged in the various types of communication (considering all methods of communication together) on a scale of one to five with descriptors of *every month or so*, *every few weeks*, *on a weekly basis*, *a few times per week*, or *daily*. The types of communication addressed in this section of the survey were: discussing individual children's learning and development, sharing information about class or program events, sharing information about successful strategies, discussing concerns about development or behavior, and sharing observations about children's progress. Results are reported in Table 5. The type of communication that had the highest mean was informing families about events and the highest number of teachers reported engaging in this type of communication on a weekly basis. Sharing information about successful strategies and discussing concerns about development or behavior also had mode responses indicating that teachers engaged in this type of communication on a weekly basis; however, the means for those items were lower than for informing families about events. Teachers reported discussing individual learning and development and sharing observations about children's progress less frequently, resulting in lower means for these items and mode responses of *every month or so*. There was slightly greater variability in responses related to the frequency of discussing individual learning and development and sharing observations about children's progress, based upon differing mode and median responses and slightly higher standard deviations. The highest mean frequency and lowest mean frequency differed by only .80 and standard deviations across all types of communication ranged from 1.29 to 1.44.

Table 5

*Frequency of Communication Types*

| Communication Type                                | Mode | Median | M    | SD   |
|---|------|--------|------|------|
| Sharing observations about children's progress    | 1    | 2      | 2.50 | 1.44 |
| Discussing individual learning and development    | 1    | 2      | 2.61 | 1.45 |
| Sharing information about successful strategies   | 3    | 3      | 2.70 | 1.31 |
| Discussing concerns about development or behavior | 3    | 3      | 3.06 | 1.33 |
| Informing Families about class or program events  | 3    | 3      | 3.30 | 1.29 |

Note. Possible survey responses were on a scale of one to five, with the following descriptors: every month or so, every few weeks, on a weekly basis, a few times per week, and daily.

PCA with a Varimax rotation was also conducted for the four items related to communicating with families about children's learning and development to determine if specific subcategories should be considered for further analysis. Although a fifth item related to communicating with families about program events was included in the survey in order to compare frequencies and to prompt teachers to differentiate between types of communication, communication about children's learning and development in a variety of forms was the primary variable of interest in this study. Therefore, communication with families about program events was not included in the PCA. All four items related to communicating with families about learning and development loaded onto a single factor and a mean score was calculated using the four items.

**Differences in use of methods and types of communication.** Table 6 includes means and standard deviations of the frequency of remote communication, in-person communication, and communication about learning and development. It includes analyses for the entire sample

as well as means and standard deviations across program type (community school or public school), funding source (federally funded or state funded only) and teacher education level (Bachelor's degree or lower or graduate degree). There was an overall difference in the

Table 6

*Mean Frequencies of Communication Categories across Program and Teacher Categories*

| Group              | N   | In-person Communication |      | Remote Communication |     | Communication about Learning and Development |      |
|--------------------|-----|-------------------------|------|----------------------|-----|--|------|
|                    |     | M                       | SD   | M                    | SD  | M  | SD   |
| Program Type       |     |                         |      |                      |     |  |      |
| Community Programs | 67  | 3.48                    | 0.06 | 2.68                 | .11 | 2.91   | 0.13 |
| Public Schools     | 74  | 3.16                    | 0.08 | 3.15                 | .07 | 2.54   | 0.13 |
| Funding Source     |     |                         |      |                      |     |  |      |
| Federal Funding    | 55  | 3.27                    | 0.10 | 2.87                 | .01 | 2.06   | 0.12 |
| State Funding Only | 80  | 3.39                    | 0.10 | 3.02                 | .09 | 2.79   | 0.16 |
| Education          |     |                         |      |                      |     |  |      |
| Bachelor's or Less | 65  | 3.46                    | 0.07 | 2.67                 | .10 | 2.90   | 0.13 |
| Graduate Degree    | 76  | 3.19                    | 0.07 | 3.15                 | .08 | 2.56   | 0.13 |
| Total              | 143 | 3.31                    | 0.05 | 2.93                 | .07 | 2.72   | 0.09 |

frequency with which the two categories of communication method were used, with a higher mean frequency for in-person communication than for remote communication. There were also several differences in the methods of communication used across program type and education level, with only small differences in mean across funding sources. The mean frequency of in-person communication was higher in community programs, was similar across funding sources, and was higher for the subgroup of teachers with a Bachelor's degree or lower. The mean frequency of remote communication was higher in public school programs, slightly higher in programs that received only state funding and was higher for the group of teachers with graduate degrees.

The overall mean of communication about learning and development was in the mid-range which is consistent with the recurring mode and mean responses for individual items indicating this type of communication occurred *on a weekly basis*. Mean communication related to learning and development was higher in community programs, programs that received only state funding, and for the subgroup of teachers who have a bachelor's degree or lower. Overall, these measures of frequency by category have small standard deviations.

### **Teacher Preparation Related to Family Engagement**

Teachers were asked to indicate the number of college or graduate level courses they had taken that include “families” or “parents” in the course title, the number of courses they had taken that embedded family engagement in the course content, and the number of days of in-service they had received. Teachers had the option to select zero, one, two, three, or other as a response. There was also the option to add text with the “other” response. Between 10 and 20 percent of respondents selected “other and many indicated a specific quantity of coursework or professional development. These quantities were substituted for the selection options whenever the response was clear or allowed for a low estimate (e.g., coding “three or more” as three). When teachers indicated an unknown value, this was considered as a missing value. Results from this section are reported in Table 7. The majority of teachers indicated that they had two or more courses that included “family” or “parent” in the title and had two or more courses that embedded family engagement in course content. The most frequently reported number of days of in-service related to family engagement was zero, however, responses were spread across a range, with 35 respondents indicating they had had no in-service professional development related to family engagement, and 51 respondents indicating that they had had two or more days. This pattern of responses, along with the standard deviation of 2.79, show greater variability in

responses related to in-service professional development than responses related to pre-service professional development.

Table 7

*Level of Teacher Preparation Related to Family Engagement*

| Teacher Preparation                                       | N   | Mode | Median | M    | SD   |
|---|-----|------|--------|------|------|
| Professional development                                  |     |      |        |      |      |
| Courses with “family” or “parent” in title                | 133 | 2    | 2      | 1.93 | 1.15 |
| Courses with family engagement embedded                   | 133 | 2    | 2      | 1.91 | 1.45 |
| Days of in-service  | 123 | 0    | 1      | 1.89 | 2.79 |
| Preparation Ratings                                       |     |      |        |      |      |
| Pre-service: Strategies                                   | 90  | 4    | 4      | 3.80 | 1.23 |
| Pre-service: communicating about learning and development | 91  | 4    | 4      | 3.78 | 1.18 |
| In-service: Strategies                                    | 96  | 4    | 4      | 3.63 | 1.37 |
| In-service: communicating about learning and development  | 98  | 4    | 4      | 3.58 | 1.35 |

Note. Possible responses were on a scale of one to five with the following descriptors, not at all, poorly, somewhat, well, and very well.

The teacher preparation section of the survey also included four questions asking teachers to rate how well their pre-service and in-service professional development prepared them to communicate with families; however these questions had a high rate of missing values, ranging from 31.47 to 37.06 % of values missing per question. Eighteen respondents did not respond to any of the questions about how well their professional development prepared them for communicating with families. An analysis of missing values and Little's MCAR test for these questions was  $X^2(828, n = 143) = 36.11, p = .14$  indicating that values were missing completely at random. Data from these four questions was not included in any further analysis.

### Structural Support for Family Engagement

The frequency of reported policies and practices that support teachers to communicate with families (structural supports) are included in Table 8. Policies and practices addressed

Table 8

#### *Frequency of Reported Structural Supports for Family Engagement*

| Structural Support                             | Yes Responses |          |
|--|---------------|----------|
|  | <u>n</u>      | <u>%</u> |
| Philosophy that includes family engagement     | 120           | 83.92    |
| Requires conferences                           | 133           | 93.01    |
| Opportunities for informal conversations exist | 122           | 85.31    |
| Planned family activities that teachers attend | 132           | 92.31    |
| Policy about written communication             | 103           | 72.03    |
| Family members are allowed to volunteer        | 132           | 92.31    |
| Administrator encourages communication         | 138           | 96.50    |
| Home visits are required                       | 26            | 18.18    |

included a program philosophy that includes family engagement, a requirement that teachers hold conferences with families, opportunities for informal conversations with families, planned family activities that teachers attend, policy about written communication with families, family members being allowed to volunteer in classrooms, administrators that encourage communication, and a requirement that teachers conduct home visits. For each individual policy or practice, with the exception of required home visits, the majority of teachers indicated that their program had that support in place. More than 90 % of teachers reported that their program required conferences, had family activities, allowed family members to volunteer, and had administrators that encouraged communication. Fewer teachers reported that their program had a philosophy that included family engagement or that their program had a policy related to written communication. Fewer than 20% of teachers reported that home visits were required.

Missing data from this section were analyzed and Little's MCAR test yielded a result of  $X^2(126, n = 143) = 48.338, p = .005$ , indicating that data was not missing completely at random. Analysis of the patterns of missing values showed no discernable patterns that indicated non-random missingness; therefore, responses were considered to be missing at random. Because expectation maximization (EM) does not support imputation of missing values for categorical variables, the missing values were imputed using multiple imputation in SPSS. The total number of structural supports for communicating with families was then calculated for use in further data analysis.

### **Teacher Self-efficacy Related to Communicating with Families**

A content validation process was undertaken prior to the use of the self-efficacy scale which comprised one section of the survey. Results of the content validation process, described in detail in Appendix A, are presented in Table 9. This process informed the revision of individual items for improved clarity. In addition, content validity indexes (CVI) for individual items that were all 80 or higher and an overall CVI of 94.40 % supported the use of this scale as a measure of teachers' self-efficacy beliefs. In addition to the content validation process undertaken prior to survey administration, Cronbach's Alpha was used as a measure of the reliability of the self-efficacy scale. The Cronbach's alpha for the entire set of items was .95, indicating a high degree of internal consistency.

The mode, median, mean, and standard deviation for each item on the self-efficacy scale are reported in Table 10. Items in the confidence portion of the self-efficacy scale generally followed the structure of, "I am confident that I know about the effect that ....has on ....." and were designed to assess teacher knowledge that a specific practice will result in an intended positive outcome. Competence questions were worded, "I am able to...." and were designed to

address teachers' beliefs about their ability to successfully implement this practice. Response options for all self-efficacy items were on a scale of one to six with the following descriptors:

Table 9

*Content Validation Results for Self-Efficacy Scale*

|                       | Average Ratings*    |            |         | Content<br>Validity Index<br>(CVI) |
|-----------------------|---------------------|------------|---------|------------------------------------|
|                       | Representativeness. | Importance | Clarity |                                    |
| Confidence            |                     |            |         |                                    |
| Learning/support      | 2.60                | 4.00       | 3.00    | 80                                 |
| Learning/coordinate   | 3.40                | 4.00       | 2.60    | 100                                |
| Learning/outcomes     | 3.80                | 4.00       | 3.60    | 100                                |
| Observ./support       | 3.80                | 4.00       | 3.40    | 100                                |
| Observ./coordinate    | 3.60                | 3.80       | 3.20    | 100                                |
| Observ./outcomes      | 3.60                | 4.00       | 3.40    | 100                                |
| Strategies/support    | 3.80                | 3.80       | 3.40    | 100                                |
| Strategies/coordinate | 3.60                | 3.80       | 3.00    | 100                                |
| Strategies-outcomes   | 3.60                | 3.80       | 2.60    | 100                                |
| Lconcern/support      | 3.80                | 3.80       | 3.60    | 100                                |
| Lconcern/coordinate   | 3.60                | 3.80       | 3.00    | 100                                |
| Lconcern/outcomes     | 3.40                | 4.00       | 3.20    | 100                                |
| Bconcern/support      | 3.80                | 4.00       | 3.40    | 100                                |
| Bconcern/coordinate   | 3.20                | 3.80       | 3.20    | 80                                 |
| Bconcern/outcome      | 3.20                | 3.80       | 3.00    | 80                                 |
| Competence            |                     |            |         |                                    |
| Learning and dev.     | 3.80                | 4.00       | 3.80    | 100                                |
| Observ. progress      | 4.00                | 4.00       | 3.60    | 100                                |
| Strategies            | 3.80                | 3.80       | 3.80    | 100                                |
| Learning concerns     | 3.80                | 4.00       | 4.00    | 100                                |
| Behavior concerns     | 4.00                | 4.00       | 3.80    | 100                                |
| Upset                 | 3.80                | 4.00       | 3.20    | 100                                |
| Disagree learning     | 3.80                | 3.80       | 3.20    | 100                                |
| Disagree behavior     | 3.80                | 4.00       | 3.60    | 100                                |
| Diff. culture         | 4.00                | 4.00       | 3.80    | 100                                |
| Diff. Language        | 3.60                | 3.40       | 3.60    | 80                                 |
| Conferences           | 3.40                | 3.40       | 4.00    | 80                                 |
| Informal conv.        | 3.40                | 3.60       | 3.20    | 80                                 |
| Text                  | 4.00                | 3.40       | 3.80    | 100                                |
| Email                 | 3.40                | 2.80       | 3.80    | 80                                 |
| Phone                 | 3.80                | 4.00       | 3.40    | 100                                |
| Written               | 4.00                | 4.00       | 4.00    | 100                                |



Table 10

*Teacher Reported Self-Efficacy*

|                       | Mode | Median | M    | SD   |
|-----------------------|------|--------|------|------|
| <b>Confidence</b>     |      |        |      |      |
| Learning/support      | 5    | 5      | 5.15 | 0.77 |
| Learning/coordinate   | 5    | 5      | 5.10 | 0.79 |
| Learning/outcomes     | 5    | 5      | 5.29 | 0.75 |
| Observ./support       | 5    | 5      | 5.26 | 0.68 |
| Observ./coordinate    | 5    | 5      | 5.16 | 0.77 |
| Observ./outcomes      | 5    | 5      | 5.23 | 0.74 |
| Strategies/support    | 5    | 5      | 5.16 | 0.78 |
| Strategies/coordinate | 5    | 5      | 5.14 | 0.77 |
| Strategies-outcomes   | 6    | 6      | 5.39 | 0.84 |
| Lconcern/support      | 5    | 5      | 5.17 | 0.76 |
| Lconcern/coordinate   | 5    | 5      | 5.20 | 0.77 |
| Lconcern/outcomes     | 5    | 5      | 5.25 | 0.71 |
| Bconcern/support      | 5    | 5      | 5.24 | 0.75 |
| Bconcern/coordinate   | 5    | 5      | 5.26 | 0.68 |
| Bconcern/outcome      | 5    | 5      | 5.26 | 0.71 |
| <b>Competence</b>     |      |        |      |      |
| Learning and dev.     | 5    | 5      | 5.38 | 0.70 |
| Observ. progress      | 6    | 6      | 5.46 | 0.69 |
| Strategies            | 6    | 5      | 5.39 | 0.65 |
| Learning concerns     | 6    | 5      | 5.32 | 0.72 |
| Behavior concerns     | 6    | 5      | 5.33 | 0.72 |
| Upset                 | 5    | 5      | 4.97 | 0.89 |
| Disagree learning     | 5    | 5      | 4.79 | 0.89 |
| Disagree behavior     | 5    | 5      | 4.79 | 0.86 |
| Different culture     | 5    | 4      | 4.62 | 0.96 |
| Different language    | 5    | 4      | 4.44 | 1.07 |
| Conferences           | 6    | 6      | 5.61 | 0.61 |
| Informal conversation | 6    | 5      | 5.32 | 0.81 |
| Text                  | 1    | 3      | 3.11 | 1.93 |
| Email                 | 6    | 5      | 4.66 | 1.07 |
| Phone                 | 5    | 5      | 5.04 | 0.90 |
| Written               | 6    | 5      | 4.97 | 1.11 |

Note. Possible survey responses were on a scale of one to five, with the following descriptors: completely disagree, strongly disagree, somewhat disagree, somewhat agree, strongly agree, and completely agree.

completely disagree, strongly disagree, somewhat disagree, somewhat agree, strongly agree, and completely agree. The most common response to items addressing confidence related to communicating with families was *strongly agree*. For one item about the impact of sharing successful strategies on child outcomes, the most common response was completely agree and this item had a slightly higher mean response than other items in the confidence section. Teachers also reported strongly agreeing or completely agreeing with most items in the competence section. Items with lower ratings included those items related to using text communication, communicating with families from different cultures or families who spoke a different language. The item related to text communication had the highest standard deviation (1.93). Although the mode and median response for items related to the ability to communicate in challenging situations (a family member being upset or disagreeing) was *strongly agree*, the mean for these items was in the lower end of the range of means for these items.

Because little research is available related to teacher communication with families about learning and development, the development of the self-efficacy scale and the underlying behaviors addressed reflect new theoretical constructs, therefore the adequacy of the sample for the purposes of Exploratory Factor Analysis (EFA) were examined. Recommendations related to sample size thresholds for exploratory factor analysis vary somewhat; however, an absolute minimum of 50 (deWinter, Dodou, & Wieringa, 2009) or a rule of five observations per variable are widely used (Yong & Pearce, 2013). Applying this second rule to the self-efficacy scale, which consisted of 31 items, yields a threshold of a sample size of 155 necessary to conduct EFA. Although the sample size for this survey was somewhat below this threshold, EFA was conducted. There are some indications that lower sample sizes may be appropriate in certain cases (deWinter et al., 2009; Mundfrom, Shaw, & Lu Ke, 2005) and tests of sampling adequacy

(determinant score, Bartlett's Test of Sphericity, and Kaiser-Meyer-Olkin Measure of Sampling Adequacy) met recommended thresholds (Yong & Pearce, 2013), indicating a sample appropriate for conducting exploratory factor analysis. Because of this uncertainty regarding the adequacy of the sample size for EFA, caution should be exercised when interpreting the results of this study.

Principal Axis Factoring with a Direct Oblimin rotation was utilized for the EFA based upon anticipated correlations between variables, making an oblique rotation method appropriate. Results of the EFA are presented in Table 11. Factor one included all of the items addressing confidence related to communicating with families except one item related to sharing concerns about child learning in order to support families. Factor two included items related to teacher's feelings of competence related to basic communication with families including items related to the forms of communication reported to be used most frequently: conferences and informal conversations. Factor three included items related competence in the face of common challenges in communicating with families. Factor four included competence using methods of communication that had a lower frequency or less consistent usage (see Frequency of Communication with Families). Factor five included all six survey items related to confidence discussing concerns about child learning or behavior, all of which had negative factor loadings. Due to the double factor loadings, factor five was not considered for further analysis, resulting in the elimination of the one item that solely loaded onto that factor. Subscale scores corresponding to the following four factors were generated: confidence related to communicating with families (Confidence), basic competence related to communicating with families (Basic Competence), competence communicating with families in the face of challenges (Competence Challenges),

and competence communicating with families using a variety of communication methods (Competence Methods).

Table 11

*Factor Loadings for Principal Axis Factoring with Direct Oblimin Rotation of Self-Efficacy Scale*

|                       | Factor          |                          |                               |                            |                                 |
|-----------------------|-----------------|--------------------------|-------------------------------|----------------------------|---------------------------------|
|                       | 1<br>Confidence | 2<br>Basic<br>Competence | 3<br>Competence<br>Challenges | 4<br>Competence<br>Methods | 5<br>Not Used<br>in<br>Analysis |
| Confidence            |                 |                          |                               |                            |                                 |
| Learning/support      | .78             |                          |                               |                            |                                 |
| Learning/coordinate   | .78             |                          |                               |                            |                                 |
| Learning/outcomes     | .86             |                          |                               |                            |                                 |
| Observ./support       | .82             |                          |                               |                            |                                 |
| Observ./coordinate    | .83             |                          |                               |                            |                                 |
| Observ./outcomes      | .85             |                          |                               |                            |                                 |
| Strategies/support    | .83             |                          |                               |                            |                                 |
| Strategies/coordinate | .78             |                          |                               |                            |                                 |
| Strategies-outcomes   | .69             |                          |                               |                            |                                 |
| Lconcern/support      |                 |                          |                               |                            | -.46                            |
| Lconcern/coordinate   | .41             |                          |                               |                            | -.49                            |
| Lconcern/outcomes     | .43             |                          |                               |                            | -.40                            |
| Bconcern/support      | .31             |                          |                               |                            | -.53                            |
| Bconcern/coordinate   | .32             |                          |                               |                            | -.67                            |
| Bconcern/outcome      | .44             |                          |                               |                            | -.54                            |
| Competence            |                 |                          |                               |                            |                                 |
| Learning and dev.     |                 | .91                      |                               |                            |                                 |
| Observ. progress      |                 | .88                      |                               |                            |                                 |
| Strategies            |                 | .66                      |                               |                            |                                 |
| Learning concerns     |                 | .62                      |                               |                            |                                 |
| Behavior concerns     |                 | .66                      |                               |                            |                                 |
| Upset                 |                 | .31                      | .68                           |                            |                                 |
| Disagree learning     |                 |                          | .85                           |                            |                                 |
| Disagree behavior     |                 |                          | .85                           |                            |                                 |
| Different culture     |                 |                          | .50                           |                            |                                 |
| Different language    |                 |                          | .50                           |                            |                                 |
| Conferences           |                 |                          |                               | .63                        |                                 |
| Informal conversation |                 |                          |                               | .65                        |                                 |
| Text                  |                 |                          |                               | .68                        |                                 |
| Email                 |                 |                          |                               | .44                        |                                 |
| Phone                 |                 | .56                      |                               |                            |                                 |
| Written               |                 | .55                      |                               |                            |                                 |

**Relationships between Variables**

Correlational analyses were conducted to answer the research questions and included examining the relationships between the frequency of teacher communication with families about learning and development and the hypothesized predictor variables: teacher preparation, structural support, and self-efficacy related to communicating with families about child learning and development (self-reported confidence and competence across the four sub-scales determined through the PCA). The relationship between teacher preparation, structural support, and self-efficacy related to communication with families and the frequency of the two methods of communication were also analyzed (remote methods and in-person methods). Finally, the relationships between teacher preparation and structural support and self-efficacy were examined. Results of the correlational analyses are reported in Table 12. The guidelines from Dunst and Hamby (2012) are used to interpret the magnitude of the effect sizes based upon the correlation coefficients.

The first research question involved determining the degree to which teacher self-efficacy (self-reported confidence and competence) about family engagement practices relates to the frequency of communication with families about their children's learning and development. As reported earlier, the final analyses related to teacher self-efficacy involved calculations of the total score across the four subscales determined through the PCA: self-confidence, basic self-competence, self-competence in the face of challenges, and self-competence with a variety of communication methods. Two of the four self-efficacy subscales were significantly correlated with the frequency of communication about learning and development. Self-confidence was the most strongly correlated with the frequency of teachers' communication with families about children's learning and development, with a correlation coefficient indicative of a medium effect

Table 12

*Correlation coefficients (r): Preparation Hours, Structural Supports, Self-efficacy Sub-scales, and Communication Categories*

| <i>Variables</i>                | 1      | 2      | 3      | 4      | 5      | 6      | 7     | 8      | 9 |
|---------------------------------|--------|--------|--------|--------|--------|--------|-------|--------|---|
| 1. Teacher Preparation          | -      |        |        |        |        |        |       |        |   |
| 2. Structural Supports          | .205** | -      |        |        |        |        |       |        |   |
| 3. Confidence                   | .286** | .265** | -      |        |        |        |       |        |   |
| 4. Basic Competence             | .205*  | .179*  | .602** | -      |        |        |       |        |   |
| 5. Competence: Challenges       | .227** | .165*  | .616** | .570** | -      |        |       |        |   |
| 6. Competence: Methods          | .104   | .101   | .471** | .484** | .479** | -      |       |        |   |
| 7. Remote Communication         | .094   | .032   | .261** | .106   | .251** | .573** | -     |        |   |
| 8. In-person Communication      | .169*  | .486** | .184** | .262** | .059   | -.015  | -.109 | -      |   |
| 9. Communication about learning | .297** | .172*  | .259** | .117   | .193*  | .073   | .156* | .237** | - |

\* $p < .05$  \*\* $p < .01$

size (Dunst & Hamby, 2012). Basic self-confidence had a weak correlation with teacher communication about learning and development. Self-confidence in the face of challenges had a significant correlation at the .05 level; however, this correlation was weaker than the correlation between confidence related to communicating with families and frequency of communication about learning and development. Competence using a variety of methods to communicate with families was not significantly correlated with the frequency of communication about learning and development.

The second research question addressed the relationship between preschool teacher preparation and self-efficacy related to communication with families about learning and development. The results indicate that there is a relationship between preschool teacher's preparation related to family engagement and three of the four self-efficacy subscales. Teacher preparation related to family engagement was significantly correlated with teacher confidence about communicating with families, basic competence in communicating with families, and competence communicating with families when facing challenging situations. The strongest correlation, indicative of a medium effect size based upon Dunst and Hamby's (2012) guide to interpreting effect sizes, was between preschool teachers' preparation related to family engagement and teacher confidence about communicating with families. There was not a significant correlation between teacher preparation related to family engagement and competence using a variety of communication methods.

The third research question addressed whether there is a relationship between structural supports and preschool teachers' self-efficacy. There was a significant correlation between structural supports and three of the four subscales related to teacher self-efficacy. The strongest correlation between structural supports and preschool teachers' self-efficacy was for the

confidence related to communicating with families subscale, with a medium effect size. There was a weaker correlation, with a small effect size, between structural supports and basic self-competence. There was also a correlation with a small effect size between structural supports and teacher self-competence in the face of challenging situations. The self-efficacy sub-scales that were correlated with structural supports were the same sub-scales correlated with teacher preparation; however, the correlations were weaker between structural supports and the self-efficacy subscales than the correlations between teacher preparation and the self-efficacy subscales.

The final research question was related to the relationship between both preparation and structural supports and the frequency of communication about learning and development. There was a significant correlation indicating a medium effect size between teacher preparation and the frequency of communication about learning and development. There was also a significant, but weaker, correlation between structural supports and frequency of communication about learning and development.

While not directly addressed by these research questions, there were also correlations between study variables and the frequency of use of the two sub-groups of communication methods. While the frequency of use of remote and in-person methods of communication were correlated to the frequency of communication about learning and development. The correlation between in-person communication and communication about learning and development was stronger than for remote communication. Teacher self-confidence was correlated with the frequency of both remote and in-person communication, teacher basic self-competence was correlated with the frequency of in-person communication, and self-competence in the face of challenges and self-competence with different methods were correlated with the frequency of use



of remote methods of communication. Teacher preparation was correlated with the frequency of in-person communication. Of particular note is the strong correlation between structural supports and in-person communication.

In addition to the relationships corresponding to the hypothesized relationships between study variables, teacher preparation related to family engagement strategies and structural supports were significantly correlated. This multicollinearity along with a relatively small sample size yielded further statistical analysis of this data inadvisable. In summary, the results of this study answer all research questions, indicating correlational relationships between teacher preparation, structural supports, specific sub-scales of teacher-self-efficacy, and the frequency of communication about learning and development.

## **Chapter Five**

### **Discussion**

The results of this study provide a small step toward understanding teacher communication with families about children's learning and development. While there is a large body of research demonstrating a link between family engagement in their child's preschool education and child outcomes (Arnold et al., 2008; Mantzicopoulos, 2003; Powell et al., 2010; Taylor & Machida, 1994) and many examples of effective programs and interventions (National Center on Parent, Family and community Engagement, 2015), there is little research examining the specific behaviors that support a strong connection between home and school. Many studies have found distinct dimensions of family engagement, with most models and research including family engagement in school, family engagement in children's learning at home, and home-school relationships; however, little detail emerges from the literature about the nature of the home-school relationships. This study focused specifically on communication between preschool teachers and families that is linked to learning, one of the opportunity conditions outlined in the Dual Capacity Building Framework for Family-School Partnerships (Mapp & Kuttner, 2013), a publication guiding work on family engagement in schools across the country. By better understanding the factors that influence the frequency of teachers' communication with families about children's learning and development, it is hoped that the frequency, and ultimately the quality, of this behavior can be increased by leveraging the contributing factors. In turn, by promoting strong connections between home and school efforts to support children's learning and development, it is theorized that the individual efforts will be coordinated and enhanced, leading to improved child outcomes.

**Limitations**

This study includes important preliminary findings related to preschool teachers' communication with families and the relationship between the frequency of this behavior to preschool teacher preparation related to family engagement, the existence of structural supports to promote communication with families, and preschool teacher self-efficacy related to communicating with families; however, several limitations impact this study and the generalizability of the findings. The first limitation is the relatively small sample size. A total of 189 surveys were either partially or fully completed. This sample represents a small portion of the preschool teachers recruited and may not be fully representative of the larger population. The need to eliminate surveys that were started but not completed resulted in an even smaller sample size. In addition, the sample for this study was a targeted group of preschool teachers working in programs that receive state and/or federal funding. These programs all have existing quality standards and/or specific requirements related to family engagement (see Table 2). In addition, these programs are generally connected to supports that other early care and education programs might not experience such as communication from state or federal program managers, community connections through local early childhood councils, and professional development opportunities. These requirements and supports are likely to result in higher levels of family engagement within these programs than what might be found in the broader group of preschool teachers across all settings.

Based upon survey responses, the preschool teachers who responded to the survey were also highly educated when compared to the general center-based workforce, with approximately 12 % of respondents holding less than a Bachelor's degree compared to 50 % of preschool teachers in a national survey (Brandon et al., 2013). In addition to the lower percentage of

preschool teachers who do not have a Bachelor's degree, over half of survey respondents held a graduate degree. Preschool teachers responding to this survey also had many years of experience, with most respondents reporting more than 10 years of experience working with preschoolers. Highly educated and experienced individuals might have an overall belief in their competency as a preschool teacher which could influence responses to self-efficacy questions specific to communicating with families. A sample that included teachers with a range of education and experience which was more representative of the broader field might result in greater variation in preschool teacher preparation related to family engagement, the number of structural supports for communicating with families, and reports of self-efficacy related to communicating with families.

In addition, it is also likely that those preschool teachers who choose to respond to the survey and completed all section were teachers who were more interested in family engagement than those preschool teachers who did not respond to the survey. Those preschool teachers who had strong self-efficacy beliefs related to their communication with families may have been more likely to respond to questions regarding these beliefs than those teachers who did not feel confident or competent. Many of the 46 surveys that were only partially completed and which were eliminated from analysis stopped responding to questions near the beginning of the self-efficacy section. Offering an incentive, such as an opportunity to enter a lottery to win a gift card, might entice a wider range of teachers to participate and encourage teachers to complete the survey whether or not they are specifically interested or confident in family engagement practices.

Finally, there may be a sense of social desirability that influenced preschool teachers' responses to survey questions. The increased focus on family engagement in recent years, as evidenced by the release of the joint position statement on family engagement in early childhood

systems and programs by the U.S. Departments of Education and Health and Human Services (2016), has brought the importance of partnering with families to the forefront. Preschool teachers might have responded to questions in the manner they felt was appropriate based on this recent focus, indicating higher frequencies of communication with families than are actually present and reporting a higher incidence of courses related to family engagement than they actually experienced.

### **Frequency of Preschool Teacher Communication with Families**

**Methods of communication.** The methods of communication addressed in this survey were drawn from recommendations by Knopf and Swick (2008) and findings from Katz and Bausch (1999); however increasingly common methods of electronic communication were also incorporated into the survey. The pattern of use of various methods reported by this sample reflects what a fairly traditional pattern of communication between teachers and families, relying most on naturally occurring opportunities to connect and the more formal structured conference. While naturally occurring opportunities to connect with families help to build relationships, and provide for more frequent communication, it is unclear whether these opportunities are well suited for in-depth communication about learning and development. Rather, these informal conversations might provide good opportunities to discuss logistics and program activities or to follow up on prior discussions. If preschool teachers are frequently relying on informal conversations to discuss learning and development, it would be valuable to know more about the nature of these discussions. Specifically, it would be valuable to determine if such discussions focus on learning and development, whether they are bi-directional in nature, and whether these discussions are used as a follow-up to more detailed discussions or processes that promote a focus on common goals. It is also important to learn more about the nature of the communication

that occurs in the more formal conference setting. If preschool teachers discuss learning and development primarily in the more formal conference setting, discussions may tend to be teacher-led, with families responding to what the preschool teacher has observed instead of playing a primary role in sharing their observations, concerns, and/or goals.

The preschool teachers who responded to this survey also reported less frequent use of remote methods of communication, especially electronic methods such as email or text messaging. A Gallup poll from recent years indicated that text messaging, cell phones, and email were the most common forms of communication (Newport, 2014). If these types of communication are not often used by preschool teachers, important opportunities to connect with families may be missed. It must be noted that while this survey did not collect information about the age of the respondents, the high level of education and years of experience reported are indications of a sample that may be in the older range of the overall population. A sample that drew more young respondents may have had higher use of remote and electronic methods of communication. Due to the expanded array of communication methods, the shifting preferences in the general population, it is important that programs determine family and preschool teachers preferences and consider whether current communication processes are meeting the needs of families.

This survey did not address differences in content or type of communication using the various methods. The distinction between remote and in-person methods of communication that emerged through the PCA may prove helpful in further examining which methods might be most appropriate for different types of communication. Remote communication might be effective for sharing observations of children's progress, sharing successful strategies, or communicating about program events, while in-person communication might be more effective for discussing

individual learning and development or discussing concerns about children's learning or behavior. York and Loeb (2014) describe a recent intervention using a remote method of communication to share strategies to support learning and development, sending three text messages per week about language and literacy development. The use of this intervention resulted in increases in home literacy activities and improvements in certain literacy outcomes for children (York & Loeb, 2014). While this program's texts messages were not individualized, text messaging may also serve as a mechanism for connecting specifically about individual children's learning and development. Further research into families' preferences for communication methods, the match of these preferences to the methods used by teachers, and the relationship of various methods of communication to the type of information being shared may provide important information to guide both in-service and pre-service teacher preparation.

**Types of communication.** While the various methods of communication are important to consider in regard to connecting with families and matching the method and type of communication, this study was specifically focused on communication about learning and development. Despite a great deal of research about the importance of the relationship between teachers and families (Adams & Christenson, 2000; Ames et al., 1995; Fantuzzo et al., 2000; Powell et al., 2010; Waanders et al., 2007) and guidance that calls for linking family engagement efforts to children's learning (Mapp & Kuttner, 2013) there has been little research available to guide the specifics of teacher communication with families. The research questions in this dissertation focused on the relationship between preschool teacher preparation related to family engagement, program support for communicating with families, preschool teacher self-efficacy related to communicating with families, and the frequency of teacher communication with families; however, survey data also provides some preliminary information about the nature of

teacher communication about learning and development. Overall, results indicate that preschool teachers who responded to this survey communicate with families about children's learning and development, using any of the methods of communication, on a weekly basis. This frequency of communication specific to individual children's learning and development is somewhat higher than might be expected; however, there is little prior research with which to compare this frequency. What is still unclear is whether this frequency holds true across all families in a classroom and whether the nature of the communication about learning and development is unidirectional or bidirectional.

The survey used in this study attempted to differentiate between sharing information about program or classroom events and four different general topics that preschool teachers might communicate about related to children's learning and development: discussing individual children's learning and development, sharing observations of children's progress, sharing successful strategies, and discussing concerns about children's learning or behavior. Survey results suggest that the preschool teacher who responded did differentiate somewhat between these types of communication based upon variation in the mode, median, and means across the different types of communication; however, the PCA used to determine any potential sub-scales yielded only one common factor across all types of communication about learning and development. Based upon the lack of prior research in this area and the results of this survey, further research is needed that specifically examines the distinctions across types of communication about learning and development that are salient and can help to guide additional research as well as policy and practice.

The pattern of the relative reported frequencies of the different types of communication raises several concerns that might inform policy and practice as well as several questions for



further study. The type of communication most frequently used by survey respondents was informing families about class or program events. This type of communication, while not a focus of this study, was included for purposes of comparison and to help survey respondents differentiate the content of their communication with families. While it may be important to share information about program events, which may be additional opportunities for communication, the relative frequency is cause for reflection. Preschool teachers who frequently communicate with families to share information about classroom or program events may believe that they are actively engaging families, and indeed families may feel connected and informed; however, it seems unlikely that this type of communication will promote family engagement in children's learning at home, the aspect of family engagement most strongly linked to children's outcomes (Fantuzzo et al., 2004). Pre-service and in-service preparation that differentiates between types of communication may highlight the different purposes, content, and goals of the various types of communication so that programs and preschool teachers can be more intentional in promoting alignment between school and home and in working to increase family support of children's learning and development at home.

The next most frequent type of communication reported by survey respondents was discussing concerns about development or behavior. The relatively lower frequency of sharing observations about children's progress when compared to the reported frequency of discussing concerns about development or behavior suggests a tendency toward deficit-focused communication. Research has shown that partnership-based approaches are associated with a sense of parent empowerment and higher capabilities (Dunst & Dempsey, 2007). Deficit-focused communication is not indicative of a partnership approach and further research into the specific nature of preschool teachers' communication with families may serve to support the

development of partnership approaches in early care and education programs. The survey did not specify the exact nature of discussions of concerns about learning or behavior. Such discussions might be initiated by teachers related their concerns about classroom incidents or these discussions might be initiated by families or teachers and focus on mutual goals. Such variation in the approach to discussing concerns about learning or behavior may account for the factor loadings in the self-efficacy scale, in which items related to preschool teachers' confidence about sharing concerns about learning or behavior loaded onto two separate factors, with one factor showing negative loadings. More research is needed in order to help further differentiate this type of communication across dimensions that can inform practice and teacher preparation programs.

Several differences in the reported frequencies of the various types of communication were noted across program types (community programs as compared to public school programs), with preschool teachers in community programs reporting higher reported frequencies of in-person communication and communication about learning and development, and preschool teachers in public schools reporting higher frequencies of remote communication. Despite a strong focus on family engagement in Head Start, the Preschool Development Grant, and Preschool Special Education programs, there was a higher reported frequency of communication about learning and development in programs that solely receive state funding. Patterns across education levels showed a higher frequency of remote communication for preschool teachers with graduate degrees and higher frequencies of in-person communication and communication about learning and development for teachers with a Bachelor's degree or less. Because this survey involved teacher reports of the frequency of these behaviors on an ordinal scale, some caution must be exercised in interpreting these results. The variations noted between types of

communication across subgroups indicates a need for further research examining program policy, structure and philosophy and the potential influence on methods and types of communication.

Teacher communication with families is an important component of family engagement and can be a way to increase trust (Adams & Christenson, 2000) and promote family engagement in their children's education (Ames et al., 1995). Communication between home and school has been shown to impact how families view their child as a learner (Ames et al., 1995) which makes it a critical factor to consider when working to increase family engagement in children's learning. This study provides a starting point for deeper exploration into the nature of the communication between teachers and families about children's learning and development. While this survey provides preliminary information about variations across methods and types of communication, more research is needed to better understand this complex behavior. Research involving actual records or samples of communication between preschool teachers and families would help to better delineate types of communication and/or measure frequency. A better understanding of how teachers communicate with families, and which methods and types are most effective, will allow for future research to appropriately and fully address communication with families and will provide the information necessary for teacher preparation programs to fully support the competencies necessary for teachers.

### **Teacher Preparation Related to Family Engagement**

A majority of preschool teachers who responded to this survey reported having two to three courses with "family" or "parent" in the course title. This finding may mark a trend toward more explicit inclusion of family engagement in early childhood coursework over recent years, given the contrast with Shartrand's (1997) finding that teacher preparation programs across the majority of states did not mention family engagement and Bruder and Dunst's (2005) finding

that early intervention preparation did not address family engagement. Wilson (2009) found in a review of teacher preparation programs in Missouri that family engagement was infused in coursework instead of being addressed in a specific course. In the current study, preschool teachers also reported having two courses that embedded family engagement practices within other coursework. The combination of coursework explicitly addressing family engagement along with coursework that infuses specific practices as they relate to other course content could represent a more thorough way of addressing family engagement practices in teacher preparation programs. The sample of preschool teachers who responded to this survey had a relatively high level of education and years of experience with preschoolers. It is unclear from the survey questions when these teachers received their education and whether this finding about the explicit and varied manner in which family engagement was reportedly addressed reflects a regional difference or a shift over time. A current review of competencies, course outlines, and requirements for teacher certification and general early childhood education coursework would provide valuable information about this potential shift in teacher preparation programs.

Responses to the question about days of in-service professional development related to family engagement showed a high level of variability. While the most common responses was that preschool teachers had received no in-service professional development on the topic, the mean higher, indicating that many preschool teachers had received two days of in-service and approximately a fifth had received three or more days of in-service on the topic. While teacher preparation plays an important role in developing teachers' knowledge and competency, on-the-job training and support has long been shown to be the most highly effective method for impacting teacher practice (Joyce & Showers, 1981). Indeed, teachers taking coursework on family engagement still expressed a need for additional support (Katz & Bauch, 1999) and may

still struggle with applying effective communication strategies (Walker & Dotger, 2012). Therefore, ongoing job-embedded support may play a key role in providing preschool teachers with the competencies necessary to effectively communicate with families about children's learning and development. Further research as to the content and nature of the in-service professional development related to family engagement is needed.

There was a poor response rate to four survey questions related to how preschool teachers perceived that pre-service and in-service preparation prepared them for using various strategies and for communicating with families about children's learning and development. Because sections of the survey adjacent to these questions did not have the same degree of missing data, this pattern of response calls into question the ability of teachers to distinguish between on-the-job experience and their more formal preparation or may indicate a lack of accuracy in respondents' reports of their preparation. In order to more fully understand the specific knowledge and skills that teachers develop through both pre-service and in-service professional development, it will be important for future research to examine the types of experiences included in coursework and in-service professional development opportunities, the intended competencies, and the degree to which these strategies support teachers to engage in these behaviors.

### **Structural Supports for Communication with Families**

In order to address program policies and practices that might serve to address such barriers, this study included eight program supports that had the potential to increase teacher communication with families. For each program support included in the survey, the large majority of preschool teachers responding to this survey reported its' presence in their program, with the exception of a requirement of home visits which was few than a fifth of respondents. In

general, respondents indicated that programs had many supports in place. This indicates generally strong support for family engagement practices in state and federally funded preschool programs in Connecticut. However, the specific program supports addressed in the survey were based on a very limited amount of research in this area. The lack of variability across these programs indicates that either there is strong support overall, or it may be an indication that the structural supports selected for inclusion in this survey do not adequately address the variability in family engagement practices across programs. One of this study's limitations is the lack of variability in the programs recruited for participation. Further exploratory research should delve into the different supports that exist across types of programs, which specific supports make the most difference in the frequency of preschool teacher communication with families about learning and development, and which supports address specific barriers that are identified by families.

### **Teacher Self-efficacy Related to Family Engagement**

Based upon this sample, preschool teachers generally report high feelings of self-efficacy related to communicating with families, with a tendency for teachers to indicate that they strongly or completely agreed with both confidence and competence statements. Teachers felt less competent using text messaging or communicating in the face of challenges, such as families being upset, disagreements about learning or behavior, and/or when there were cultural or language differences. The factors that emerged from the EFA corresponded to the following aspects of communicating with families: confidence, general competence, competence communicating when facing challenges, and competence with less frequently used methods of communication. A fifth factor included items related to confidence discussing concerns about children's learning or behavior. This pattern of factors is generally consistent with the existing

literature on teacher self-efficacy, with a clear distinction between items related to confidence and competence as found in previous studies (Stewart et al., 2000; Bruder et al., 2011). Further, a distinction between general competence and competence in the face of challenges or across differing circumstances fits with the literature related to general self-efficacy. Bandura (1977, 2006) describes a threshold of self-efficacy beliefs needed to execute a particular behavior, a resulting higher sense of self-efficacy as a result of the initial attempts, and a differentiation between those who have a tentative belief in their abilities versus those who persevere in using a particular behavior in the face of challenges. Despite the need for further research into the nature of preschool teacher communication with families about children's learning and development, as described throughout this discussion, the correspondence of the findings related to this self-efficacy scale and the literature supports the use of this scale as a measure of preschool teachers' belief appraisals specific to communicating with families.

Despite the general support for the use of this scale, the negative loading of the group of items related to confidence discussing concerns about learning or development onto a common factor warrants further investigation into the nature of this type of communication, as well as preschool teachers' perceptions about this behavior. As discussed in the section on frequency of communication, preschool teachers' discussions with families about concerns can take on many forms, including teachers sharing their own concerns in positive or negative ways and/or teachers hearing families concerns. Discussions about concerns could be in the context of a partnership approach and could serve to build capacity of both the teacher and the family to support the child. Conversely, such discussions could take the form of didactic, one-way communication about a problem which aligns to the professionally-centered model described by Dunst et al (1991). Additional research should help to distinguish important aspects of this type of communication,

as well as examine teachers self-efficacy related to the various ways this type of communication might be manifested.

### **Relationship between Variables**

The correlational analyses broadly support existence of the theorized relationships between study variables within the sample population. The research questions guiding this study focused on the relationships between preschool teacher preparation related to family engagement, structural support for communicating with families, preschool teacher's self-reported feelings of competence and confidence related to communicating with families, and the frequency of communication with families. In addition, because the analyses of the individual study variables yielded a complex picture that included four subscales related to teacher belief appraisals about communicating with families and three categories of communication, the results of this study point to a much more complex relationship between the study variables than was reflected in the general theoretical model guiding this study. The following discussion will consider each of the study questions broadly, as well as considering the additional findings and questions that emerged based upon the subscales used in the final analysis.

The first research question focused on the relationship between preschool teachers' self-efficacy related to communicating with families and the frequency of communication. The theoretical model guiding this research included self-efficacy as a potential intermediary factor which is influenced by teacher preparation and structural supports and which in turn influences the frequency of communication about learning and development. Results indicate that for this sample, two specific subscales, confidence in communicating with families and competence communicating in the face of challenges, were significantly correlated with the frequency of communication about learning and development. In addition, when the correlations between the



various subscales of preschool teacher self-efficacy and methods of communication are considered, it appears that basic competence in communicating with families may support general communication but not communication about learning and development, based upon high correlation to in-person communication but not communication about learning and development. When the lack of a significant correlation between basic competence communicating with families and the frequency of communication about learning and development is considered along with the medium effect size between preschool teachers confidence related to communicating with families and the frequency of communication about learning and development, it suggests that an understanding and belief in the impact for children and families might be needed in order to focus communication on learning and development. Furthermore, the correlation between competency communicating in the face of challenges and the frequency of communication related to learning and development suggests that this competency allows teacher to engage in this behavior more frequently.

The second research question focused on the relationship preschool teacher's preparation related to family engagement and self-efficacy related to communicating with families. Overall, study findings indicate a significant relationship between preparation and self-efficacy in the case of preschool teachers' communication with families, with the exception that the level of preparation related to family engagement was not significantly correlated with competence using a variety of methods to communicate. Teacher preparation was significantly correlated with teacher self-confidence, basic teacher self-competence, and teacher self-competence when facing challenges. These correlations were indicative of medium effect sizes and support previous findings that preservice and in-service professional development influence teacher's perceived confidence and competence related to specific skills (Bruder & Dunst, 2011; Delfin & Roberts,

1980; Jarvis & Pell, 2004). This strongest correlation between amount of preparation related to family engagement and self-confidence may be reflective of preservice and in-service professional development that focuses more on attainment of knowledge than on competence in applying specific skills. Further research examining the specific types of experiences that preschool teachers have had during preservice and in-service professional development, as well considering as how these experiences impact self-efficacy and the frequency of communication, will be valuable in improving teacher preparation in this area. In addition, research related to the role of different methods of communication and a refinement of the questions related to type of communication will allow for more robust analysis and conclusions about the relationship between teacher preparation and teacher self-efficacy.

The third research question addressed the relationship between structural supports for communicating with families and teacher self-efficacy related to communicating with families. Structural supports were significantly correlated with preschool teachers' confidence related to communicating with families, basic competence, and competence communicating in the face of challenges, but not to competence using a variety of methods. The correlations between structural supports and the sub-scales of the teacher self-efficacy measure were weaker than the correlations between preschool teacher preparation and the self-efficacy sub-scales. This finding suggests that for this sample, preservice and in-service professional development exerted a greater influence on self-efficacy related to communicating with families than having policies and practices in place that promote these behaviors. Social learning theory (Bandura, 1979, 1997) indicates the mastery experiences (in this case successful communication with families due to having policies and practices in place that allow this to occur) increase feelings of self-efficacy, which in turn increase the frequency of a behavior. However, social learning also indicates that

a basic level of self-efficacy is necessary in order to initiate behaviors. Based upon this theory, it could be speculated that teacher preparation plays a role in the initial actions and basic self-efficacy, while structural supports play a role in ongoing opportunities for mastery experiences. Due to limitations with the study design and sample size, this study was not able to illustrate this complex and reciprocal relationship; however, results do indicate that further research into the respective roles of teacher preparation and structural supports are warranted.

Structural supports for communicating with families were most highly correlated with teacher confidence in communicating with families, which might suggest that the presence of policies and practices in a program signal to preschool teachers that these practices will result in a desired result. The relationship between structural supports for communicating with families and basic competence and competence in the face of challenges was weaker, but still significant. While program supports might provide teachers' with opportunities to engage in communication with families and practice engaging in this communication might bolster their sense of competence, it may be that the guidance and support that occurs through pre-service and in-service preparation is necessary for preschool teachers to gain a sense of competency in applying these skills that they know to have an impact.

The final research question focused on the direct relationships between both preschool teachers' preparation related to family engagement and program supports for communicating with families and the frequency of communication about learning and development. Preschool teachers' preparation related to family engagement was significantly correlated with the frequency of communication about learning and development. The number of structural supports for communicating with families was also significantly correlated with communication about learning and development; however, to a lesser degree than preschool teachers'

preparation related to family engagement. Prior research related to teacher preparation in family engagement practices has found increases in teachers' sense of preparation (Katz & Bauch, 1999), confidence (Walker & Dotger, 2012), and knowledge (Meholig & Shmov, 2013); however, none of these studies addressed the frequency of communication about learning and development. While previous research has also not specifically connected the frequency of communication with structural supports, the direct correlation between structural supports and communication about learning and development does fit with research focused on barriers to communication (Policy Study Associates, Inc., 1997). Because preservice and in-service professional development may occur at various points in one's career while structural supports are an immediate influence on behavior, more information about the timing of the preservice and in-service professional development would be valuable in better understanding the relationships between these variables.

While correlational analyses cannot be construed to indicate causation, this study sets the stage for additional research on possible relationships and influences among these variables. The pattern of these results, when considered in light of previous research, offers a plausible relationship among these variables that warrants further study. The correlation between basic-self efficacy and in-person communication, along with the lack of a strong correlation between basic self-efficacy and communication about learning and development can be considered in light of social learning theory, in which a foundational level of competency is necessary to initially engage in a behavior. This pattern of correlations may indicate that basic self-competence, influenced by teacher preparation, and structural supports set the stage for communication between teachers and families to occur, primarily using in-person methods of communication. Teacher preparation related to family engagement may also differentially influence, or increase

teachers' knowledge that their action will result in the desired effect (teacher self-confidence) and, in turn, both directly and indirectly impact the frequency of communication about learning and development. A great deal of additional research is needed to explore these possible relationships among these study variables.

Further refining the field's understanding of the specific behaviors involved in communicating with families about children's learning and development, including which types of communication might best support families to engage in their child's learning at home is an important starting point and will eventually provide a foundation for further research regarding the relationships addressed in this study. Ultimately, understanding the relationship between teacher preparation related to family engagement, the structural supports that programs put in place to support preschool teachers' communication with families, preschool teachers' self-efficacy related to communicating with families, and the frequency of communication help target preservice and in-service professional development appropriately.

## **Conclusions**

This study examined the relationship between preschool teachers' preparation related to family engagement, structural support for communicating with families, preschool teachers' self-efficacy related to communicating with families, and the frequency of communication with families about learning and development. Findings indicate that for the teachers' responding to this survey, pre-service and in-service preparation related to family engagement was correlated with preschool teachers' confidence that communicating with families would result in intended outcomes, competence communicating with families, competence communicating in the face of challenges and the frequency of communication about children's learning and development. Structural supports that programs put in place that promote communication with families are also

correlated with preschool teachers' confidence that communicating with families would result in intended outcomes, competence communicating with families, competence communicating in the face of challenges and the frequency of communication about children's learning and development. Despite a need for additional research in order to fully leverage teacher communication with families as a strategy for improving children's outcomes, several simple practices and policies could be put in place more immediately. The following recommendations are intended to guide researchers, policy makers, and practitioners in taking steps to link family engagement efforts to children's learning. These recommendations have the potential to build knowledge in around communicating with families about learning and development, in addition to impacting current practice.

**Research recommendations.** While the field of education in general has a strong focus on family engagement and guides teachers to link family engagement efforts to learning, there is little specific information to guide teachers on how to approach this complex task or to guide teacher preparation programs in building knowledge and competency in this area. Researchers should focus on questions that will guide practices in preschool programs or which will provide information to guide teacher preparation in supporting the development of teachers' knowledge and competency communicating about children's learning and development. Research in this area should involve some direct measures of the quality and quantity of preschool teachers' communication with families about learning and development as well as considering both family and teacher perceptions and preferences related to communication. The nature of teacher communication with families has the potential to have a significant impact on the respective roles that teachers and families play within their relationship with each other and may also impact the role that families play in their child's education. Better understanding the complexity

of communicating about children's learning and development should include delving deeply into how families and teacher communicate about concerns that arise at home or at school, progress that is observed and can be built upon, strategies that are effective at home and at school, and individual children's learning and development.

Research should also examine teacher preparation related to family engagement, including consideration of what currently exists and methods that are effective in impacting teacher practice. Methods known to be effective in changing teacher practices, such as the use of videos, role-playing, or coaching, can be applied to determine how to best increase teachers' knowledge and competency specific to communicating with families about children's learning and development. Finding techniques that will increase teachers' communication with families about learning and development will allow for further research examining changes in family behavior and/or impacts on child outcomes.

**Policy and practice recommendations.** While a great deal of additional research is needed to increase the field's understanding of communication between teachers and families related to children's learning and development, several steps can be taken to improve or refine current practice. The following recommendations are for policy or practices that could have an immediate impact. Several of these recommendations, while written as program actions, may be addressed through individual teachers or programs adopting specific practices or through guidance and policy implemented on a larger scale, such as requirements tied to specific funding sources. First, supports that allow teachers the opportunity to engage in communication with families should be in place. Programs should consider what supports are currently in place and whether these supports match family preferences for methods of communication. Secondly, the field should be supported to examine current practices related to communicating with families

about children's learning and development. Guidance that focuses on the importance of linking communication to children's learning can begin to focus communication and professional learning efforts. Opportunities for teachers and/or families to discuss and reflect on which practices are effective and consider ways to practice or improve their communication about learning and development will help to build teacher competence and a general understanding about this practice within the field.

Teacher competencies, teacher preparation standards, and course syllabi should be reviewed to ensure that family engagement in general is included, but also that communication about learning and development is specifically addressed. Individual programs and teachers can consider current competencies related to communicating with families and seek opportunities to build knowledge and skill in this area.

These recommendations are a beginning toward improved linkages between preschool programs and families. Linking two efforts known to impact children's outcomes, high quality preschool, and family engagement in children's learning, there is a great potential for improving children's outcomes; however, in order to do this effectively, a greater focus on the nature of communication about children's learning and development is necessary. This study represents an initial step in this understanding. Further research, as well as an increased focus on communication about learning and development in the field of early childhood education in general, will provide the knowledge necessary to develop teacher preparation programs that provide teachers with the competency to communicate effectively with families and will support programs structures that provide teachers with the necessary opportunities to engage in this practice in the field.



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## **Appendix A: Preschool Teacher Communication Survey**

### **Information Sheet**

Principal Investigator: **Mary Beth Bruder, Ph.D.**

Doctoral Dissertation Student: **Michelle Levy**

**Title of Study:** *The relationship between preschool teacher background, structural supports, and frequency of teachers' communication with families about children's learning and development*

You are invited to participate in this survey regarding preschool teachers' communication with families about their children's learning and development. This survey is part of a doctoral dissertation research study through UConn Health. This study seeks to better understand the relationship between teacher education, structural supports, teacher self-efficacy, and the frequency of communication about children's learning and development in order to inform further steps in research and ultimately improve teacher preparation programs, decrease barriers to family engagement, and increase the frequency of communication that is linked to children's learning. Your participation in this study will require the completion of the attached survey. This should take approximately 15-20 minutes of your time. Your participation is voluntary and you can stop responding to the survey at any time. You may skip any question at any time. You will not be paid for being in this study. We believe this survey does not involve any risk to you. There will be no direct benefit to you from your participation. The results of this study will be shared through the same email lists used to recruit participants for this study and may help to shape future professional development efforts. Your participation will be anonymous and you will not be contacted again in the future. No personally identifiable data will be collected as a part of the online survey. Data will be collected and stored on the Qualtrics survey

platform. The results of the online survey will be maintained within the Qualtrics system only as long as necessary to review and analyze data. Upon completion of the data analysis process, these records will be destroyed. You do not have to be in this study if you do not want to be. If you have further questions about this project or if you have a research-related problem, you may contact Michelle Levy or Mary Beth Bruder at (860) 679-1500. If you have any questions about your rights as a research participant, you may contact the UConn Health Institutional Review Board (IRB) at 860-679-1005. The IRB is a group of people who review research studies to protect the rights and welfare of research participants. This study was approved by the UConn Health IRB # 17-157-2.

1. Completion of the survey implies voluntary participation.

- ☐ Agree
- ☐ Disagree

### **Section One: Preschool Teacher Communication with Families**

2. Please complete the following questions. Do not provide any identifying information on this survey. This survey is about communicating with families about their child's learning and development. For the purpose of this survey, *communication* refers to a two-way exchange of information. In each of the questions below, *communication with families about children's learning and development* is intended to refer to both sharing information and receiving information from families.

3. Indicate the frequency with which you use the following methods of communicating with families about their child's learning and development.

|                 | Not at all            | Rarely                | Sometimes             | Frequently            | Very<br>Frequently    |
|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Telephone calls | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|                                      |                       |                       |                       |                       |                       |
|--------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Written family communication journal | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Parent conferences                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Home visits                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Emails                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Text communication                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Informal, in-person communication    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

4. Considering all communication strategies together, how often do you engage in the following types of communication with families?

|   | Every month or so     | Every few weeks       | On a weekly basis     | A few times per week  | Daily                 |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Discussing individual children's learning and development | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Informing families of class or program events             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sharing observations about children's progress            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sharing information about successful strategies           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Discussing concerns about development or behavior         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

**Section Two: Preparation related to Communicating with Families**

5. How many college or graduate level courses have you completed that included *families* or *parents* in the course title?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ Other \_\_\_\_\_

6. How many college or graduate level courses have you completed that embedded family engagement practices in the course material?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ Other \_\_\_\_\_

7. How many days of in-service professional development related to family engagement practices have you had?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ Other \_\_\_\_\_

8. What types of in-service professional learning opportunities have you received? Check all that apply.

- ☐ Informational (lecture, discussion)
- ☐ Practice with children (coaching, role playing)
- ☐ Demonstrations (videos, illustrations)
- ☐ Follow-up consultation or coaching after initial training
- ☐ Not sure

9. How well did your preservice professional learning prepare you to use different strategies (e.g., conversations, conferences, communication journals) for communicating with families about children's learning and development?

- ☐ Very Well
- ☐ Well
- ☐ Somewhat
- ☐ Poorly
- ☐ Not at all

10. How well have your college or graduate level courses prepared you to communicate with families about their children's learning and development?

- ☐ Very Well
- ☐ Well
- ☐ Somewhat
- ☐ Poorly
- ☐ Not at all

11. How well has your in-service professional learning prepared you to use different strategies (e.g., conversations, conferences, communication journals) for communicating with families about children's learning and development?

- ☐ Very well
- ☐ Well
- ☐ Somewhat
- ☐ Poorly
- ☐ Not at all

12. How well has your in-service professional development prepared you to communicate with families about their children's learning and development?

- ☐ Very well
- ☐ Well
- ☐ Somewhat
- ☐ Poorly
- ☐ Not at all

### **Section Three: Preschool Teacher Beliefs**

13. Please indicate how much you agree or disagree with the follow statements about your confidence about communicating with families about children's learning and development.

14. I am confident that I know about communicating with families about a child's learning and development in order to help families support their child at home.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

15. I am confident that I know about communicating with families about a child's learning and development in order to coordinate school and home efforts to support a child's learning.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

16. I am confident that I know about the effect that communicating with families about their child's learning and development has on the child's social and learning outcomes.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

17. I am confident that I know about sharing observations of a child's progress with their family in order to help them support their child's learning and development.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

18. I am confident that I know about sharing observations of a child's progress in order to coordinate home and school efforts to support a child's learning.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

19. I am confident that I know about the effect that sharing observations of a child's progress with families will have on a child's social and learning outcomes.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

20. I am confident that I know about sharing strategies that have supported a child's learning and development in the classroom with families in order to help families support their child at home.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

21. I am confident that I know about sharing strategies that have supported a child's learning and development in the classroom with families in order to coordinate home and school efforts to support children's learning.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

22. I am confident that I know about the effect that sharing strategies that have supported a child's learning and development in the classroom with families has on social and learning outcomes.

- ☐ Strongly agree
- ☐ Moderately agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Moderately disagree
- ☐ Strongly disagree

23. I am confident that I know about discussing concerns about a child's learning with their family in order to help the family support their child's learning and development at home.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

24. I am confident that I know about discussing concerns about a child's learning with their family in order to coordinate home and school efforts to support children.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree

- ☐ Strongly disagree
- ☐ Completely disagree

25. I am confident that I know about the effect that discussing concerns about a child's learning with their family can have on a child's social and learning outcomes.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

26. I am confident that I know about discussing children's behavior in order to help families support children at home.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

27. I am confident that I know about discussing children's behavior with families in order to coordinate home and school efforts to support children.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

28. I am confident that I know about discussing children's behavior with families in order to improve children's social and learning outcomes.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

**Please indicate how much you agree or disagree with each of the following statements about your communication with families about children's learning and development.**

29. I am able to discuss individual children's skills and learning with their family.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree



- ☐ Somewhat disagree
  - ☐ Strongly disagree
  - ☐ Completely disagree
30. I am able to share my observations of a child's progress with their family.
- ☐ Completely agree
  - ☐ Strongly agree
  - ☐ Somewhat agree
  - ☐ Somewhat disagree
  - ☐ Strongly disagree
  - ☐ Completely disagree
31. I am able to share information about strategies that I have found to be successful at supporting a child's learning and development in the classroom with their family.
- ☐ Completely agree
  - ☐ Strongly agree
  - ☐ Somewhat agree
  - ☐ Somewhat disagree
  - ☐ Strongly disagree
  - ☐ Completely disagree
32. I am able to discuss my concerns about a child's learning with their family.
- ☐ Completely agree
  - ☐ Strongly agree
  - ☐ Somewhat agree
  - ☐ Somewhat disagree
  - ☐ Strongly disagree
  - ☐ Completely disagree
33. I am able to discuss my observations related to children's behavior with families.
- ☐ Completely agree
  - ☐ Strongly agree
  - ☐ Somewhat agree
  - ☐ Somewhat disagree
  - ☐ Strongly disagree
  - ☐ Completely disagree
34. I am able to communicate with families about children's learning and development when a family member is upset.
- ☐ Completely agree
  - ☐ Strongly agree
  - ☐ Somewhat agree
  - ☐ Somewhat disagree
  - ☐ Strongly disagree
  - ☐ Completely disagree

35. I am able to communicate with families when a family member disagrees with what I am saying about their child's learning.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

36. I am able to communicate with families when a family member disagrees with what I am saying about their child's behavior.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

37. I am able to communicate with families about their child's learning and development when the family is from a different culture than mine.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

38. I am able to find ways to communicate with families about child's learning and development when the family speaks a language that I do not speak.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

39. I am able to use email to communicate with families about their child's learning and development.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

40. I am able to communicate with families about their child's learning and development by phone.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

41. I am able to use written communication such as journals to communicate with families about their child's learning and development.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

42. I am able to discuss a child's learning and development during home visits with families.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree
- ☐ Don't know

43. I am able to use text messaging to communicate with families about their child's learning and development.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

44. I am able to communicate with families about their child's learning and development during casual, in-person conversations at school.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

45. I am able to communicate with families about children's learning and development during parent conferences.

- ☐ Completely agree
- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Somewhat disagree
- ☐ Strongly disagree
- ☐ Completely disagree

**Section Four: Current Program Practices**

46. Program Setting

- ☐ Community center-based setting
- ☐ Public school program

47. Program Type/Funding (Note that while your program may also have other funding sources, this survey only collects information about those listed below. Please check all that apply)

- ☐ Head Start
- ☐ Preschool Special Education Classroom
- ☐ State-funded preschool (Child Day Care, School Readiness, Smart Start)
- ☐ Preschool Development Grant

48. Does your school/program philosophy or mission statement include a statement about the importance of family engagement?

- ☐ Yes
- ☐ No
- ☐ Don't know

49. Does your school/program require regularly scheduled family conferences?

- ☐ Yes
- ☐ No
- ☐ Don't know

50. Does your school/program schedule provide opportunities for you to have informal, in-person conversations with families?

- ☐ Yes
- ☐ No
- ☐ Don't know

51. Does your program hold planned activities for families that you attend?

- ☐ Yes
- ☐ No
- ☐ Don't know

52. Does your school/program have a policy/practice regarding written communication with families about children's learning and development?

- ☐ Yes
- ☐ No
- ☐ Don't know

53. Does your school/program allow family members to volunteer in the classroom?

- ☐ Yes
- ☐ No
- ☐ Don't know

54. Does your program administrator encourage teachers to communicate regularly with families?

- ☐ Yes
- ☐ No
- ☐ Don't know

55. Does your program require home visits with families?

- ☐ Yes
- ☐ No
- ☐ Don't know

56. Does your program permit home visits with families?

- ☐ Yes
- ☐ No
- ☐ Don't know

**Section Five: Background (Education and Experience)**

57. Please indicate your highest level of education

- ☐ Child Development Associate (CDA) credential
  - ☐ Associate's Degree
  - ☐ Bachelor's Degree
  - ☐ Master's Degree
  - ☐ Doctorate
  - ☐ Other (Please specify)
- 

58. Do you hold a Connecticut Teaching Certification?

- ☐ Yes
- ☐ No

59. If yes, what endorsement do you hold?

- ☐ 112 Integrated Early Childhood/Special Ed., Birth - K
- ☐ 113 Integrated Early Childhood/Special Ed., N/K through grade 3
- ☐ 01 PreK-Grade 8
- ☐ 02 PreK-Grade 6
- ☐ 03 PreK-Grade 3
- ☐ 08 PreK-K

☐ 065 Comprehensive Special Education PreK-Grade 12

☐ Other (Please specify) \_\_\_\_\_

61. Please indicate the major area of concentration of your highest degree (select one).

☐ Child studies

☐ Early childhood education

☐ Early child special education

☐ Psychology

☐ Special education

☐ Other (Please specify) \_\_\_\_\_

61. Please indicate the number of years of experience you have working with infants and toddlers.

☐ Less than 1 year

☐ 1-3 years

☐ 4-6 years

☐ 7-9 years

☐ 10-12 years

☐ 13-15 years

☐ 15 or more years

62. Please indicate the number of years of experience you have working with preschoolers.

☐ Less than 1 year

☐ 1-3 years

☐ 4-6 years

☐ 7-9 years

☐ 10-12 years

☐ 13-15 years

☐ 15 or more years

63. Please indicate the number of years of experience you have working with children with disabilities.

☐ Less than 1 year

☐ 1-3 years

☐ 4-6 years

☐ 7-9 years

☐ 10-12 years

☐ 12-15 years

☐ 15 or more years

Thank you for completing this survey.

### **Appendix B: Self-efficacy Scale Content Validation**

The survey developed for the study “The relationship between preschool teacher preparation, structural supports, and frequency of teachers’ communication with families about children’s learning and development” consists of five main sections. The first section addresses the frequency and forms of preschool teachers’ communication with families related to children’s learning and development. The second section includes questions related to preschool teachers’ preparation related to communicating with families about children’s learning and development. The third section addresses preschool teachers’ self-efficacy beliefs, specifically targeting their confidence and competence related to communicating with families about children’s learning and development. The fourth section of the survey asks questions about preschool program structural supports for communicating with families about children’s learning and development. The fifth, and final, section includes questions about teacher’s education and experience.

Because the construct of self-efficacy beliefs consists of multiple factors that are not likely to be well understood by the intended research subjects, this paper reviews the development process for the third section of the survey, including a content validation process that was undertaken to ensure that the survey measures what it is intended to measure. Initial survey development was completed based on research to date. Findings suggest that self-efficacy includes two distinct factors: *confidence* and *competence* (Bruder, Dunst, & Mogro-Wilson, 2011; Stewart et al., 2000) and therefore the survey targets these two factors. Drawing upon definitions used in the research literature, this study defines *confidence* as the knowledge that a specific practice will result in an intended positive outcome and *competence* as the belief that one is able to successfully implement this practice. The questions in the current survey were developed based upon Albert

Bandura's (2006) chapter on constructing self-efficacy scales, however, the wording of items was refined to specifically and clearly address confidence and competence as defined.

Confidence questions include the same basic structure, starting with the words, "I am confident that I know about...." followed by a particular behavior and the expected positive outcome.

Positive outcomes are phrased in terms of the interactions from the broader theory of change represented in Figure 1 and include helping families to support their children's learning and development, aligning school and home efforts to support children, and improving child outcomes. The specific communication practices match those addressed in the section of the survey related to the frequency of communication about children's learning and development, with the exception that sharing information about program events or activities was not included in this section. This communication practice was not included because the theory of action focuses on communication specific to individual children's learning and development as the mechanism of change. The communication practices included in the confidence items include: discussing individual children's learning and development, sharing observations of children's progress, sharing information about successful strategies, discussing concerns about children's learning, and discussing concerns about children's behaviors.

Bandura (2006) describes self-efficacy as varying in generality, strength, and level. This study focused on one specific domain of behavior (communicating with families about children's learning and development) but survey questions addressing competence included varying circumstances (differing communication practices and differing communication methods) and potential challenges encountered when communicating with families about children's learning and development. This variation was included in order to differentiate between individuals who feel capable in limited circumstances and those who feel capable across circumstances, in



addition to differentiating between those who are likely to persist in the face of challenges and those who may not continue to communicate with families if they encounter challenges. Questions in this section were worded with, "I am able to....." followed by a specific behavior. Communication practices included are: discussing individual children's learning and development, sharing observations of children's progress, sharing information about successful strategies, discussing concerns about children's learning, and discussing concerns about children's behaviors. Methods of communication in the competence section included those listed in the section on frequency of communication and include: telephone, written journal, conferences, home visits, email, informal conversations, and text communication. Potential challenges included in the competence section include: family members who become upset, family members who disagree with the teacher, families from cultures that differ from the teacher, and families who speak a language not spoken by the teacher.

Standard self-efficacy scales ask subjects to rate their perceptions related to a specific behavior on a 100 point scale with 10 unit intervals (Bandura, 1997). The online survey format lends itself to a more truncated response range and the likely familiar range of responses from strongly agree to strongly disagree; therefore, a six point scale will be used with the following possible responses: strongly agree, agree, somewhat agree, somewhat disagree, disagree, strongly disagree. It is anticipated that differences in levels of confidence and competence will be evident; however, means of the confidence and competence subsection and the broader self-efficacy section of the survey (the combination of confidence and competence) will all be used in data analysis.

### **Content Validation Method**

A convenience sample consisting of two groups was recruited for the content validation process: content experts with a background in both research and early childhood education and lay experts who represent the intended audience (preschool teachers). Participants in the content validation process included three content experts and two teachers. An additional preschool teacher completed only a portion of the questionnaire and therefore, his/her responses were not included in the data analysis.

The self-efficacy portion of the preschool teacher survey consists of 15 questions related to teacher confidence and 16 questions related to teacher competence. Participants in the content validation process were asked to rate each item for its representativeness, importance and clarity. This process aligns with the recommendations of Rubio, Berg-Wegner, Tebb, Lee and Rauch (2003), addressing three of the four criteria recommended: whether the survey represents the constructs intended to be measured, the clarity of the items, and the comprehensiveness of the measure. The final criterion discussed by Rubio et al. (2003) is whether items are appropriately matched to factors and a process of sorting by factors is suggested. This process was not considered appropriate in the case of this survey due to the wording of the statement stems which used language directly aligned to the factor and the fact that there were only two suspected factors represented in this self-efficacy measure. Instead, in order to determine the match of items to the factors questions were included asking the participants to rate the alignment of the two different word stems to the intended factor.

In addition to the questions about representativeness, fit to factor, clarity and importance, participants in the content validation process were asked to indicate whether or not the domain of teacher communication with families about their child's learning and development was

adequately represented by the items included and whether the sections related to confidence and competence adequately addressed those factors. Finally participants were offered an opportunity to suggest items that should be removed or added to the survey.

For each item, the average rating for each criteria assessed (representativeness, importance, and clarity) were computed. In addition, the content validity index (CVI) and overall interrater reliability agreement for representativeness and importance were computed. Because multiple experts were employed in the process specifically to gather disparate opinions and improve the clarity of items for a range of subjects, the interrater reliability for the criteria related to clarity was not computed. Instead, when a lay or content expert indicated that clarity was lacking for a particular item, modifications to the items in question were made and the revised items were checked with the expert to ensure the issues had been addressed in a satisfactory manner.

In addition to the five experts who complete the content validation survey, two additional teachers completed the preschool teacher survey to determine the amount of time it took to complete. These two preschool teachers were also asked to indicate if any questions were difficult to understand or difficult to answer.

## **Results**

Full results for the ratings of representativeness, importance, and clarity are included in Table 1. Overall, items were rated as representative of the factor or construct intended. The overall Content Validity Index for the survey was .95, with interrater reliability agreement for the criterion of representativeness of 77.42%. With the exception of the first item in the confidence subsection, the average rating for representativeness of items ranged from 3.2 to 4. None of the individual Content Validity Index were below .80, which is the threshold recommended by Davis

(1992) for new measures. With the exception of one item with an average rating of 2.8, ratings for item importance ranged from 3.4 to 4, with interrater reliability agreement of 87.10%. For any individual items with a rating below 3 on any criterion, the item was revised to reflect the expert recommendations and the experts who provided low ratings for that item were consulted to ensure that the item modifications addressed the issues in question.

The stems used for the confidence and competence items were rated as moderately or fully representative by all participants in the content validation process. The statements following the stem in the confidence section were reworded, shifting the action so that it precedes the anticipated outcome. This modification was reviewed with those experts who indicated that the stem was moderately representative and this shift helped to address the minor concerns they had about the stem "I am confident that I know about..." No items were removed or added following further discussion with one expert who recommended additional survey items.

Overall, the results of the content validation survey and the changes made to the survey provide support for the content validity of this measure of teacher self-efficacy related to communicating with families about their child's learning and development. If a sufficient sample size is achieved through survey distribution, a factor analysis and/or structural equation modeling may provide additional evidence regarding the validity of this measure.