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The Transition to Kindergarten: Impact of Transition Preparation on Socio-Behavioral Outcomes for Children with and without Disabilities

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Abstract

The transition to kindergarten is regarded as a key early childhood developmental milestone with important implications for later school outcomes. This period presents many challenges to children with and without disabilities, their families, and teachers. Despite its importance, there are few empirical studies that examine kindergarten transition. In particular, no prior research has investigated the impact of transition practices on kindergarten outcomes for both populations of children with and without disabilities. Therefore, the overarching goal of the current study was to examine the relationship between kindergarten transition preparation and child socio-behavioral outcomes in kindergarten among both typically developing children (TD) and children with developmental delays and disabilities (DD). Data collection involved parent/caregiver, preschool teacher, and kindergarten teacher reports of child behavior and involvement in kindergarten transition practices. Results showed that the involvement in transition preparation activities of families and preschool teachers, but not kindergarten teachers, was higher for children with DD than TD children. Additionally, preschool teachers, but not kindergarten teachers or families, were found to have higher involvement for children with poorer socio- behavioral competencies. Hierarchical linear regression analyses demonstrated that the involvement of preschool teachers in kindergarten transition preparation activities did not predict unique variance in kindergarten outcomes for children with or without DD. Instead, preschool child behavioral variables (i.e., adaptive and problem behavior) significantly predicted kindergarten outcomes. Best practices in kindergarten transition programming for children with and without disabilities are discussed.

THE TRANSITION TO KINDERGARTEN: IMPACT OF TRANSITION PREPARATION ON SOCIO-BEHAVIORAL OUTCOMES FOR CHILDREN WITH AND WITHOUT DISABILTIES

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Table of Contents

List of Illustrative Materials

The Transition to Kindergarten: Impact of Transition Preparation on Socio-Behavioral Outcomes for Children with and without Disabilities

Transitions are imminent in the lives of young children as they grow and develop. Major transitions involving movement from one environment to another, including home, child care, preschool, and elementary school settings, often hold particular significance for young children and their families. Because they may lack experience navigating these situations, early childhood transitions can lead to uncertainty and anxiety for both children and caregivers (McIntyre, Eckert, Fiese, DiGennaro, & Wildenger, 2007). Early transitions may involve qualitative changes in physical settings, schedules, activities, caregivers, and behavioral expectations (Pianta & Kraft-Sayre, 2003). Given the nature of the changes involved, transitions typically generate some degree of stress. In light of the developmental flux of early childhood, transitions during this period can be viewed as continuous rather than static processes requiring adjustment for children and caregivers (Wolery, 1999). In particular, the transition to kindergarten is of paramount importance, and is considered a significant developmental milestone for both children and families (Eckert, McIntyre, DiGennaro, Arbolino, Perry, & Begeny, 2008).

The transition to kindergarten can be conceptualized as an ongoing process that begins several months before a child leaves a "sending" preschool program and continues throughout the child's period of adjustment to a new "receiving" kindergarten program (Atwater, Orth-Lopes, Elliott, Carta, & Schwartz, 1994). Children transition to kindergarten from a variety of early childhood experiences and programs. Some children attend structured, center-based preschool programs, others attend daycare centers, some attend family daycare in another person's home, and still others remain in their own

homes with a family member or hired caregiver. Some children attend part-day preschool programs while others are in full-day child care arrangements. While some states (e.g., New York) have high-quality universal pre-kindergarten programs with specific standards for evidence-based curricula and teacher certification (New York State Education Department, 2008), many states do not have such systems. Thus, across these early childhood settings, children's experiences are diverse (Zigler & Finn-Stevenson, 2007).

The National Association for the Education of Young Children (NAEYC) emphasizes specific, empirically-based guidelines for Developmentally Appropriate Practices in early childhood programs (Bredekamp & Copple, 1997) and offers a national accreditation system for programs that meet these standards. In 2005, only 57% of children in the U.S. ages 3-5 attended center-based early childhood programs (US Department of Education, 2007). Large-scale evaluations of early childhood settings reveal that of those children about half (53%) receive poor or inadequate care relative to NAEYC standards (NICHD Early Child Care Research Network, 2005). This finding helps to explain the great variability in children's readiness for school (National Education Goals Panel, 1998).

In particular, early childhood education experiences vary along socio-economic lines. According to the National Center for Education Statistics, 60% of nonpoor children ages 3-5 participated in center-based programs (i.e., day care, Head Start, preschool, nursery school, prekindergarten), compared to only 47% of poor children in 2005. In addition, a greater percentage of children whose mothers held a bachelor's degree or higher attended a center-based program compared to children whose mothers had lower

education levels (US Department of Education, 2007). The variability and inequity that characterizes the U.S. early childhood education system has motivated many to advocate for a national policy for universal preschool (Zigler & Finn-Stevenson, 2007).

Although kindergarten is not mandated in the majority of states in the U.S., most require that programs are offered (U.S. Department of Education, 2007). In contrast with preschool attendance, nearly all children attend kindergarten, with the majority in full-day programs (West, Denton, & Germino-Hausken, 2000). National data indicate that kindergarten enrollment has remained steady, hovering around 96%, since 1977 (U.S. Department of Education, 2007). Kindergarten students constitute an increasingly diverse group with respect to racial, ethnic, cultural, social, economic, and language backgrounds (West et al., 2000). As a result of their different early life experiences, including early education, kindergartners begin school encompassing a broad continuum of knowledge and skill levels. Statistics derived from the Early Childhood Longitudinal Study-Kindergarten Class of 1998-1999 (ECLS-K) demonstrate that children who entered kindergarten varied greatly with respect to cognitive skills and knowledge, social skills, approaches to learning, and fledgling reading and mathematics skills (West et al., 2000). Thus, children also differ greatly in their preparedness or "readiness" for kindergarten.

The Significance of the Kindergarten Transition

A successful negotiation of the kindergarten transition is critical in the sense that it sets the stage for later academic and social outcomes in a child's educational experience. The relation between early school success and later school adjustment and achievement is noteworthy (Eckert et al., 2008; Rimm-Kaufman, Pianta, & Cox, 2000). Research suggests that academic trajectories tend to remain relatively stable over time

such that children who display positive early adjustment patterns generally continue to succeed in school, both socially and academically (Belsky & MacKinnon, 1994; LaParo, Kraft-Sayre, & Pianta, 2003). Conversely, it has been empirically demonstrated that negative academic trajectories are significantly more difficult to modify by third grade (Entwisle & Alexander, 1999), while maladaptive peer social behavior patterns established during the kindergarten transition remain relatively stable over many years of formal schooling (Ladd & Price, 1987). Further, comorbid academic and behavioral deficits manifested as early as preschool have been shown to predict major subsequent school difficulties through adolescence (Hinshaw, 1992). Rimm-Kaufman and Pianta (2000) go as far as to deem the early school transition a "sensitive period" necessary for later school success.

The importance of the transition to kindergarten has been recognized at the national level, and is reflected in several recent federal, educational, and social initiatives focused on early childhood education and the kindergarten transition. The *No Child Left Behind* legislation (U.S. Department of Education, 2002) underscores the importance of addressing young children's transitions to elementary school in both policy and practice. A major facet of this legislation, the Early Reading First Program, aims to ready young children to enter kindergarten prepared to achieve reading success. To this aim, the document urges early education programs to address language and cognitive needs of children more comprehensively. The document *Ready Schools* similarly states that all children should have access to high quality and developmentally appropriate preschool programs in preparation for their transition to formal schooling. The foremost goal of this report is that "all children in America will start school ready to learn" (National

Education Goals Panel, 1998, p.1). Improving school readiness to facilitate the kindergarten transition constitutes a clearly defined national education goal.

The transition to kindergarten is widely acknowledged as both an exciting and challenging period of change. Early education and kindergarten experiences differ significantly, which may underlie adjustment difficulties for both children and families. In fact, one study demonstrated that children confronted with a greater degree of change between preschool and kindergarten environments experienced higher levels of physiological stress during transition, as evidenced by higher amounts of the stress hormone cortisol (Quas, Murowchick, Bensadoun, & Boyce, 2002). Indeed, children and their families experience "a substantial shift in culture and expectations" during this period (Pianta & Kraft-Sayre, 2003, p.2). Discontinuities confronting children are diverse, and may involve aspects such as the classroom's physical environment or the curriculum, social relationships with teachers and peers, and the family (Margetts, 2002).

Kindergarten classrooms are qualitatively different from preschool classrooms. They are often larger and more complex, and are typically more structured and formal. Systematic observational studies of early education environments demonstrate that children spend substantially more time transitioning between activities, engaging in class business, and standing in line in kindergarten compared to preschool (Carta, Atwater, Schwartz, & Miller, 1990). They are also more likely to learn in large groups, to be sitting at tables, and to be engaged in independent seat work (LeAger & Shapiro, 1995). The presence of more students, many transitions, and an intensified daily schedule may lead to reduced teacher attention (Pianta & Kraft-Sayre, 2003). One study suggests that kindergarten students receive individual teacher attention as little as four percent of the

time (Rule, Fiechtl, & Innocenti, 1990). As a result of these kindergarten classroom characteristics, a formal system of rules and expectations is usually established to maintain order and ensure safety, and children are required to regulate their behavior according to these new expectations (Perry & Weinstein, 1998). For example, formal procedures and routines like hand-raising may be emphasized to maintain order in the kindergarten classroom (Desimone, Payne, Fedoravicius, Henrich, & Finn-Stevenson, 2004).

Other discontinuities more directly concern the content and character of the curriculum. Unlike many preschool programs grounded in developmental approaches, kindergarten curricula are based in formalized instruction, in areas like literacy and numeracy, intended to increase child skill levels (Rimm-Kaufman et al., 2000). Children are officially considered students (Eckert et al., 2008) and typically receive formal feedback (i.e., grades) evaluating their academic performance for the first time (Perry & Weinstein, 1998). As a consequence, kindergarteners are met with more structured and challenging academic demands and experience a simultaneous decrease in play-based activity (Carta et al., 1990). Observations of early education environments reveal that play and gross motor activities are more prevalent in preschool classrooms while preacademic and fine motor activities occur more frequently in kindergarten. Children use fewer manipulatives and more instructional, art, and writing materials in kindergarten. Additionally, more activities are teacher-initiated in kindergarten, where teachers spend less time prompting children and more time instructing them (LeAger & Shapiro, 1995; Rule et al., 1990), and children spend more time passively attending and less time physically engaged with objects (Carta et al., 1990).

While in the past kindergarten was conceptualized as a transitional year that allowed children the opportunity to adjust to the school environment prior to confronting the academic rigor of the subsequent elementary grades, the adoption of the *No Child Left Behind* legislation (U.S. Department of Education, 2002), with its associated 3rd grade standards, has caused many states to implement academic benchmarks for the kindergarten year (Goldstein, 2007). For example, according to the New York State Department of Education, within the domain of reading competence, kindergarten students are expected to demonstrate knowledge of phonemic awareness (e.g., count or tap the number of syllables in spoken words, isolate individual sounds within spoken words), alphabet recognition and phonics (e.g., letter-sound correspondence, recognize and name automatically all uppercase and lowercase letters), and fluency (e.g., recognize and identify some sight words), among other competencies. Grade-specific performance indicators are associated with each academic domain (i.e., reading, writing; New York State Education Department, 2005). The New York State Department of Education also has a core kindergarten mathematics curriculum. For example, kindergarten students are expected to count verbally to 20 by ones, count backward from ten, and count up to ten items in a collection, among many other benchmark skills (New York State Education Department, 2005). Although states differ with respect to specific academic benchmarks and standards, in general, the traditional first-grade curriculum has increasingly infiltrated kindergarten on a national level. Thus, kindergarten has become progressively more academic as instruction continues to increase in speed and intensity (National Education Goals Panel, 1998). Many kindergarten teachers struggle to balance kindergarten's important historical functions with these new academic requirements (Goldstein, 2007).

This amplified academic pressure may also exacerbate the stress associated with the kindergarten transition for children and families.

Children encounter a new social environment in kindergarten, with different teachers and unfamiliar peers to interact with. Research suggests that establishing a caring, positive relationship with teachers early on in kindergarten is an important predictor of future school adjustment (Pianta, 1994; Pianta, Steinberg, & Rollins, 1995). However, the nature of the teacher-child relationship may change as an artifact of new expectations, activities, and curricula in kindergarten (Rimm-Kaufman & Pianta, 2000). In addition to negotiating a shifting relationship with their teacher, kindergarten students must also develop appropriate relationships with their peers (Ladd & Price, 1987; Perry & Weinstein, 1998). For example, they must learn to cooperate, play constructively, work in groups, and treat their classmates with respect. The nature of children's early peer interactions greatly impacts subsequent school adjustment (Ladd & Price, 1987). A successful kindergarten transition hinges largely on negotiating these new relationships with teachers and peers (Pianta & Kraft-Sayre, 2003; Rimm-Kaufman & Pianta, 2000).

Other changes involve the family. Given the increased amount of time that children spend in school, they may experience changes in the amount of time spent with caregivers following kindergarten entry. Family schedules and routines, including mealtime, sleep, and waking activities, may also shift during transition, and these disruptions may contribute to child difficulties (Wildenger, McIntyre, Fiese, & Eckert, 2008). The nature of interactions between parents and their child's school also changes significantly. Evidence suggests that contact between parents and teachers becomes both more formalized and less frequent in kindergarten, with less emphasis placed on parent-

teacher communication in general compared to preschool (Rimm-Kaufman & Pianta, 2000). This shift may be a result of parental perceptions of kindergarten being less welcoming to their involvement than their child's preschool (Rimm-Kaufman & Pianta, 2005). The work of Rimm-Kaufman and Pianta (1999; 2005) quantifies changes in family-school communication from preschool to kindergarten. The results of this research generally indicate that as children transition to kindergarten, there is a notable decrease in family-school contact. In addition, communication in kindergarten is more often initiated by the school rather than the family and becomes more negative in character (Rimm-Kaufman & Pianta, 1999). The decrease in family involvement and connection with the school during the kindergarten transition may pose an additional challenge for children and families.

Children at Risk for a Challenging Transition

The myriad changes and heightened academic, social, and behavioral expectations associated with children's transition to kindergarten make this a challenging developmental period for many children and families. Observational studies of kindergarten classrooms suggest that social and behavioral skills such as following directions, adhering to classroom rules and routines, working independently, and participating in group activities, are essential for success (e.g., Carta et al., 1990; Rule et al., 1990). Although some children transition successfully, many experience problems in transition (Perry & Weinstein, 1998), which can range from mild to more serious (Rimm-Kaufman et al., 2000). Transition success is impacted by a number of important factors, including child social, emotional, behavioral, academic, and cognitive skills (e.g., McIntyre, Blacher, & Baker, 2006), as well as family factors (e.g., socioeconomic status)

(LoCasale-Crouch, Mashburn, Downer, & Pianta, 2008; Schulting, Malone, & Dodge, 2005) and community resources (Rimm-Kaufman et al., 2000).

The kindergarten transition has been demonstrated to be especially challenging for children with or at-risk for disabilities (McIntyre et al., 2006). Because young children with developmental delays or disabilities often have deficits in adaptive self-regulation ability and social skills that facilitate transition to kindergarten, adjustment is generally more difficult (McIntyre et al., 2006). In addition, families of children with disabilities must negotiate a host of stressful changes, for example, disruptions in service provision and support team staff, that are unique to special education (Wolery, 1999).

Problems are not confined to the special education population. Research also suggests that a large proportion of typically developing children do not transition smoothly. According to kindergarten teachers, approximately half (48%) of typically developing children encounter difficulties in transition and do not complete this milestone successfully (Rimm-Kaufman et al., 2000). In particular, social and economic disadvantage at both the district (Rimm-Kaufman et al., 2000) and family levels (Fantuzzo, Rouse, McDermott, Sekino, Childs, & Weiss, 2005) places children at an elevated risk for transition problems and early school problems. In addition, children who lack formal early education experiences may experience more stress (Quas et al., 2002) and poorer academic and behavioral outcomes (Ladd & Price, 1987; Margetts, 2002) in kindergarten. Conversely, children who have attended center-based early childhood programs prior to kindergarten have more positive social and academic transition outcomes, even after controlling for several important socio-demographic risk factors (Fantuzzo et al., 2005; Wildenger & McIntyre, 2008). Although the nature of associated

problems and concerns may differ for children with disabilities and their typically developing counterparts, the challenges of transition impact *both* groups of children and families.

The Ecological and Dynamic Model of Transition, proposed by Rimm-Kaufman and Pianta (2000), provides a fundamental theoretical framework to guide conceptualization of the transition to school. A key assumption of this model is that child-centered models of transition emphasizing only children's internal characteristics or 'readiness', while important, are inadequate to fully explain transition outcomes. Indeed, it has been argued that within-child factors such as cognitive ability explain less than one-quarter of the variance in children's academic outcomes (Rimm-Kaufman & Pianta, 2000). Instead, the Dynamic Effects Model focuses on changing contexts and relationships amid the transition to school. This model describes how connections among child, family, school, peer, and community factors create a dynamic network of relationships that impact children's transition to school both directly and indirectly (Rimm-Kaufman & Pianta, 2000). Another key component of The Dynamic Effects Model is the transactional nature of the interactions between child and ecological contexts. These theorists contend that dynamic patterns and relationships can operate to either enhance or impede a child's transition to kindergarten. Thus, this model is particularly helpful for identifying both risk and protective factors that affect transition outcomes.

Conceptualizing an Adaptive Transition to Kindergarten

Defining a successful transition to kindergarten is critical given the fact that there are myriad ways to conceptualize this construct. Furthermore, definitions of successful

transition to kindergarten shape the ways in which professionals prepare and support children during transition. Some researchers have argued for a broad conceptualization of transition success. Perry and Weinstein deem school adjustment "a multifaceted task" (1998, p. 179). Similarly, Eckert and colleagues (2008) argue for a wider definition of the construct, encompassing academic, socio-emotional, and behavioral realms of adaptation. The document *Ready Schools* supports this broad conceptualization of an adaptive transition, defining children's 'readiness' to learn as dependent on a number of factors, including "…social and emotional development; approaches to learning; language and communicative skills; and cognition and general knowledge" (National Education Goals Panel, 1998, p. 3). However, many have suggested that socio-emotional and behavioral functioning are just as important, if not *more* critical than academic skills in early educational settings (Fowler, Schwartz, & Atwater, 1991; McIntyre et al., 2006; Rimm-Kaufman et al., 2000). Beginning kindergarten students are expected to function autonomously, develop relationships with peers, understand and conform to classroom routines and rules, and remain on-task for considerably longer periods of time compared with demands in early education classrooms (Rimm-Kaufman & Pianta, 2000). Indeed, social and behavioral skills such as the ability to work independently and follow directions are consistently identified as kindergarten "survival skills" in the empirical literature (Fowler et al., 1991; LeAger & Shapiro, 1995; Rule et al., 1990).

A major national survey of teachers regarding the kindergarten transition revealed that the most commonly reported problem among incoming students was difficulty following directions (Rimm-Kaufman et al., 2000). Although a lack of academic skills was also rated as a significant problem among kindergarteners, this finding suggests that

teachers consider aspects of socio-behavioral functioning the foremost priority in conceptualizing transition success (Rimm-Kaufman et al., 2000). In a study examining *family* concerns during the kindergarten transition (McIntyre et al., 2007), four out of the top five concerns expressed by parents/caregivers regarding their child's transition to kindergarten concerned socio-behavioral adjustment, including attending a new school, compliance/following directions, behavior problems, and getting along with peers. Parents also ranked academic skills as a significant concern. Collectively, research suggests that child socio-behavioral functioning is emphasized more than academic competencies in kindergarten across groups of key stakeholders, including educators and parents (Grace & Brandt, 2008; McIntyre et al., 2007; Rimm-Kaufman et al., 2000). It is important to note that behavioral and academic problems frequently co-occur in young children, although the direction of the relationship is unclear (Hinshaw, 1992; Perry & Weinstein, 1998). It has been suggested that social and behavioral kindergarten adaptation can be viewed as an important pre-requisite to later child academic development, creating the foundation for quality learning to occur (LoCasale-Crouch et al., 2008).

Social competence is critical for healthy social, emotional, and behavioral outcomes for young children beginning school (Hinshaw, 1992; McIntyre et al., 2006; Walker, Colvin, & Ramsey, 1995; Walker, Irvin, Noell, & Singer, 1992). Social competence is a multidimensional construct encompassing cultural, demographic, adaptive behavioral, and social skills variables. Individuals who are socially competent are able to meet the demands of daily functioning and are prepared to handle participation and responsibility for their own personal welfare and the welfare of others (Gresham &

Elliott, 1987). Specific social skills, including interpersonal behaviors, assertion, peer acceptance, and communication skills, are considered key components of adaptive behavior (Gresham and Elliott, 1987). Notably, higher levels of both adaptive behavior and social skills have been empirically demonstrated to predict a more successful transition to kindergarten (McIntyre et al., 2006). Social competence is critical in negotiating both teacher- and peer-related social interactions during the transition to kindergarten, two relations that have been amply documented to contribute to the success of school adjustment (McIntyre et al., 2006; Perry & Weinstein, 1998; Walker et al., 1992, 1995). McIntyre et al. (2006) contend that children who fail to meet standards for adaptive prosocial behavior are at risk for rejection by both peers and teachers, heightening their risk for emotional and behavioral problems. Walker and colleagues (1992, 1995) endorse a similar viewpoint, and argue that while successful development of teacher and peer relationships are integral for academic achievement and social development, failure to successfully negotiate these relationships during the transition to school may lead to a plethora of negative developmental outcomes.

Development of a positive student-teacher relationship is recognized as a particularly critical facet of socio-behavioral adjustment in the transition to kindergarten (e.g., McIntyre et al., 2006). It has been suggested that because kindergarten teachers essentially replace parents as the primary caregiver, the child-teacher relationship is an especially significant context for development in school (Pianta, 1994). Research by Pianta and colleagues (Pianta, 1994; Pianta et al., 1995) underscores the importance of student-teacher relationships for children at school entry in predicting later adjustment outcomes. Pianta (1994) found that students who maintained positive relationships with

their teachers in kindergarten displayed both superior social skills and work habits in first grade. In contrast, when children experienced dysfunctional, angry, or dependent relationships with their teachers, they were more likely to develop subsequent externalizing behavioral and learning problems. Later research by Pianta and colleagues (1995) indicates that these adjustment patterns remain relatively stable in second grade, as well. This same research by Pianta and colleagues (1995) also suggests that the nature of the student-teacher relationship in kindergarten can serve to either reduce or increase the risk of referral and retention for at-risk students. For example, students who had low "readiness" scores on kindergarten screening assessment batteries but who had warm, communicative, conflict-free relationships with teachers were significantly more likely to be promoted to a regular first-grade classroom than students without positive student-teacher relationships. Conversely, students who were not *initially* identified to be at-risk for negative outcomes, but who were eventually either referred to special education or retained, had experienced significantly higher levels of conflict with kindergarten teachers and had a less positive student-teacher relationship (Pianta et al., 1995). Although child social skills and behavioral regulation are generally predictive of more positive early relationships with teachers, maladaptive behaviors and poor social skills may negatively impact relationships with teachers (McIntyre et al., 2006). Thus, the ability to meet social and behavioral demands in the kindergarten classroom is clearly linked to the development of positive student-teacher relationships, which may exacerbate or mitigate risk for children during early school adjustment.

Kindergarten Transition Preparation

Given the challenges associated with transition for both children with special needs and many of their typically developing peers, it is widely recognized that children and families greatly benefit from targeted support and assistance during this period of change. Thus, a substantial body of theoretical literature addresses transition preparation, and makes recommendations for effective school- and family-based practices to smooth the kindergarten transition. Many transition practices are intended to bring the often discrepant early education and kindergarten environments into closer alignment and reduce the "very clear schism between the cultures of preschool and kindergarten" (Pianta, Kraft-Sayre, Rimm-Kaufman, Gercke, & Higgins, 2001, p. 129). It is generally recognized that best practices in schools to facilitate the kindergarten transition are characterized by strategies to increase communication between home, preschool, and kindergarten contexts (Pianta & Kraft-Sayre, 2003). The goal of many beneficial transition practices is to enhance family involvement and strengthen the home-school connection. Best transition practices should also forge strong partnerships between early educational institutions and kindergartens (Pianta, Cox, Taylor, & Early, 1999; Pianta & Kraft-Sayre, 2003; Pianta et al., 2001). Specifically, high-quality transition preparation should involve collaboration between preschool and kindergarten staff to clarify general goals for students as well as to identify specific needs of individual students in order to best prepare them for transition (Desimone et al., 2004). The notion that transition practices should strengthen connections and create flexibility among the social contexts that surround the child through high quality communication and contact echoes the practice recommendations of the Ecological and Dynamic Model of Transition (Rimm-

Kaufman & Pianta, 2000). National educational objectives also underscore the importance of contextual factors surrounding transition. The National Education Goals Panel asserts that schools ready to support the transition to kindergarten "1) smooth the transition between home and school and 2) strive for continuity between early care and education programs and elementary schools" (1998, p.5).

The most commonly identified practices utilized by elementary schools and preschools in the kindergarten transition literature include student-centered activities such as visits to kindergarten classrooms and contact with teachers prior to school, parent or family-centered practices such as orientation sessions and meetings, and school-centered activities such as screenings, all of which have been determined to be useful (Eckert et al., 2008). Transition practices are characterized both by intensity and type of contact. It is generally accepted that both high intensity practices and those utilizing personal rather than generic contact are most effective (Pianta et al., 1999). For example, a home visit by a teacher is a more personal type of contact and is a practice of higher intensity compared to a generic flyer sent home advertising an open house. It is also recommended that transition practices target children *prior* to the start of school as opposed to after entering kindergarten (Pianta et al., 1999). Therefore, in order to be considered best practices, transition preparation activities should create links between families and schools through high-intensity, individualized strategies, and establish those connections early in the process (Pianta et al., 1999).

High quality transition practices characterized by communication and planning to ensure environmental continuity and consistency are often particularly important for children with disabilities. Given their special needs and the extra supports that they

typically require, this kind of preemptive communication among parents and teachers helps to increase the chances that children with special needs will be successful in kindergarten (Atwater et al., 1994; Wolery, 1999). Thus, a great deal of research on the kindergarten transition has traditionally concerned children with or at-risk for disabilities. However, there has recently been an increased focus on advocating a successful transition for typically developing children, for whom transition is also both challenging and critical (Eckert et al., 2008; National Education Goals Panel, 1998; Pianta & Kraft-Sayre, 2003). Although the transition literature separately addresses the unique aspects of both special needs and typically developing populations of children, there is significant overlap between best practice recommendations for a quality transition model. In light of the very different needs of the two populations, these commonalities are striking. Furthermore, although a substantial body of theoretical transition literature exists, there is a remarkable lack of empirical, data-based literature to support and substantiate the theoretical recommendations.

The Context of the Kindergarten Transition for Children with Disabilities

At the inception of U.S. special education law (P.L. 94-142, Education for All Handicapped Children Act of 1975), children with disabilities were typically defined as school-aged (Education for All Handicapped Children Act, 1975). In 1986, the Education of the Handicapped Act Amendments (P.L. 99-457) lowered the age of eligibility for special education and related services for children to age three (Education of the Handicapped Act Amendments, 1986). This law also established the Handicapped Infants and Toddler Program, a federal program to provide early intervention services to children with or at-risk for developmental delays aged birth – three years. The most recent report

to Congress on the implementation of the nation's special education law indicated that in 2003, states reported providing special education services to 2.2% of infants and toddlers aged birth – two years, 5.8% of preschool children ages three – five years, and 9.1% of school-aged children (U.S. Department of Education, 2007). Due to these relatively recent changes in the law, preschool special education figures have increased significantly. From 1993-2003, the number of infants and toddlers served increased by 64.8%, while the number of preschoolers served increased by 38.3%.

The most prevalent disabilities among preschool children are speech-language impairment and developmental delay, while specific learning disabilities and speech-language impairment are predominant among school-age children (U.S. Department of Education, 2007). These trends are partially explained by the shift from the noncategorical preschool disability classification system, which determines eligibility based on the presence of developmental delay, to the categorical K-12 school system, in which children must be identified in one of thirteen possible disability categories in order to receive services (Individuals with Disabilities Education Improvement Act, 2004). The settings of special education service provision vary widely for preschoolers. Approximately one-third of children are placed in early childhood programs, another third are placed in early childhood special education programs, and still others are placed in combined programs (16%), other specialized settings (14%), or the home environment (3%). In contrast, the vast majority (96.1%) of elementary school children with disabilities, including kindergarteners, are served in regular school buildings (U.S. Department of Education, 2007), with many students in general education kindergarten classrooms (Wolery, 1999).

Formal transition plans are required by U.S. special education law (Individuals with Disabilities Education Improvement Act, 2004) as a part of the written Individualized Family Service Plan (IFSP) for children moving from early intervention to preschool services. Although a parallel plan in not required for the transition from preschool to kindergarten, systematic transition planning is recognized as a key component of best practice in early childhood special education (Atwater et al., 1994). Furthermore, all children with disabilities and their families have specific due process rights over the course of their public education that requires careful consideration in planning transitions (Wolery, 1999). In particular, progress on written Individualized Education Plan (IEP) goals are evaluated on an annual basis in the context of a collaborative meeting that may coincide with the transition to kindergarten and facilitate planning and preparation.

The overarching presumption and starting point for the vast majority of empirical literature addressing the transition to kindergarten for children with disabilities is that transition is even more complex and challenging for these children and families given their unique needs and the supports that they require (e.g., Atwater et al., 1994; Fowler, Schwartz, & Atwater, 1991; McIntyre et al., 2006; Wolery, 1999). Children with developmental delays and disabilities often experience problems transferring adaptive preschool skills to new kindergarten settings, activities, people, and routines, which places them at heightened risk for negative outcomes (Atwater et al., 1994). Indeed, children with cognitive-intellectual delays have significantly poorer transition outcomes compared to typical peers (McIntyre et al., 2006). Family stress is heightened as parents not only must support their child's adjustment during this time, but are also faced with a

plethora of related responsibilities, adjustments, and decisions (Atwater et al., 1994). For example, the loss of supportive preschool programs and staff during transition is experienced as particularly difficult for many families (Atwater et al., 1994; Fowler et al., 1991). Wolery (1999) also highlights administrative and interagency issues associated with transition, including coordination of elementary schools with multiple sending preschool programs, the transfer of confidential child records, and the shift in disability eligibility criteria that can have a major impact on service delivery in elementary school. Success of transition for children with disabilities is thus largely dependent on the continuity of supports from preschool to kindergarten to ensure optimal child functioning in the new environment (e.g., Atwater et al., 1994; Fowler et al., 1991; Janus, Kopechanski, Cameron, & Hughes, 2008; Wolery, 1999). Summarizing the literature, Wolery (1999) recommends that the broad goals of transition to kindergarten for children with disabilities should be to ensure continuity of services, minimize family disruption, equip children to function in the receiving program, and fulfill the legal requirements of special education law.

Empirical Investigations of Kindergarten Transition for Children with Disabilities

Although there is a wealth of theoretical literature addressing best practices to support children with special needs during the transition to kindergarten, there is a relative lack of high-quality, data-based studies. Specifically, 14 empirical studies to date have examined the kindergarten transition for children with disabilities (see Table 1). Several of these studies have addressed the perspectives of caregivers and teachers regarding the transition process. Others have directly examined the preschool and kindergarten environments to identify variables that facilitate successful transitions. Still

other investigations have utilized knowledge of these variables that promote positive transitions to design and implement transition interventions.

Studies Examining Caregiver Perspectives on Transition

It is well-recognized that kindergarten transition presents a major challenge to caregivers of children with special needs (e.g., Johnson, Chandler, Kerns, and Fowler, 1986). Thus, several studies have explicitly investigated caregiver perspectives on transition. Hamblin-Wilson and Thurman (1990) surveyed 91 parents of children who had transitioned from early intervention programs to special education kindergarten classrooms regarding their involvement in, preparation for, and satisfaction with the process. The questionnaire utilized in this study asked parents to use a 5-point Likert-type scale to rate the importance of various transition activities as well as their involvement in and satisfaction with the process. The instrument also contained items to glean descriptive information about the respondent, the child, and his or her services. Additionally, the questionnaire contained an item in which parents indicated whether they had received more support during transition from early intervention, the public school, or both equally. Parents were also asked to indicate whether or not they had participated in each of three transition activities. Results from the survey indicated that many parents had involvement in transition activities such as program planning, program selection, and visiting the kindergarten building or classroom. Caregivers that experienced a high degree of support and had explanations provided to them by kindergarten staff regarding their child's special education program and related services expressed the highest degree of satisfaction with the process. More highly educated parents also felt most satisfied with the transition process. Additionally, most caregivers indicated that they had received

more support from their Early Intervention (preschool/3-5 year) provider as compared to their child's kindergarten program.

Johnson and colleagues (1986) conducted face-to-face interviews with 19 parents of children transitioning from a specialized preschool to a kindergarten program regarding their experiences and perceptions. The Retrospective Transition Interview contained a combination of open-ended questions, multiple-choice items, and Likert scale ratings that were presented verbally to parents. Responses to open-ended questions were recorded on cassette tapes and subsequently transcribed. The interviews addressed issues such as home-school communication, planning and placement, school visits, child readiness, parent satisfaction, and transition-related stress. Caregivers were asked to provide a satisfaction rating using a six-point Likert scale in each of the ten areas addressed by the interview. Many caregivers reported that the changes associated with transition were stressful for both children and families. All parents reported they participated in planning their child's transition. Most caregivers indicated that IEP meetings had been helpful in planning, and reported that visits to and observations of the new kindergarten program were also beneficial. The majority of parents also reported that their child's preschool and kindergarten teachers exchanged information during transition. However, parents reported experiencing more contact with preschool than kindergarten teachers. In general, parents reported satisfaction with transition-related activities, although they were more satisfied with preschool than kindergarten activities. Fowler, Chandler, Johnson, and Stella (1988) also conducted interviews with caregivers. The interview data were intended to be used as a tool to assist 30 parents of preschool children with special needs in planning their child's transition to elementary school in a

more individualized manner. The interviews assessed family and child needs, family involvement in transition planning, and areas of both family and school responsibility. Major categories in the interviews focused on areas such as general transition information, sources of information regarding new programs, parents' participation level, sources of information regarding child progress, specific features of receiving programs, and criteria for selecting the receiving program. Each category contained seven to 15 items that were rated in importance on a four-point Likert scale. Parents then were asked to rank the three items that they considered most important. The interviews also contained 16 open-ended questions. Overall, parents rated opportunities for family involvement in transition planning (e.g., help identify child's needs in new program) and program selection (e.g., based on opportunity for service provision) as well as specific characteristics of receiving programs (e.g., ability to meet child's educational and social needs) and future teachers (e.g., ability to communicate with parents) as most important. The majority of parents indicated a desire to share responsibility for transition planning and reported a willingness to work with their child at home in areas like preacademics.

A study by Conn-Powers, Ross-Allen, and Holburn (1990) evaluated the implementation of a collaborative school transition model intended to assist with transition planning and address transition challenges. The study examined the satisfaction of 28 caregivers of children with special needs transitioning from early childhood special education programs to mainstream kindergarten classrooms. Caregivers rated satisfaction with various aspects of the school's implementation of the model using a five-point Likert scale. The model utilized a collaborative team of key stakeholders to develop goals and identify barriers for transition planning procedures. Transition procedures

emphasized systematic, individualized, timely, and collaborative planning, the incorporation of families into the planning process, preparation of both the child and the receiving program, and provision of necessary services and supports to facilitate the child's transition. Due to the use of these exemplary practices, parents indicated high satisfaction with both the school's transition planning procedures and child placement decisions in kindergarten. It is important to note that although considered part of the literature on parent perspectives and involvement, the study by Conn-Powers and colleagues (1990) does not explicitly aim to evaluate these variables. Instead, the main objective of this study was to present a transition model. The data regarding parent satisfaction was intended to provide evidence for the effectiveness of the model and was not explored independently. Thus, this study does less to advance our understanding of parent perspectives and involvement in transition compared with the other studies reviewed here.

A paper by LaParo and colleagues (2003) describes the National Center for Early Development and Learning (NCEDL) transition project. Although not explicitly part of the special education transition literature, this study used an at-risk sample of children and families, many with unique developmental and behavioral needs. Caregiver involvement in and perceptions of the transition intervention were examined. Results indicated that when offered the opportunity, the great majority of caregivers participated in transition activities and found them to be helpful, although many families faced the barrier of work schedules that interfered with their ability to participate.

As a group, these studies provide a preliminary empirical basis for best practice recommendations to support kindergarten transition for children with special needs and

their families. In general, the literature addressing parent perspectives emphasizes the importance of family-school collaboration, the involvement of *both* sending and receiving programs in high-quality planning, and the use of proactive, individualized practices. In particular, the involvement of families as equal partners in transition planning in light of the special needs of this population emerges as a priority (Conn-Powers et al., 1990; Fowler et al., 1988; Hamblin-Wilson & Thurman, 1990; Johnson et al., 1986). It is also clear from this set of studies that parents regard early intervention and preschool staff as more involved and helpful during transition compared with kindergarten staff (Hamblin-Wilson & Thurman, 1990; Johnson et al., 1986). Research conducted in Canada by Janus and colleagues (2008) corroborate this sentiment. This study assessed the transition experiences of 40 caregivers of children with special needs at school entry and found that parent perceptions of quality of care were significantly higher when children were in preschool compared with kindergarten. Finally, these studies overwhelmingly suggest that caregivers of children with special needs tend to be highly involved in many aspects of transition planning and program selection (Conn-Powers et al., 1990; Fowler et al., 1988; Hamblin-Wilson & Thurman, 1990; Johnson et al., 1986; LaParo et al., 2003).

The assessment of caregiver perceptions and involvement in transition is a critical endeavor given the key role of families of children with special needs. However, the special education studies reviewed here all utilized relatively small samples, which raise concerns about the ability to generalize the results. These studies are also likely characterized by several biases commonly associated with caregiver reports (i.e., selection bias, limitations of retrospective reports, social desirability biases). Thus, while

evaluation of parent perspectives is necessary, it does not provide a complete account of the transition process for children with special needs.

Studies Examining Teacher Perspectives on Transition

A second group of studies has focused on teacher perceptions of the kindergarten transition for children with special needs. A study by McIntyre and colleagues (2006) examined kindergarten transition experiences among children with developmental delays and typically developing students. The study compared kindergarten teacher reports of transition outcomes, using standardized psychoeducational measures, across these two groups of children. The measures utilized by McIntyre and colleagues (2006) to examine transition outcomes included the Teacher's Report Form (TRF; Achenbach, 1991), a measure of child problem behavior, and the Student-Teacher Relationship Scale (STRS; Pianta, 2001), which assessed the child's relationship and interactions with the kindergarten teacher. Independent samples *t*-tests were conducted to compare the two disability status groups. Results indicated that children with developmental delays had generally less positive transitions, including more classroom problem behavior, poorer social skills, and more negative student-teacher relationships.

Given the relatively more difficult transitions of children with special needs as reported by teachers, other studies have aimed to identify teacher perspectives on child skills and competencies necessary for successful functioning in mainstream classroom settings. Using a survey methodology, Beckoff and Bender (1989) compared 67 preschool and 63 kindergarten teachers' instructional strategies and perceptions of child characteristics essential for successful transition to general education kindergarten classrooms. Results suggested that preschool teachers considered child social and

academic competencies to be more important than kindergarten teachers. Groups of teachers also differed in their use of classroom management strategies. Specifically, preschool teachers emphasized effective teaching behaviors, as identified in the teaching literature (.e.g., individualization, task analysis), to a greater extent than kindergarten teachers, who placed more emphasis on establishing supportive environments (e.g., hand raising before standing, completing worksheets).

Still other studies have assessed teacher perceptions and implementation of transition practices for children with special needs. A study by Vaughn, Reiss, Rothlein, and Hughes (1999) explored kindergarten teachers' attitudes regarding the desirability and feasibility of implementing transition practices intended to enhance kindergarten outcomes for children with special needs (e.g., observing child in preschool classroom, discussing the kindergarten program with preschool teachers, etc.). Thirty-one teachers completed a survey to gather this information. Statistically significant differences emerged between teacher's views of the desirability of implementing transition practices and the feasibility of doing so, such that teachers rated transition enhancement practices as more desirable than feasible. Although teachers indicated feeling somewhat confident in their ability to make instructional adaptations for children with special needs, they felt unprepared to do so. The study by LaParo and colleagues (2003) describing the NCEDL transition project generally corroborates the findings of Vaughn et al. (1999). Kindergarten teachers in LaParo et al's sample of at-risk children engaged in fewer transition preparation activities overall compared with preschool teachers, citing barriers such as unpaid summer work and the late generation of class lists.

Rimm-Kaufman and Pianta (1999) examined rates and characteristics of communication between families and schools across preschool and kindergarten, using a daily diary method to track family-school contacts. Teachers recorded the date and nature of each family-school contact in a log notebook, including home visits, school visits, family members' volunteer efforts, notes to and from the school, telephone calls, conversations at drop-off and pick-up, and other conversations in public. To be defined as a contact, the exchange was required to consist of at least two or more sentences of personal communication between the teacher and the child's family member. In addition, teachers recorded which family member was involved, whether the contact was initiated by the home or school, topics discussed, and the length of the contact. Rates of contact per month were computed for each child. Results were analyzed both cross-sectionally (n = 290) and longitudinally (n = 71), and revealed that contact between families and teachers occurred more frequently in preschool as compared to kindergarten. Contact was more often initiated by schools than parents in kindergarten, and became increasingly formal and negative as children transitioned from preschool to kindergarten. The results regarding family-school communication in this study have been replicated in other research (e.g., Rimm-Kaufman & Pianta, 2005). Additionally, the large and heterogenous sample, daily diary method of data collection, and combination of cross-sectional and longitudinal design employed increase confidence in the validity of their results.

Taken together, the empirical investigations of teacher perspectives on the kindergarten transition for children with special needs suggest that although teachers perceive children with special needs to have more difficult transitions (McIntyre et al., 2006), kindergarten teacher implementation of transition practices to support these

students may not reflect best practices. Evidence suggests that family-school communication decreases drastically in kindergarten (Rimm-Kaufman & Pianta, 1999), kindergarten teachers regard transition practices as more desirable than feasible to implement (Vaughn et al., 1999), and that sharp differences exist between preschool and kindergarten teachers' behavioral and academic expectations and use of classroom management strategies (Beckoff & Bender, 1989). The disconnect between preschool and kindergarten may place children with special needs in a precarious position upon transition. Studies assessing caregiver and teacher perceptions of transition illuminate some of the key issues and problems surrounding transition for children with special needs. Despite their importance, the majority of these studies have utilized indirect survey and interview methodology to draw conclusions about appropriate supports for children with special needs as they transition to kindergarten. Furthermore, although teachers' perceptions of issues related to transition were obtained, *actual implementation* of kindergarten transition practices by teachers was not evaluated in these studies.

Studies Directly Comparing Preschool and Kindergarten Environments

Another group of studies has directly examined inclusive kindergarten environments to identify child skills and behaviors that are critical for successful functioning. These 'future environment studies' have relied on direct behavioral observations in the identification of kindergarten survival skills to inform academic, social, and behavioral goals and objectives for preschool children with disabilities (Fowler et al., 1991). An investigation by Carta and colleagues (1990) was conducted to compare ecological and behavioral variables between special education preschool programs and general education kindergarten programs. Specifically, the authors aimed

to determine the degree of difference in structural factors and response requirements between the two environments in order to better clarify the adaptations that preschoolers with disabilities must make during the transition to kindergarten. The authors utilized an ecobehavioral assessment instrument (Ecobehavioral System for the Complex Assessment of Preschool Environments; ESCAPE) to conduct direct observations that examined aspects of classroom ecology, teacher behavior, and student behaviors for special education preschool children (n = 11) and general education kindergarten students (n = 9). Ecobehavioral assessment is an approach to measuring environments that describes the ecology, including topographical features and individuals within it, and examines the interactions that occur between the ecology and student behaviors (Carta et al., 1990). A defining characteristic of ecobehavioral assessment is that ecological factors are recorded with similar frequency and priority as student behavior. The goal of ecobehavioral assessment is thus to collect a sample of ecobehavioral events for the target student. In ESCAPE, a single observer typically tracks a single child for a significant length of time (i.e., two hours or more). The ESCAPE system records 92 variables within 12 separate categories using a momentary time sampling system. Four 15-second intervals are used to sample all 12 code categories once every minute; three ecological categories (e.g., materials) are recorded in the first interval, three more ecological categories (e.g., grouping) in the second interval, three teacher categories (e.g., teacher behavior) in the third interval, and three student categories (e.g., competing behaviors) in the fourth interval. Observers use laptop computers to record ESCAPE data.

Results revealed the existence of several significant differences between special education preschool and regular education kindergarten environments (Carta et al., 1990).

Instructional content shifted such that kindergarten students were observed to spend more time transitioning between activities and engaged in class business (i.e., circle time) and less time playing compared to preschool children. The physical settings of instruction also differed across environments. While preschool children spent more time in small groups seated at tables, kindergarten students were more likely to be instructed in large groups on the floor. Results also suggested that preschool children were more often actively engaged in activities (i.e., manipulating materials or objects) compared with children in kindergarten classrooms, who spent a larger amount of instructional time passively attending. Teacher behavior differed across settings as well. Specifically, preschool teachers provided higher levels of verbal prompts during activities critical for future kindergarten classroom survival (i.e., preacademics, fine motor, and transitions).

LeAger and Shapiro (1995) utilized direct observations of preschool and kindergarten classrooms as an initial step in developing a kindergarten transition intervention for children with disabilities. The intervention focused on aligning discrepant ecological and behavioral variables between sending and receiving environments, thus, observations were helpful in the identification of differences. As in the Carta et al. (1990) study, the direct observations were conducted using the Ecobehavioral System for Complex Assessments of Preschool Environments (ESCAPE), which provides information about the specifics of the educational environment (e.g., location, activities, and use of materials). However, LeAger and Shapiro also utilized a second instrument, the Assessment Code/Checklist for Evaluating Survival Skills (ACCESS), which evaluates student behavior and teacher-child interactions during independent work tasks, transitions, and group instruction. The ACCESS observation

system is also an ecobehavioral assessment instrument but differs from ESCAPE in some respects. The instrument uses a 10-second combined momentary and whole-interval time sampling system, and target children in the same classroom are observed in rotating sequence, each for a five-minute period of time. Variables recorded include activity, engagement, and teacher-child interactions. Ecological information (e.g., material location, type of prompt) is recorded at the end of each five-minute interval. In the LeAger and Shapiro (1995) study, assessments were conducted in two Head Start preschool classrooms containing a total of 40 students as well as the kindergarten classrooms targeted to receive those preschool children the following year. The observational data were used to develop templates, or behavioral profiles, of both educational environments.

The results from LeAger and Shapiro's ecological assessments revealed major discrepancies between the sending and receiving environments, similar to the results obtained by Carta and colleagues (1990). Preschool children more often engaged in play and gross motor activities while preacademic and fine motor activities occurred at a higher frequency in kindergarten classrooms. Additionally, activities were more often initiated by teachers in kindergarten, as opposed to child-directed preschool programming. Preschool and kindergarten students also used correspondingly different materials during instructional activities; manipulatives were more common in preschool while writing, art, and instructional materials were more common in kindergarten. Finally, preschool children spent more time in small groups and on the floor, whereas kindergarten students were more likely to learn in large groups and at tables. Behavioral discrepancies were also discerned through direct observations. For example, kindergarten

teachers provided fewer prompts and spent more time engaged in instruction compared to preschool teachers. ACCESS data indicated that although independent work tasks occurred daily in kindergarten classrooms, they were completely absent in preschool.

Rule and colleagues (1990) also utilized direct observations of classroom ecology and behavior to inform the development of a kindergarten transition intervention. Because the focus of the intervention concerned teaching kindergarten survival skills to preschool children with disabilities, the purpose of the observations was to identify common activities in regular kindergarten settings and the skills necessary for successful participation in those activities. Observations that examined teaching behaviors and setting variables for 10 teachers and 20 children in kindergarten and first grade classrooms were conducted. Results indicated that children in early elementary grades received minimal teacher attention. Observational data also revealed that kindergarten students spent the majority of their time in large groups, being instructed or lectured by their teachers, or in semi-independent activities in which teachers circulated among students. Children were primarily engaged in specified activities (i.e., pre-reading, reading, or creative tasks) and used many different materials. Based on their results, Rule et al. concluded that in order to successfully transition to kindergarten, children must be able to work independently, participate in groups, follow varied directions, and use varied materials.

The descriptive information that emerges from this group of comparative environment studies has important implications for the preparation of children with special needs for successful kindergarten transitions. The data gleaned from direct observational studies help to elucidate the difficulties inherent in the transition from

special education preschool settings to regular kindergarten classrooms. As demonstrated by each of three studies reviewed in this section (i.e., Carta et al., 1990; LeAger & Shapiro, 1995; Rule et al., 1990), preschool and kindergarten environments are markedly different and thus require different child skills. Observational studies consistently indicate that kindergarten students often participate in activities that require skills for working independently, with minimal teacher direction, and participating in sizeable groups. In stark contrast, children in early childhood special education settings spend much of their time in smaller grouping arrangements and receive substantially more teacher prompting, feedback, and support. Because successful functioning in kindergarten requires higher levels of independence and self-regulation, the transition may pose challenges for children with special needs. Following directly from these observed differences, the theoretical literature consistently suggests that preparation of children with special needs for success in kindergarten necessitates the teaching of generic, functional skills to increase independence and appropriate engagement alongside typically developing peers as opposed to teaching specific preacademic or readiness skills (Atwater et al., 1994; Wolery, 1999).

It is important to note that the assessment of the future kindergarten environment using direct observational methods addresses several methodological limitations associated with parent and teacher reports (Fowler et al., 1991). Because they are conducted under naturalistic conditions, classroom observations are a more ecologically valid method for the assessment of contextual variables as well as teacher and child behavior (Fowler et al., 1991). Furthermore, direct observational behavioral assessment measures have higher validity than more indirect forms of assessment such as parent and

teacher reports (Goldfried & Kent, 1972). Yet, these studies are not without limitations. Collectively, the future environment studies have relied upon relatively small and idiosyncratic samples often isolated to a few classrooms. Despite this fact, results across studies with respect to characteristics of kindergarten and preschool environments are strikingly similar.

Intervention Studies of Kindergarten Transition

In several studies, information gathered from future environment observational and survey work has informed interventions to facilitate the kindergarten transition for children with special needs. The majority of studies focus on teaching children survival skills in order to prepare them to function successfully in the demanding kindergarten classroom. Thus, the general goal of the intervention work is to foster better matching or alignment of preschool and kindergarten environments. Based on their observations of kindergarten and first-grade classrooms, Rule and colleagues (1990) developed a Skills for School Success curriculum to teach survival skills (e.g., attend to teacher during directions, play appropriately with peers and materials) necessary to participate in nine common activities in regular kindergarten classrooms (e.g., school arrival routines, transition activities, group circle activities). The curriculum was implemented with 18 preschool children with developmental delays by two special education teachers. In order to ensure generalization of basic survival skills, the curriculum included planned variations in teaching procedures, instructions, and location of materials as well as fading of teacher assistance. A group design was used to collect descriptive data on the results of the curriculum implementation. Direct observational data were collected on the percentage of steps mastered for each skill across a number of weeks. Group means and

ranges were calculated for each skill over time. Results indicated that most children mastered all of the survival skill activities. In order for a skill to be considered mastered, the mean percentage of steps mastered needed to reach a criterion of 80% or higher during three of the last four weeks of observation. Additionally, regular child care providers who were blind to the procedures reported improvements in children's survival skills following intervention; pre and post scores on a questionnaire assessing survival skills differed significantly. Follow-up assessments (i.e., skills checklists) completed by kindergarten teachers suggested that most children performed the skills independently or with very little assistance after transitioning to kindergarten.

Hains (1992) implemented an intervention to teach preschoolers in early childhood special education classrooms skills to work independently. Specifically, this study evaluated the impact of simple environmental manipulations, namely, reduced teacher support and the use of a behavioral checklist, with respect to the on-task behavior of 11 children with special needs during reading activities. The study used a multiple baseline across subjects single-case design. The effectiveness of the intervention was evaluated with direct behavioral observations of on-task behavior. Results suggested that reduction of teacher attention was sufficient to promote work completion and child on-task behaviors during independent activities for most children. For the remaining children, the implementation of a simple behavioral checklist procedure led to significantly improved outcomes. The author suggests that these procedures can be used to prepare children with special needs to function under conditions of reduced teacher attention in kindergarten.

An investigation by LeAger and Shapiro (1995) sought to determine the effectiveness of a template-matching intervention to facilitate the transition to kindergarten for preschool children with disabilities. The intervention was focused on the alignment of major environmental and behavioral discrepancies between preschool and kindergarten as identified through direct observations. This study used a quasi-experimental design, and assigned three classrooms of preschool children to Intervention (n = 20), Assessment Only (n = 20), and Control (n = 21) conditions. Preschool intervention targets were identified based on differences in classroom ecology and teacher and student behavior across settings and subsequently modified. Ecological variables targeted included location of students at tables rather than on the floor, increased large-group and fine-motor activities, use of art and writing materials, and more frequent teacher-initiated activities. Preschool children in the intervention condition also engaged in increased independent work activities. Direct observations using the ecobehavioral assessment instruments, ESCAPE and ACCESS, as well as teacher ratings of survival skills, were utilized to assess the impact of the intervention. Results suggest that the intervention was effective in more closely aligning the preschool environment and teacher and child behavior with kindergarten variables. Additionally, follow-up assessments revealed that children in the intervention condition exhibited fewer competing behaviors (e.g., acting out, off-task) and received fewer teacher prompts during independent work in kindergarten.

The work of Hutinger and Johanson (2000) aimed to implement and evaluate an early childhood special education comprehensive technology system. The technology system was designed to provide children with disabilities additional resources to equalize

learning opportunities (e.g., adaptive devices, interactive software). Activities to facilitate a seamless bridging of technological services during the transition to kindergarten constituted a major component of the comprehensive technology system. The intervention was implemented among 317 children and 43 teachers from several school districts across three years. The evaluation of the system was based on a modified naturalistic paradigm using a mixed methods strategy that incorporated quantitative (e.g., rating scales, behavioral observations) and qualitative (e.g., focus groups, interviews) methods. Results suggest that the intervention led to positive child outcomes (e.g., increased attending behaviors, fine- and visual-motor, social skills) as well as an increase in staff technology skills. However, child kindergarten transition success was largely dependent on the policies of receiving school districts and was thus mixed. In schools where the transfer of technological supports was smooth, children had more positive transition experiences. Conversely, in instances where sending and receiving environments were not aligned with respect to technology services, transition was reportedly more difficult for children and families. Although considered part of the special education transition intervention literature, the study by Hutinger and Johanson (2000) is only peripherally related to key issues associated with the kindergarten transition. Thus, it does not fully cohere with other intervention studies for children with disabilities and has relatively less helpful implications and applications.

The kindergarten transition intervention literature supports and elaborates on the results of studies addressing parent and teacher perspectives and on those utilizing classroom observations. Taken together, these intervention studies consistently demonstrate that when preschool and kindergarten environments are aligned, children

with special needs can be successfully taught survival skills to strengthen independence and group participation and facilitate the transition to kindergarten (Atwater et al., 1994). These studies are very valuable in their examination of actual interventions and the measurement of child outcomes in kindergarten. They have also utilized relatively rigorous experimental designs and direct behavioral assessment methods, which are well suited to measure child outcomes. However, the developmental appropriateness of teaching kindergarten survival skills to preschoolers has been questioned by many (e.g., Atwater et al., 1994; LeAger & Shapiro, 1995) on the grounds that it may be inappropriate to teach preschool students skills that may exceed developmental limits (e.g., hand-raising, completing worksheets). Despite their methodological strengths, kindergarten transition intervention studies have also tended to use small and idiosyncratic samples of children with disabilities. The intervention studies also vary with respect to the amount and quality of follow-up data collected upon transition to kindergarten. While LeAger and Shapiro (1995) collected excellent follow-up data on behavioral adjustment in kindergarten, Rule and colleagues (1990) collected only limited follow-up data and Hains (1992) failed to collect any sort of follow-up data. It is critical to assess generalization and maintenance of target survival skills in kindergarten. Future research would do well to emphasize the collection of high-quality follow-up data for this reason.

Comprehensive Kindergarten Transition Preparation Interventions

A study by Redden and colleagues (2001) is the only investigation to examine the impact of a comprehensive kindergarten transition preparation intervention on child outcomes in kindergarten. This study departs from the special education kindergarten transition intervention

literature in several respects. Most notably, the intervention did not grow out of the future environment work and thus, did not focus explicitly on teaching preschool students survival skills or aligning preschool and kindergarten environments. This study also utilized a group design with a significantly larger sample compared to the other intervention studies. Redden and colleagues (2001) examined elementary special education identification rates in a national sample of Head Start children (n = 7,079). Approximately half had been provided with systematic transition programming from kindergarten through third grade, while a comparison sample of children had not received such programming. Children were randomly assigned to intervention or control conditions. The multicomponent transition program was intended to enhance and extend Head Start experiences. Therefore, the intervention was comprised of school transition and curricular modifications, parent involvement activities, health screening and referrals, and family social services, similar to Head Start services. In order to assess the impact of the intervention, several indices of child adjustment were examined. Student records were reviewed to obtain information about special education services, referrals, and disciplinary actions, child psychoeducational assessments (i.e., Peabody Picture Vocabulary Test-Revised; Woodcock-Johnson Psycho-Educational Battery-Revised) were conducted, and teacher ratings were obtained (i.e., Social Skills Rating System).

Results indicated that the total percentage of Head Start children eligible for special education in the transition intervention group was significantly higher than the comparison group. In addition, fewer children who had received transition programming were identified as having mental retardation and emotional disturbance in third grade, while more were identified as having speech-language impairment. Few statistically significant differences were discerned on psychoeducational outcome measures for children in the four major special education

categories between intervention and non-intervention groups. The authors suggest that a prevention effect may have occurred such that the intervention was particularly effective for children at risk for mental retardation and emotional disturbance due to the benefits of family support and preventive referrals and screenings. Redden and colleagues also speculate that minor speech-language difficulties may either have been detected earlier for children in the intervention group or that they may have been mistakenly identified in the less socially stigmatizing "triage" category of speech-language impairment. This study provides tentative support for the value of a comprehensive kindergarten transition intervention targeting children at risk for disabilities.

The work of Redden and colleagues (2001) makes a critical contribution to the special education transition literature in its investigation of the impact of a comprehensive transition preparation intervention on *child outcomes* in elementary school. However, it is important to note that the study primarily used diagnostic labels and disability categories to represent intervention outcomes. The authors failed to discern evidence suggestive of a positive impact on other academic and socio-behavioral outcomes. Additionally, this study focused on a very specific intervention confined to, and particularly appropriate for, a Head Start population. Given that the Redden et al. (2001) study is the sole investigation addressing the impact of transition preparation activities on child kindergarten outcomes, this constitutes a major gap in the special education literature; most studies focus on parent and teacher perceptions of, concerns about, and satisfaction with transition preparation. There is a pressing need for additional studies to examine the impact of transition preparation conceptualized more broadly and from the perspectives of multiple stakeholders on more general socio-behavioral child outcomes. It is also important for studies of transition preparation to utilize samples of children previously identified as eligible for special education services rather than children at risk for poor developmental outcomes.

Empirical Investigations of Kindergarten Transition for Typically Developing Children

Although an excellent theoretical base of knowledge exists regarding the kindergarten transition for typically developing children, there is a dearth of empirical research examining the effectiveness of recommended transition practices among this population, similar to the special education literature. In fact, according to a recent review of the literature, only seven empirical studies assessing kindergarten transition practices for typically developing children have been published to date (Eckert et al., 2008). Since this review was conducted, three additional studies have been published (i.e., Grace & Brandt, 2006; LoCasale-Crouch et al., 2008; McIntyre, Eckert, Fiese, DiGennaro, & Wildenger, 2007), resulting in a total of ten empirical studies addressing the kindergarten transition in general education samples of children (see Table 2). Also paralleling the special education literature, many studies examine professional and caregiver perspectives while others have implemented and evaluated transition interventions.

Studies Examining Teacher Perspectives on Kindergarten Transition

A series of four studies by authors associated with the National Center for Early Development and Learning (NCEDL) were conducted examining multiple aspects of the kindergarten transition. These studies used results from the NCEDL's 1996 Transition Practices Survey, a large national survey of 3,595 kindergarten teachers. The sample was stratified by 'poverty', 'percent minority students', and 'metropolitan status' variables. The cumulative results of this survey provide a strong foundation of knowledge concerning the current state of kindergarten transition practices in the United States.

Early, Pianta, and Cox (1999) conducted the first study analyzing the results from the NCEDL's survey. This study explored demographic features of contemporary

kindergarten classrooms and teachers pertinent to transition. This investigation of key contextual factors impacting the kindergarten transition was an important preliminary empirical undertaking as implied by the Dynamic Effects Model. The results of the study suggested that kindergarten classrooms differ significantly according to some demographic variables. For example, the number of students eligible for free and reduced-price lunch is predictably higher in poor, urban, and high minority schools. However, few differences were found with respect to teacher education, experience, transition training and classroom size by demographic variables. Thus, some structural characteristics do not appear to vary as a function of poverty, metropolitan status or ethnic composition of schools. The results also indicated that although kindergarten teachers had high levels of education and experience in teaching kindergarten students, only 22.7% reported typically receiving information about strategies for enhancing transitions, and 24.1% reported training specific to the kindergarten transition. Based on this finding, the authors recommend that professional development be targeted as a potential area for kindergarten transition intervention, especially in schools with high populations of at-risk students.

In the second study using the NCEDL's national sample of kindergarten teachers, Pianta and colleagues (1999) described teachers' perceptions and use of common kindergarten transition practices as well as factors cited by teachers as barriers to implementing these practices. The survey requested that teachers identify, from a list of 21 practices, the strategies they had used in the previous year to facilitate the transition to kindergarten for their students, and to evaluate whether each practice was a "good idea". Finally, teachers were asked to identify, from a list of 15 potential barriers, those that

would impede their use of transition practices judged to be helpful. According to Pianta et al.'s (1999) results, the most commonly used transition practices reported by teachers were characterized as low intensity, involved generic contact, and occurred *following* the start of kindergarten. These strategies included talking with a parent, a practice used by 95% of teachers, sending a letter to parents (88%), holding an open house (82%), and sending a flyer home (77%). Conversely, practices involving personal contact and occurring prior to the start of school were cited as the least frequently used. Home visits and phone calls to children either prior to or following the start of school as well as visiting preschools were practices reportedly used by between merely 5 and 17% of teachers surveyed. Perceived utility of these practices was directly related to how frequently teachers employed them.

Pianta et al. (1999) also analyzed teachers' use of transition practices by the three demographic variables of school metropolitan status, district poverty, and school minority composition. Results from these analyses indicate that, generally, high-SES schools used more intensive transition practices that took place before the start of school and were characterized by personal contact when compared to low-SES schools. This finding is especially concerning, in that disadvantaged students with the greatest need for high-quality transition practices are apparently the least likely to receive them. Finally, the most serious barriers to implementing kindergarten transition practices reported by teachers were that class lists are generated too late to support proactive practices (56%), transition planning requires unpaid summer work (47%), there is a lack of a district plan to address the transition (43%), practices take too much time (37%), and funds are not available (35%). Many of these barriers concern structural aspects of schools. Teachers in

schools with many poor and minority students were more likely to report barriers related to family characteristics. This finding underscores the need to establish early, supportive home-school relationships especially with low-income and minority families.

The third NCEDL survey study was conducted by Rimm-Kaufman and colleagues (2000) and assessed teachers' perceptions of child adjustment amid the transition to kindergarten. In particular, the frequency and specific types of problems that manifest themselves in the transition to kindergarten were examined. As was previously discussed, teachers reported that while 52% of children transition to kindergarten successfully, 32% of children experience only a moderate level of success with some problems, and 16% of children have difficult transitions with many problems and serious issues. Furthermore, more than one-third of teachers reported that at least half of their entering kindergarten classes exhibited specific difficulties. The problems most frequently reported to be impacting at least half of incoming kindergartners were: difficulty following directions (46%), a lack of academic skills (36%), disorganized home environments (35%), and difficulty working independently (34%). Upon incorporating demographic variables into this model, it was found that teachers in low-SES schools reported higher overall rates of problems during the kindergarten transition.

The final NCEDL survey-based study, conducted by Early, Pianta, Taylor, and Cox (2001), built on the work by Pianta and colleagues (1999). This study grouped transition practices identified by teachers in order to link their prevalence to a variety of teacher and classroom variables. The researchers hypothesized that teacher characteristics (i.e., experience, education, certification, transition training, and ethnicity), as well as classroom characteristics (i.e., class size and timing of generation of class lists) would be

correlated with the nature of kindergarten transition practices utilized. Results for teacher variables indicate that although teacher experience and education were not significantly related to differences in transition practices used, specialized training in facilitating kindergarten transitions was related to utilization of *all* types of strategies. This finding provides additional impetus for training teachers specifically in kindergarten transition practices. In addition, teachers' tendency to employ transition practices either before or after the start of school was significantly related to their ethnicity such that white teachers used more practices prior to the beginning of kindergarten, and black teachers used more transition practices following the start of school. The authors suggested that these observed differences may be related to contextual factors, as minority teachers are more likely to teach in low-SES schools with fewer resources than their white colleagues.

Consistent results for the effect of classroom variables on kindergarten transition practices emerged from this research. Teachers with larger class sizes reported using fewer transition practices before the beginning of the school year. In addition, timing of class list generation was significant; teachers who received class lists early were more likely to utilize transition practices prior to the start of school. Collectively, the results from this study suggest that the failure of teachers to use effective transition practices, as demonstrated by Pianta and colleagues (1999), may largely be a result of the fact that high-intensity, individualized practices that take place before school are demanding to implement. Optimal transition practices are time-consuming and require substantial effort, planning, money, and preparation on the part of teachers and schools. It appears that teachers and schools are somewhat ill prepared for this undertaking.

A study by Grace and Brandt (2006) was conducted to identify and synthesize beliefs about child and school kindergarten readiness held by key stakeholders in Hawaii. To this aim, the perspectives of preschool (n = 204) and kindergarten (n = 301) teachers and administrators (n = 124) were examined through both qualitative (i.e., focus groups) and quantitative (i.e., statewide survey) methods of data collection. Results revealed that although there was general agreement regarding the importance of child socio-behavioral characteristics for success in kindergarten, opinions differed somewhat across role groups. According to focus group data, while preschool teachers considered the domain of child social-emotional development (e.g., takes turns and shares, makes friends) to be of primary importance, kindergarten teachers weighted school-related behaviors (e.g., can follow directions, rules, and routines, sits still and pays attention) more heavily. According to survey data, teachers reported that child ability to follow directions, rules, and routines is most critical to success in kindergarten while administrators reported that the most important child readiness characteristic is being healthy, rested, and well-nourished. Additionally, preschool teachers viewed general knowledge and skills to be more important than kindergarten teachers, however, academic skills were rated as *least* important across groups. Regarding school readiness, preschool teachers emphasized that the school environment should nurture child social-emotional well-being and provide a hands-on curriculum. Preschool teachers were also more likely to mention the importance of schools supporting family-school communication. Kindergarten teachers reported more concern with parents helping children to acquire school-related behaviors and skills as well as the quality of school facilities and resources.

Studies of general education teacher's perceptions of kindergarten transition provide valuable information. It is clear that the transition to kindergarten poses challenges for typically developing children (Rimm-Kaufman et al., 2000) and that teachers view social and behavioral skills and competencies, such as following directions, as particularly critical to successfully navigate the transition (Grace & Brandt, 2006; Rimm-Kaufman et al., 2000). Thus, similar survival skills appear to be required for children with special needs and their typically developing peers. Despite the recognized importance of transition, empirical evidence also indicates that kindergarten teachers use mainly low-intensity, generic, one-size-fits-all transition practices such as screenings and open houses (i.e., Early et al., 2001; Pianta et al., 1999), in particular in low-SES districts and communities (Pianta et al., 1999) and may facilitate family-school communication less compared with preschool teachers (Grace & Brandt, 2006; Rimm-Kaufman & Pianta, 2005). Kindergarten teachers report structural barriers to utilizing high-quality transition practices (Pianta et al., 1999) as well as a lack of formal transition training (Early et al., 1999), which appears to negatively impact their use of effective transition practices (Early et al., 2001). The present state of general education kindergarten transition practices clearly does not reflect the theoretical and professional consensus on effective strategies to support the transition, nor does it meet national standards for "ready schools". It is also important to note that many of these findings parallel trends in the special education transition literature.

Research addressing teacher perspectives, and in particular, the series of studies associated with the NCEDL Transition Practices Survey, provides a wealth of information about the national state of current kindergarten transition practices. However,

due to the fact that these studies, with the exception of Grace and Brandt (2006), are descriptive in nature, are derivations of the same national survey, and assess teacher perceptions alone, they provide only a partial understanding of kindergarten transition practices for typically developing children.

Studies Examining Caregiver Perspectives on Kindergarten Transition

The kindergarten transition greatly impacts both children and families (e.g., Pianta & Kraft-Sayre, 1999). Caregivers of typically developing children may experience significant transition-related concerns, including those regarding their child's behavior and academic skills (McIntyre et al., 2007). Additionally, family involvement in transition is considered critical for positive child outcomes (Rimm-Kaufman & Pianta, 1999). A study by Schulting and colleagues (2005) suggests that the effectiveness of transition practices may be partially attributed to their tendency to increase parental involvement. Yet, in contrast to the focus on teacher perceptions, very few studies examine transition experiences from the perspective of the family. In fact, only one empirical study (i.e., McIntyre et al., 2007) examines *family* use of transition practices and involvement in transition preparation activities. In this study, 132 urban caregivers of children transitioning from preschool to kindergarten classrooms were surveyed about their experiences and involvement in kindergarten transition. The survey instrument, Family Experiences and Involvement in Transition (FEIT), contained rationally derived items from five domains, including child educational history, family concerns, identified needs during transition, family involvement in transition activities, and family sociodemographic information. Caregivers used a 4-point Likert scale to rate the extent of their concerns (e.g., regarding child behavior problems). They also indicated whether

or not specific types of intervention (e.g., more information about kindergarten behavior expectations) would be helpful, and whether they had, wanted, or neither had nor wanted involvement in specific transition activities (e.g., visit to child's kindergarten classroom). Results suggested that families desired a higher level of involvement in transition planning and wanted information about kindergarten readiness. Caregivers expressed concerns about their child attending a new school and difficulties with following directions or other behavior problems. This study also found that families with fewer financial resources were less involved in transition activities.

The study by Grace and Brandt (2006) also assessed the perceptions of 2,153 parents of preschool and kindergarten students in Hawaii regarding transition. Standardized interviews were conducted within focus groups on the topic of kindergarten readiness. Focus group data was analyzed for a) the number, mean, and range of readiness items generated by focus groups, b) the degree to which different focus groups similarly labeled categories of child and school readiness as a measure of category salience, and c) the number of individual participant votes for readiness items deemed most critical for success. Results indicated that along with preschool teachers, parents considered social-emotional development to be of primary importance for kindergarten readiness. Both interview and survey data revealed that parents considered socio-behavioral child skills (i.e., gets along well with others, can follow directions, rules, and routines) to be most critical for kindergarten entry. However, parents also perceived general knowledge (i.e., of colors, shapes, letters, numbers) to be an important aspect of child kindergarten readiness, while teachers emphasized these academic skills less.

Results also suggested that parents viewed school support of parent-school communication and parent involvement to be very important.

Thus, research conducted with both teachers and parents suggests that socio-behavioral functioning is regarded as even more critical than academic competencies in kindergarten for typically developing children (Grace & Brandt, 2008; McIntyre et al., 2007; Rimm-Kaufman et al., 2000). Research also suggests that both caregivers and early educators view family involvement as particularly important (Grace & Brandt, 2008; McIntyre et al., 2007). Studies of parent perspectives and use of transition practices contribute a valuable dimension to the typically developing transition literature. However, the purpose of the great majority of research with parents and teachers has been to *describe* the current state of kindergarten transition practices and perceptions of key stakeholders. Subsequent studies have sought to move beyond mere description by designing, implementing and evaluating programs to support the kindergarten transition.

Intervention Studies of Kindergarten Transition

Desimone and colleagues (2004) described the results of the implementation of a kindergarten transition program featuring preschool programs located within elementary schools. It has been argued that school-based preschool programs ease the transition to kindergarten for children; however, little research has evaluated these programs. The data from this study were drawn from a large, three-year, multi-site study of the School for the Twenty-First Century (21C) school reform model. The researchers conducted focus groups to assess the perceptions of those involved with the program and analyzed the sessions in order to identify overarching themes. The resulting focus group data were based on the contributions of 20 preschool teachers, 22 kindergarten teachers, and 53

parents. Results suggested that implementing preschool programs on the same premises as an elementary school did, in fact, facilitate the transition to kindergarten. It was reported that both children and parents felt more familiar and comfortable with the school, which made for a smoother transition. Another important outcome of the program was that it increased collaboration between preschool and kindergarten teachers, which led to increased coordination of curriculum and efforts to address the needs of individual students by sharing information. Participants noted that when expectations were aligned between preschool and kindergarten teachers, children entered school better prepared to meet the demands of kindergarten. The program also fostered early, supportive relationships with families, which were maintained over the kindergarten year.

Pianta and colleagues (2001) engaged in a collaborative effort with teachers and parents to design, implement, and assess a kindergarten transition program. This project, called the Kindergarten Transition Intervention, was also associated with the NCEDL. The foundation of the intervention was a Collaborative Design Team (CDT), comprised of preschool teachers, family workers, kindergarten teachers, principals, and NCEDL researchers. Participants in the intervention were 90 children and families enrolled in one of two preschool programs, who were then followed as they transitioned to kindergarten. The intervention was based on an ecological model, with an emphasis on strengthening key relationships to support the transition. In order to design the transition program, the CDT utilized the results of the national survey assessing current transition practices and barriers to implementation (Pianta et al., 1999) as well as community perceptions of need. The resulting intervention was a “menu-based approach” of transition practices tailored to each family’s individual needs.

The NCEDL sought to examine implementation outcomes primarily by way of teacher and parent perceptions of both the intervention itself and of relationships among participants within the process (Pianta et al., 2001). To this end, participants completed a questionnaire assessing their use of kindergarten transition activities in the intervention as well as the perceived utility of the practices. Participants also completed another questionnaire assessing the home-school relationship. Finally, mothers were interviewed to gather information on their perceived social support network in the transition.

Analysis of the data revealed that the most commonly employed transition practice was for preschool teachers to visit elementary classrooms with their students. Other very commonly used transition practices included orientation meetings in the spring of preschool, and events intended to familiarize both children and families with elementary schools. Conversely, individual contact between preschool and kindergarten teachers occurred infrequently. These results confirmed the overall findings of the NCEDL's Transition Practices Survey. Analysis of the perceptions of mothers and teachers revealed that both groups regarded one another positively during the transition process. Mothers viewed preschool teachers as the most helpful source of social support during their child's transition to kindergarten, and indicated that preschool teachers became increasingly helpful over the year. This aspect of the results corroborates the sentiment apparent in the descriptive literature that family involvement and connection with the school decreases significantly in elementary school (Rimm-Kaufman & Pianta, 2005) and that parents and preschool teachers may place more emphasis on family involvement than kindergarten teachers (Grace & Brandt, 2006; McIntyre et al., 2007).

The studies by Desimone and colleagues (2004) and Pianta and colleagues (2001) offer valuable insights into the actual implementation of programs designed to facilitate the kindergarten transition. They begin to address an important need for research evaluating the effectiveness of kindergarten transition programs (Eckert et al., 2008). However, both studies are limited to addressing parental and teacher perceptions of the transition process, which, while necessary, is not sufficient. In order to develop a richer understanding of the kindergarten transition for typically developing children, it is essential that transition practices be evaluated regarding their effect on child outcomes, particularly given their theoretical significance and widespread use by teachers and schools. To date, only two published studies in the U.S. have evaluated the effect of kindergarten transition practices on typically developing child outcomes.

Studies of Kindergarten Transition Preparation Examining Child Outcomes

Schulting and colleagues (2005) conducted a study that examined the effect of kindergarten transition practices on child academic outcomes. This study used data from the ECLS-K, a longitudinal study that followed a large, nationally representative cohort of 21,260 children from kindergarten through fifth grade. The ECLS-K analyzed child academic outcomes through a direct cognitive assessment battery measuring competencies in reading, mathematics, and general knowledge of the social and physical world. Kindergarten teachers identified the transition practices that had been implemented in their schools in the fall of kindergarten, and parents reported on their involvement in a range of school activities and events in the spring of kindergarten. The descriptive results of this survey corroborate other findings regarding the frequency of use of specific transition practices. According to the data, the most common transition

practices reportedly used by teachers were to deliver information to parents, either by phone or by mail, about the kindergarten program (86%), and to hold orientations at school (76%). Conversely, the least frequently used practices included home visits (4%) and shortened school days for children (18%).

Schulting et al. also found that the number of school-based practices to ease the transition to kindergarten was associated with higher academic achievement scores at the conclusion of kindergarten, even when controlling for important demographic factors, such as SES. These findings supported their main hypotheses. The results indicated that parent-initiated school involvement was also positively correlated with more transition practices, again controlling for SES. The researchers determined that parent involvement in schooling has a mediating effect on students' academic outcomes such that transition practices stimulate parent involvement which, in turn, results in higher child academic achievement. Furthermore, an important interaction was found between transition practices, child achievement, and SES such that the positive impact of transition practices on academic performance were greater for children from low-SES backgrounds. Although children from affluent backgrounds displayed a higher level of academic achievement regardless of kindergarten transition practices, at-risk children from low-income backgrounds benefited more from practices and policies aimed at families to support the kindergarten transition (Schulting et al., 2005).

The findings of Schulting et al. (2005) thus established a link between transition practices and improved child academic outcomes in kindergarten. Because child socio-behavioral competencies have been robustly demonstrated to be critical in early school adjustment, empirical investigations of socio-behavioral outcomes in relation to

kindergarten transition practices are critical as well. To date, a single published empirical investigation conducted in the United States by LoCasale-Crouch and colleagues (2008) has associated kindergarten transition practices with enhanced socio-behavioral child outcomes. This study examined the impact of pre-kindergarten teachers' use of transition practices on kindergarten teachers' judgments of children's social, self-regulatory, and academic skills following transition. Outcomes were examined for 722 children from 214 pre-kindergarten classrooms participating in the NCEDL's Multi-State Pre-Kindergarten Study, using behavioral rating scales (i.e., Teacher-Child Rating Scale, Academic Rating Scale). Descriptive results suggest that there was significant variation across preschool teachers regarding the types of transition activities used. While many employed generic practices, individualized transition practices were also common. This finding seems to indicate that preschool teachers' approaches to kindergarten transition programming may be more in line with best practice recommendations compared with kindergarten teachers.

The major finding that emerged from LoCasale-Crouch et al.'s (2008) study was that pre-kindergarten teachers' use of more transition activities was associated with higher child social competencies and fewer problem behaviors in the beginning of kindergarten. In particular, contact between preschool and kindergarten teachers regarding curricula or specific children, was consistently and positively associated with socio-behavioral adjustment in kindergarten. However, a similar relation was not found between transition practices and child academic outcomes. LoCasale-Crouch and colleagues (2008) argue that pre-kindergarten transition practices are intended to facilitate social and emotional adjustment and to increase a child's ability to function successfully within the classroom, ultimately laying the foundation for *later* school

success and the initiation of academic skill development, as seen in the Schulting et al. (2005) study. Additionally, the relation between transition activities and socio-behavioral adjustment was more robust for children experiencing social and economic risk factors. Thus, both outcome studies (i.e., LoCasale-Crouch et al., 2008; Schulting et al., 2005) found SES to similarly moderate the relation between transition preparation and child outcomes. This is especially concerning in light of the fact that poor children in schools lacking resources are the least likely to receive these services and supports during the kindergarten transition (Pianta et al., 1999).

Two studies conducted in Australia by Margetts (2002; 2007) have also linked transition preparation to child socio-behavioral outcomes during the first year of school. Margetts (2002) investigated kindergarten transition in 197 children, with and without disabilities, in four schools. Schools were dichotomized as “low” or “high” according to the number of transition practices implemented at the school level. Child socio-behavioral adjustment was measured using both parent and teacher versions of the Social Skills Rating System (SSRS). Results showed that children in schools using high numbers of transition activities had lower levels of problem behavior both at home and in school. Having a familiar playmate in the same class also predicted favorable outcomes. Additionally, a moderate level of child attendance at a preschool program (i.e., hours per week) was related to positive child socio-behavioral adjustment. In a subsequent study, Margetts (2007) examined the relation between transition activities and socio-behavioral outcomes for 155 children and families. Parents were asked to indicate which transition practices they had engaged in from a list of seven potential activities (e.g., meeting child’s teacher, visits to school), and teachers completed the SSRS as a measure of child

adjustment. Results indicated that parent participation in six or more transition activities predicted higher levels of teacher-reported self-control, social skills, and academic competence. These studies lend additional support to the tentative conclusion that transition preparation activities promote child socio-behavioral adjustment (LoCasale-Crouch et al., 2008). However, it is important to keep in mind that both the Australian educational system and families within that system likely differ from U.S. schools and families in a number of respects (e.g., differences in early education system, differences in conceptual and measurement aspects of family SES variables, etc.). Given that socio-demographic community and family variables exert a substantial impact on transition processes, these results may not generalize to U.S. samples. Furthermore, Margetts (2002) utilized a somewhat crude measure of quality of transition practices (i.e., low or high) and in both studies (Margetts 2002; 2007) solely relied on the SSRS as an outcome measure of child adjustment.

Finally, a recent study by Wildenger and McIntyre (2008) also investigated the relation between kindergarten transition preparation and typically developing children's socio-behavioral outcomes. Optimal kindergarten transition preparation was conceptualized as high family involvement in transition practices as well as child enrollment in a public school pre-kindergarten program, given the demonstrated benefits of such programs (i.e., Desimone et al., 2004). Participants included 86 general education students, their caregivers, and teachers, drawn from three school districts. Parents indicated which transition practices they had engaged in, from a list of 14 possible activities, both generic and individualized (e.g., transition planning meetings, visits to child's future kindergarten classroom). Socio-behavioral kindergarten outcomes included

teacher reports of student-teacher relationships, child social skills and problem behavior. Results of hierarchical linear regression analyses indicated that kindergarten transition preparation did indeed account for unique variance in children's socio-behavioral outcomes in kindergarten, including school problem behavior and the quality of relationships with their teachers, above and beyond community (i.e., district locale), family (i.e., SES), and within-child (i.e., parent-reported problem behavior) variables. Specifically, kindergarten transition preparation explained 10.2% of unique variance in school problem behavior and 9.5% of unique variance in student-teacher relationship quality.

The study by Wildenger and McIntyre (2008) was the first to examine the relation between *family* involvement in kindergarten transition preparation and child socio-behavioral outcomes in U.S. public schools; therefore, it fills an important gap in the transition literature. These findings also broaden the current understanding of the relation between kindergarten transition practices and typically developing child socio-behavioral outcomes in kindergarten. The finding that transition preparation was predictive of student-teacher relationship quality is critical in light of the importance of this relationship as a context for early school adjustment (e.g., Pianta, 1994; Pianta et al., 1995). These findings provide additional empirical evidence to support the wealth of theoretical literature arguing for the value of school- and family-based kindergarten transition preparation in promoting a range of positive child outcomes. Given the scant yet promising evidence for the relation between transition preparation and early child socio-behavioral adjustment in kindergarten (LoCasale-Crouch et al., 2008; Margetts,

2002; 2007; Wildenger & McIntyre, 2008), additional empirical exploration of this issue is imperative.

In summary, there are several major gaps in the general education kindergarten transition literature. Very few studies have examined the impact of kindergarten transition preparation on typically developing child outcomes, and only one published U.S. study has examined socio-behavioral outcomes, despite their recognized importance. Furthermore, there is a need for additional studies to use a longitudinal framework to examine child outcomes. To date, only the LoCasale-Crouch et al. (2008) outcome study has spanned the entire transition period (i.e., preschool to kindergarten). Additionally, the great majority of studies have measured kindergarten teachers' use of transition practices, with the exception of the Locasale-Crouch et al. (2008) study, which assessed preschool teachers' use of transition practices. Similarly, only one (unpublished) outcome study (i.e., Wildenger & McIntyre, 2008) has conceptualized kindergarten transition preparation to include a parent involvement component. Currently, no outcome studies have measured transition preparation from the perspectives of multiple stakeholders (i.e., kindergarten and preschool teachers *and* caregivers), despite the recognized importance of all groups in transition preparation. Finally, to date, the literature on socio-behavioral outcomes in kindergarten has solely examined outcomes using indirect measures (i.e., teacher reports) of child behavior.

Kindergarten Transition Studies Comparing Special and General Education Samples

A single study, conducted by McIntyre and colleagues (2006), has bridged the special and general education kindergarten transition literature by explicitly comparing the social and behavioral kindergarten outcomes of children with developmental delays to those of typically developing children. This study examined factors that predict an adaptive transition to school,

operationally defined by the researchers as few school problem behaviors and positive relationships with teachers, for children with (n = 24) and without (n = 43) intellectual disability (ID). Using multiple regression analyses, this study tested the predictive power of child developmental functioning (i.e., IQ and adaptive behavior), self-regulation (i.e., laboratory-based delay of gratification tasks), and parent and teacher reports of social skills (Social Skills Rating System -Parent and Teacher versions) on socio-behavioral kindergarten outcomes, specifically, teacher-reported problem behavior, and student-teacher relationship quality. Results clearly indicated that children with ID had overall poorer adaptation in kindergarten (i.e., higher levels of problem behavior and less positive student-teacher relationships). Results also showed that higher IQ and adaptive behavior, better self-regulation ability and more parent- and teacher-reported social skills were positively related to school adaptation, collapsed across groups. Notably, social skills uniquely predicted adaptation to school, after accounting for child developmental and adaptive functioning. The variables that explained the most variance in adaptation to school were adaptive behavior and teacher-reported social skills.

The study by McIntyre et al. (2006) is critical for several reasons. Primarily, it is the only study to date that has directly compared the socio-behavioral kindergarten outcomes of children with disabilities and typically developing children. Although it is assumed that children with special needs experience poorer school transitions than typically developing counterparts, the aim of this study was to measure and quantify those differences. The McIntyre et al. (2006) study also clearly demonstrated that child adaptive behavior (e.g., communication, self-care) and social skills were critical predictors of successful kindergarten transition, consistent with the survival skills literature. Although this investigation examined child socio-behavioral outcomes in kindergarten among both children with developmental delays and typically developing children,

it did not utilize *transition preparation* to predict those outcomes. Currently, no comparison studies exist that aim to examine the differential impact of transition preparation on outcomes for children with special needs and typically developing peers.

It is interesting that, despite the vastly different needs and functioning of children with and without disabilities, the best practice recommendations for kindergarten transition preparation are remarkably similar. In part, this is likely due to the fact that the typically developing kindergarten transition literature was preceded by and has, in many respects, grown out of, the special education literature. For example, Wolery (1999) recommends that variations of transition practices and goals developed for children with special needs and their families be applied to typically developing populations. An article by Fuchs and Fuchs (1995) argues that the use of empirically-based instructional practices and intensive, data-based focus on individual students sets special education apart and makes it effective. Furthermore, the authors argue that these approaches simply represent best practices in education. However, Fuchs and Fuchs (1995) conclude that efforts to transfer this intensive, individualized form of instruction to general education settings are not usually attempted and often unnecessary for the great majority of students. An obvious parallel can be noted in the kindergarten transition literature; while intensive, individualized transition practices are regarded as optimal, research suggests that few general education teachers actually adhere to these recommendations in practice (Pianta et al., 1999). Ramey and Ramey (1999) have actually asserted that while it is unwise for schools to adopt a one-size-fits-all approach to transition preparation, "excessive individualization of the transition process for every child and family may not be feasible or particularly beneficial to certain types or even the majority of children entering school" (p. 248). Therefore, a study that closely examines the relation between transition preparation and socio-behavioral kindergarten

outcomes for both typically developing children and children with disabilities may help to clarify the nature of the impact of kindergarten transition preparation on the outcomes of these groups of children in light of both best practice recommendations and the substantial gaps in the literature (Eckert et al., 2008).

Study Rationale, Goals and Hypotheses

The importance of child social and behavioral competencies for successful kindergarten transition for both children with special needs and typically developing peers is well-recognized. Therefore, it is troubling that only two American studies, both within the general education literature (LoCasale-Crouch et al., 2008; Wildenger & McIntyre, 2008) have examined the association between transition practices and child socio-behavioral outcomes. Furthermore, only a single study exists (McIntyre et al., 2006) that has directly compared child social and behavioral outcomes across special education and typically developing samples of kindergarten students, albeit without considering the impact of transition preparation. Despite this, best practice recommendations for kindergarten transition among both children with disabilities and typically developing children and families are strikingly similar.

Thus, the overarching goal of the current study was to examine the relation between kindergarten transition preparation, conceptualized to include the involvement of multiple stakeholders (i.e., caregivers, preschool teachers, and kindergarten teachers), and child socio-behavioral outcomes in kindergarten among both typically developing children (TD) and children with developmental delays and disabilities (DD). The first aim of the study was to descriptively explore differences in parent and teacher involvement in transition preparation activities between groups of TD and DD children.

Specifically, family experiences in transition (i.e., concerns and involvement) and preschool and kindergarten teacher transition practices and concerns were investigated. The second aim of the study was to examine the relation between preschool child problem and adaptive behavior (including social skills) and parent and teacher involvement in kindergarten transition practices across the entire sample of children. The third aim of the proposed study was to examine and compare the impact of transition preparation on socio-behavioral kindergarten outcomes for children with and without DD.

It was hypothesized that parents and teachers of children with DD would have a) significantly greater overall involvement in transition preparation activities and b) significantly greater involvement in high-quality, individualized transition practices. It was also hypothesized that there would be significantly more teacher collaboration across preschool and kindergarten settings for children with DD. With respect to concerns, it was hypothesized that parents and teachers would have more concerns about children with DD compared with TD children. Secondly, it was hypothesized that parents and teachers of preschool children with higher levels of problem behavior and lower levels of adaptive behavior and social skills would have greater involvement in kindergarten transition practices. Finally, it was hypothesized that the predictor of interest, transition practices, would be a more robust predictor of socio-behavioral kindergarten outcomes (i.e., explain more unique variance) for children with DD given their special needs and lower levels of adaptive and socio-behavioral functioning.

Method

Participants

Participants were 104 children attending their final year of preschool in upstate New York, their primary caregivers, preschool teachers, and subsequent kindergarten teachers. To be included in the typically developing (TD) group (n = 52), participating children were: 1) receiving general education and not receiving special education or related services; 2) in their final year of attendance in an early education setting; and 3) had lived with their primary caregiver for a minimum of one year prior to the beginning of the study. To be included in the developmental delay (DD) group (n = 52), participating children: 1) had an active Individualized Education Program (IEP); 2) were in their final year of attendance in an early education setting; and 3) had lived with their primary caregiver for a minimum of one year prior to the beginning of the study. Families in both groups were excluded if: 1) their children were not ambulatory, 2) their children had significant sensory impairments (i.e., deaf, blind), 3) parent/caregiver did not hold legal guardianship, 4) parent/caregiver did not hold educational rights for their child receiving special education, or 5) parent/caregiver was unable to complete measures in English.

Children were drawn from nine early education programs in upstate New York. A total of 111 families responded to recruitment efforts (special education n = 54; general education n = 57); however, 7 participants were excluded for the following reasons: (a) respondent was not the primary caregiver and/or did not hold legal guardianship (n = 5) and (b) the parent was unable to complete measures in English (n = 2). Thus, a sample of

104 was obtained at Time 1 of the current study. Of the 104 child participants at Time 1, 71 (68.3%) were male, and 33 (31.7%) were female.

Procedure

Preschool (Time 1). Following the receipt of IRB approval, early education program directors in Central New York were contacted for site participation in April 2009. Recruitment was initiated by the researcher using a letter to outline details of the study (Appendix A). Programs serving children with disabilities as well as typically developing children (i.e., preschool special class integrated settings) were invited to participate. Of the 16 programs invited, 9 (56.3%) agreed to participate, one declined to participate, and six did not respond to multiple contact attempts. Once program directors had provided consent to recruit participants through their programs, brief meetings were arranged with preschool teachers to discuss study procedures. Once consent was obtained from preschool teachers, family participants were recruited through the various early education programs. Each participating site provided information regarding the number of transitioning children with and without IEPs. Teachers were asked to send home study materials in children's backpacks. A total of 426 packets were distributed (n = 179 special education; n = 247 general education), and 111 were completed and returned (overall response rate of 26.1%). The response rate was 30.2% for the special education sample and 23.1% for the general education sample.

Parents who agreed to participate completed a consent form (Appendix B) and two questionnaires (Family Experiences and Involvement in Transition, Social Skills Improvement System). They were instructed to mail completed materials directly to the researcher in a self-addressed, postage paid envelope. A reminder flyer was sent home to

encourage family participation. Upon receipt of family materials, the researcher or a research assistant (i.e., doctoral students in school psychology) contacted participating families and administered a measure of child adaptive behavior over the phone to the primary caregiver. To encourage family participation in the phone interview portion of the study, follow-up contact was pursued through electronic mail, phone calls, and letters. Of the original 104 families, 87 parents/caregivers (special education *n* = 48; general education *n* = 39) completed the adaptive behavior phone interview (83.7%). Parents/guardians did not complete the phone interview at Time 1 for the following reasons: no contact information was provided (*n* = 1); parents declined to participate in the follow-up assessment (*n* = 2); parents did not respond to follow-up contact efforts (*n* = 14). Parents were advised to contact the researcher with questions surrounding their participation in the study. Parent participants received a small ($10) honorarium for Time 1 participation.

Upon receipt of parent consent forms and packets, preschool teachers were asked to complete a consent form (Appendix C), a short demographic form, and two questionnaires (Teacher Perceptions on Transitions, Social Skills Improvement System) for each participating child. Preschool teachers were encouraged to complete the materials outside of school hours. The researcher collected completed teacher materials directly from participating preschool sites. Preschool teacher participants received a small honorarium ($25). To encourage teacher participation, follow-up contact was pursued through electronic mail and phone calls. All teachers (100.0%) agreed to distribute materials to families and completed questionnaires for participating students. However,

because some families returned materials past the stated deadline, preschool teacher materials were completed for 98 out of the 104 participating families at Time 1 (94.2%).

Kindergarten entry (Time 2). Upon the child's kindergarten entry (September 2009), parent participants were invited to participate in a follow-up assessment through a phone call from the researcher or a research assistant (i.e., an advanced undergraduate psychology student). During this phone call, the researcher provided details regarding follow-up study procedures, requested information about the child's kindergarten placement (i.e., school, district, teacher, type of classroom), special education programming if applicable (i.e., IEP, diagnosis, related services) and asked for permission to contact the child's kindergarten teacher to participate in the study. The researcher also conducted an interview using the Family Experiences and Involvement in Transition (FEIT) survey to assess caregiver concerns and behavioral involvement in kindergarten transition practices. Specifically, caregivers were asked whether they had engaged in any additional transition practices not captured on the written administration of the FEIT at Time 1. All families who participated in the follow-up assessment received a small honorarium ($10). To encourage family participation in the second wave of data collection, follow-up contact was pursued through electronic mail, phone calls, and letters. Of the original 104 families, 80 caregivers participated in the follow-up assessment (overall response rate of 76.9%). Of these families, n = 43 were from the DD group at Time 1 (special education response rate of 82.7%) and n = 37 were from the TD group at Time 1 (general education response rate of 71.2%). Of the 80 child participants at Time 2, 57 (71.3%) were male, and 23 (28.7%) were female. Parents did not complete the phone interview at Time 2 for the following reasons: no contact information was

provided (n = 1); parents declined to participate in the follow-up assessment (n = 2); parents did not respond to follow-up contact efforts (n = 21).

Kindergarten (Time 3). Following the transition to kindergarten (late October 2009), kindergarten teachers were invited to participate in the study. Contact was initiated through phone and email messages from the researcher that explained study procedures. Teachers were then mailed packets to complete for the participating student(s) in their classroom. All but two of the 80 families that participated in the Time 2 assessment agreed to allow the researcher to invite their child's teacher to participate in the study. Therefore, packets for 78 kindergarten students were mailed to 67 teachers; 57 teachers had one participating student in their classrooms, nine teachers had two participating students, and one teacher had three participating students. Kindergarten teachers were asked to sign a consent form (Appendix D), complete a short demographic form and three questionnaires (Teacher Perceptions on Transitions, Social Skills Improvement System, and Student-Teacher Relationship Scale) for each participating student. Kindergarten teachers were encouraged to complete the materials outside of school hours and returned the completed materials directly to the researcher in a self-addressed, postage-paid envelope. Packets were returned for 57 participating students (73.1% response rate). Of these students, n = 32 were from the DD group at Time 1 (special education response rate of 61.5%) and n = 25 were from the TD group at Time 1 (general education response rate of 48.1%). Of the 57 child participants at Time 3, 41 (71.9%) were male, and 16 (28.1%) were female. Kindergarten teacher participants received a small honorarium ($10 per student) for their participation. To encourage teacher participation, follow-up contact was

pursued through electronic mail, phone calls, and letters. For a detailed description of the methods, instruments, and informants utilized at each time point, refer to Figure 1.

When parent and teacher packets were returned, data were entered using SPSS Version 16.0 (SPSS, 2007). Prior to the data entry process, questionnaires were checked for missing data. In instances where any data were missing from the FEIT or the TPOT, a follow-up phone call or email was initiated to obtain responses from participants. On the TPOT – preschool, 0.2% (n = 3) of items remained missing from one questionnaire after follow-up attempts. On the TPOT- kindergarten, 0.0% (n = 0) of items remained missing after follow-up attempts. On the FEIT at Time 1, 1.3% (n = 94) of items remained missing from 16 questionnaires after follow-up attempts. Due to the phone administration format of the FEIT at Time 2, there were no missing data. During the data entry process, in instances where five or fewer items were missing from a particular subscale on the Social Skills Improvement System-Parent version (SSIS-P) or the Social Skills Improvement System-Teacher version (SSIS-T), adjustment factors were utilized in scoring as described in the SSIS Manual to account for missing data (Gresham & Elliott, 2008). When the number of missing items exceeded five for a particular subscale and precluded use of the adjustment factor, a follow-up phone call or email was initiated to obtain responses from participants. Adjustment factors were utilized for a total of 0.2% of items (n = 20) on the SSIS-P, 0.2% of items (n = 16) on the SSIS-T in preschool, and 0.5% of items (n = 24) on the SSIS-T in kindergarten. On the SSIS-P, 0.1% (n = 6) of items remained missing from one questionnaire after follow-up attempts. On the SSIS-T in preschool, 2.4% (n = 180) of items from six questionnaires remained missing after follow-up attempts. On the SSIS-T in kindergarten, 0.0% (n = 0) of items remained

missing after follow-up attempts. With respect to missing data on the Student-Teacher Relationship Scale (STRS) one teacher left the entire questionnaire blank and could not be contacted, (1.8% missing; *n* = 28 items).

Research Design

A descriptive design with data collection occurring at multiple time points, using multiple measures and across multiple informants, was used to explore behavioral involvement of parents and teachers in kindergarten transition preparation activities. A within-subjects correlational design was used to assess the extent to which kindergarten transition preparation activities predicted DD and TD child socio-behavioral kindergarten outcomes.

Parent-Reported Measures

Kindergarten transition practices. The Family Experiences and Involvement in Transition (FEIT; McIntyre et al., 2007) questionnaire was utilized to assess family experiences, involvement, and transition concerns during preschool (Time 1) and kindergarten entry (Time 2) (see Appendix E). The 67-item measure was originally developed to assess family experiences and involvement in transition practices for general education students. As a result, some questions (i.e., items 5, 6, 7, and 8) were slightly modified for use with families with children receiving special education. This revised FEIT is comprised of 67 items measuring five domains: (1) child educational history (11 items; e.g., previous enrollment in early educational program, special education and related services received); (2) parent concerns regarding the transition to kindergarten (12 items; e.g., academics, behavior problems, following directions); (3) identified needs during the transition to kindergarten (14 items; e.g., more information

about their child's kindergarten program or new teacher); (4) parental involvement in kindergarten transition practices (16 items; e.g., transition planning meetings, visits to child's future kindergarten classroom); and (5) family demographic information (14 items, e.g., caregiver education, income). Three of the items (i.e., one in the concerns section and two in the involvement section) are open-ended. Parental involvement in kindergarten transition activities at Time 1 was discerned by asking parents to select between three options: whether they "have", "want", or "don't have or want" access to various transition practices. Those items that parents indicated that they "had" reflected their reported engagement in transition practices. Parents were also asked to rate the perceived importance of each transition practice on a four-point scale (1 = not important; 2 = a little important; 3 = somewhat important; 4 = very important). Total completion time is estimated at 20 minutes. No current information regarding psychometric properties is available due to the recent development of the survey. The current study used separate Total Family Transition Concerns scores from Time 1 and Time 2, created by summing the 11 items (i.e., items 13 - 23) that quantified concerns (possible range 11 – 44), from the parent concerns domain at Time 1 (11 items; alpha coefficient = .86 for the current sample) and Time 2 (11 items; alpha coefficient = .83 for the current sample). A Total Family Involvement score (14 items; alpha coefficient = .67 for the current sample) was also created by summing the transition practices items (i.e., items 38 – 51) that parents indicated to "have" at Time 1 and the additional transition practices items that caregivers reported to "have" during the phone interview at Time 2 (possible range 0 – 14). That is, at Time 2, caregivers were asked to report on any *additional* transition practices that they had engaged in following the written administration of the FEIT at

Time 1. During the phone interview, the researcher administered only those items that caregivers had not reported involvement in at Time 1. The Total Family Involvement score thus did not differentiate between involvement at Time 1 and Time 2, but instead summed activities across the transition period. Additionally, individual items from the behavioral involvement domain and child and family demographic information from the FEIT was utilized in the current study.

Adaptive behavior. The researcher administered the survey interview form of the Vineland Adaptive Behavior Scales 2nd edition (Vineland-II; Sparrow, Cicchetti, & Balla, 2005) over the phone to caregivers in the spring of preschool (Time 1) (Appendix F). This procedure was similar to phone administrations of the Vineland-II in previous studies (e.g., McIntyre, 2008). This measure is appropriate for individuals aged birth to 90 years, contains items that assess adaptive behavioral functioning in four domains: 1) Communication (99 items; e.g., listens to instructions, says first and last name when asked); 2) Daily Living Skills (109 items; e.g., puts shoes on correct feet, puts away personal possessions); 3) Socialization (99 items; e.g., uses actions to show happiness or concern for others, shares toys or possessions when asked); and 4) Motor Skills (76 items; e.g., throws ball, completes simple puzzle).The domains combine to yield an overall Adaptive Behavior Composite score, with a mean of 100 and standard deviation of 15. The Motor Skills subscale was omitted in the current study due to the fact that inclusion of this subscale can artificially inflate Adaptive Behavior Composite scores if children do not have physical impairments. Given that the current study utilized a sample of ambulatory and physically mobile children, the Communication, Socialization, and Daily Living Skills domains were considered to have more relevance for kindergarten

adaptation. Furthermore, while communicative, socialization, and daily living skills deficits are considered part of the definition of adaptive behavior as it relates to the diagnosis of intellectual disability, motor skills deficits are not part of this definition (American Association on Mental Retardation, 2002; American Psychological Association, 2000). Therefore, we chose to utilize a conceptually linked definition of adaptive behavior.

The Vineland-II is a semi-structured interview in which general questions about the child's behavior are asked initially and followed by further probes to elicit more specific information. Basal and ceiling rules are utilized to determine starting and ending points for item administration. Therefore, not all items were individually administered during the interview. Frequency of child behaviors were rated on a three-point scale (0=Never; 1=Sometimes or Partially; 2=Usually). Parents could also choose the option 'DK' if they did not know whether their child performed a behavior. Results yield raw scores that can be converted to standard scores, percentile ranks, and adaptive levels. Standard scores were used for the current study. Reported internal consistency reliability coefficients on the survey interview form of the Vineland-II for domains and the adaptive behavior composite (for children ages 0-5) are as follows: Communication, .92; Daily Living Skills, .89; Socialization, .93; Motor Skills, .90; Adaptive Behavior Composite, .97. The Vineland-II has sound psychometric properties and has been validated on populations of individuals with and without disabilities. It is a widely used instrument for the assessment of adaptive behavior in individuals with and without developmental disabilities (McIntyre et al., 2006; Sparrow et al., 2005). Due to the great variability in items administered for each child based on their level of adaptive functioning and

correspondingly different basal and ceiling points, reliability coefficients are not reported for the current sample. Total administration time of the Vineland-II is approximately 30 minutes. Only the Adaptive Behavior Composite scale was used in the current study.

Social skills. The Social Skills Improvement System – Parent Form (SSIS-P; Gresham & Elliott, 2008) was completed by the primary caregiver with respect to the preschool-aged child during the Spring wave of data collection (Time 1) (Appendix G). The parent version contains 46 items assessing social skills in seven domains: (1) communication (seven items; e.g., says "thank you"), (2) cooperation (six items; e.g., follows household rules), (3) assertion (seven items; e.g., expresses feelings when wronged), (4) responsibility (six items; e.g., takes care when using other people's things), (5) empathy, (six items; e.g., tries to understand how you feel), (6) engagement, (seven items; e.g., joins activities that have already started), and (7) self-control, (seven items; e.g., resolves disagreements with you calmly). Parents used a four-point scale (0=Never; 1=Seldom; 2=Often; 3=Almost Always) to rate the frequency of the social skill as well as a three-point scale (0=Not Important; 1=Important; 2=Critical) to rate their perception of the importance of the behavior for their child's development. Results yield raw scores that can be converted to Behavior Levels, standard scores, and percentile ranks. Standard scores were used for the current study for ease of interpretation. Reported alpha coefficient reliability scores for the parent form of the Social Skills domain (for ages 3-5) range from .76 (Communication subscale) to .96 (Total Scale). The coefficient alpha for the current sample was .97 for Total Social Skills. The Total Social Skills scale was used in the current study.

Problem behavior. The SSIS-P (Gresham & Elliott, 2008) also includes a 33- item Problem Behaviors scale assessing child problem behaviors in five domains, with several items loading on more than one domain: (1) externalizing, (12 items; e.g., disobeys rules or requests), (2) bullying, (five items; e.g., bullies others), (3) hyperactivity/inattention, (seven items; e.g., has difficulty waiting for turn), (4) internalizing, (ten items; e.g., withdraws from others), and (5) autism spectrum, (15 items; e.g., repeats the same thing over and over). The autism spectrum domain includes items from both social skills and problem behaviors scales on the SSIS and was not utilized for the purposes of the current study. Parents used the same four-point scale (0=Never; 1=Seldom; 2=Often; 3=Almost Always) to rate the frequency of the problem behavior. Results yield raw scores that can be converted to standard scores, percentile ranks, and Behavior Levels. Standard scores were used in the current study for ease of interpretation. Reported alpha coefficient reliability scores for the parent form of the Problem Behavior domain (for ages 3-5) range from .80 (Internalizing subscale) to .94 (Total Scale). The coefficient alpha for the current sample was .94 for Total Problem Behavior. The current study used the Total Problem Behavior scores in analyses. The administration time for the entire SSRS-P (Social Skills and Problem Behavior scales) is approximately 15 to 20 minutes.

Teacher-Reported Measures

Demographics. Each participating preschool and kindergarten teacher was asked to fill out a short teacher demographics form developed for the study (Appendix H). The one-page form assessed the teacher's ethnicity, teaching experience and credentials, and classroom setting (general education, inclusive, or self-contained). Total administration time was estimated to be less than five minutes.

Kindergarten transition practices. The Teacher Perceptions on Transitions (TPOT; Quintero & McIntyre, 2009) was completed by the preschool and kindergarten teachers regarding each participating student in the classroom (Appendix I). The TPOT consists of items regarding the length of time the teacher has known and taught the student and questions concerning the use of 14 commonly utilized transition preparation activities. The teacher indicated which practices had been used with the student, when they were used, and rated each practice in importance on a four-point Likert-type scale. In open-ended items, teachers indicated any additional forms of involvement that they had or would liked to have had in order to facilitate transition to kindergarten, as well as perceived barriers to implementing transition practices. Additionally, two items address major concerns regarding transition for the target student. Total administration time was approximately 10 minutes for each student. No current psychometric properties are available due to the recent development of this scale. The current study used a Total Teacher Involvement score, created by summing those transition practices items that teachers reported utilizing (possible range 0 - 14) at Time 1 in preschool (14 items; alpha coefficient = .76 for the current sample) and Time 3 in kindergarten (14 items; alpha coefficient = .78 for the current sample). That is, two separate Total Teacher Involvement scores were calculated for each child, one reflecting the behavior of the preschool teacher and one reflecting the behavior of the kindergarten teacher. In addition, the current study used individual items from the transition preparation activities section as well as the item (#4) that quantified teacher concerns on a five-point Likert-type scale (0 = no concerns; 4 = very many concerns).

Social skills. The Social Skills Improvement System – Teacher Form (SSIS-T; Gresham & Elliott, 2008) was completed by the preschool teacher during the Spring wave of data collection (Time 1) and the kindergarten teacher during the Fall wave of data collection (Time 3) (Appendix J). The scale contains 46 items assessing social skills in seven domains; (1) communication (seven items; e.g., says "please"), (2) cooperation (six items; e.g., follows your directions), (3) assertion (seven items; e.g., asks for help from adults), (4) responsibility (six items; e.g., is well-behaved when unsupervised), (5) empathy, (six items; e.g., tries to comfort others), (6) engagement, (seven items; e.g., makes friends easily), and (7) self-control, (seven items; e.g., stays calm when teased). Similar to the parent version, teachers used a four-point scale to rate the frequency of behaviors (0=Never; 1=Seldom; 2=Often; 3=Almost Always) and a three-point scale to rate the perceived importance of each behavior for classroom success (0=Not Important; 1=Important; 2=Critical). Results yield raw scores that are converted to standard scores, percentile ranks, and behavior levels. Standard scores were used in the current study for ease of interpretation. Reported coefficient alpha reliability scores for the teacher form of the Social Skills domain (ages 3-5) range from .85 (Communication subscale) to .97 (Total Scale). The coefficient alpha for the current sample was .97 in preschool and .97 in kindergarten for Total Social Skills. The Total Social Skills scale was used in the current study.

Problem behavior. The SSIS teacher form also includes a 30-item Problem Behavior scale. The scale assesses child problem behaviors in five domains, with several items loading on more than one domain: (1) externalizing, (12 items; e.g., cheats in games or activities), (2) bullying, (five items; e.g., bullies others), (3)

hyperactivity/inattention, (seven items; e.g., acts without thinking), (4) internalizing, (seven items; e.g., withdraws from others), and (5) autism spectrum, (15 items; e.g., becomes upset when routines change). The autism spectrum domain includes items from both social skills and problem behaviors scales on the SSIS and was not utilized for the purposes of the current study. Teachers used the same four-point scale (0=Never; 1=Seldom; 2=Often; 3=Almost Always) to rate the frequency of the problem behavior. Results yield raw scores that can be converted to standard scores, percentile ranks, and Behavior Levels. Standard scores were used in the current study for ease of interpretation. Reported coefficient alpha reliability scores for the teacher form of the Problem Behavior domain (ages 3-5) range from .75 (Bullying subscale) to .94 (Total Scale). The coefficient alpha for the current sample was .92 in preschool and .93 in kindergarten for Total Problem Behavior. The Total Problem Behavior scale was used in the current study.

Academic competence. In addition, the SSIS-T contains a very brief (7 items) Academic Competence scale that assesses student academic behaviors for students in kindergarten through Grade 12. Therefore, kindergarten teachers at Time 3 completed the academic competence scale. Teachers rated student academic behaviors (e.g., overall academic performance, reading and mathematics performance, motivation, and general intellectual functioning) on a five-point scale (1=Lowest 10%; 2=Next Lowest 20%; 3=Middle 40%; 4=Next Highest 20%; 5=Highest 10%) that serves to compare the target student to the rest of the class, capturing local norms. Although academic outcomes were not the primary focus of the current study, this information was collected to examine the relation between academic competence and socio-behavioral school outcomes. The

Academic Competence domain yields raw scores, standard scores, percentile ranks, and an academic competence level. This study used the Academic Competence standard score for ease of interpretation. The reported coefficient alpha reliability score for the academic competence domain (ages 5-12) is .97. The coefficient alpha for the current sample was .98 for Total Academic Competence. The administration time for the entire SSIS - teacher form is approximately 15 to 20 minutes.

Student-teacher relationship. The Student-Teacher Relationship Scale (STRS; Pianta, 2001) was completed by the child's kindergarten teacher (Time 3) (Appendix K). The STRS measures teachers' perceptions of her relationship with a target student, the student's interactive behavior with the teacher, the teacher's beliefs about the student's feelings toward her, and overall relationship quality. The instrument is designed for use with students in pre-K through third grade. The STRS is a self-report measure containing 28 items assessing three domains of the student-teacher relationship: conflict (12 items, e.g., the child feels that I treat him/her unfairly), closeness (11 items, e.g., if upset, this child will seek comfort from me), and dependency (5 items, e.g., this child reacts strongly to separation from me). Teachers used a five-point scale (1=definitely does not apply; 2=does not really apply; 3=neutral, not sure; 4=applies somewhat; 5=definitely applies) to rate the extent to which a particular item applied to her relationship with the target student. The STRS yields both raw subscale scores and a raw total score, which can be converted to percentiles comparing the relationship of the teacher and the target child to the normative sample. Reported alpha coefficient reliability estimates for the STRS subscales range from .64 (Dependency) to .92 (Conflict), and the reported alpha coefficient for the STRS Total is .89. The coefficient alpha for the current sample was .68

for the STRS Total. The current study used the total raw scores. Total administration time for the STRS ranges from five to ten minutes.

Data Analysis

Dependent variables. The dependent variables of interest were the kindergarten teacher-reported measures of child outcomes: 1) social skills (Total Social Skills score from the SSIS-T), 2) problem behavior (Total Problem Behavior score from the SSIS-T), and 3) overall student-teacher relationship quality (Total score from the STRS).

Covariates. Chi-square and independent samples *t*-tests were conducted to assess whether significant group differences (TD v. DD) existed on any of the demographic variables. If significant differences in demographic variables were identified, they were entered as covariates in subsequent analyses.

Descriptive analyses. Descriptive analyses were used to explain the general structure of the data. These descriptive statistics (i.e., range, means, and standard deviations) as well as univariate analyses allowed for exploration of the distribution, skew, and general structure of the data. In order to address the first aim of the study, univariate analyses were used to assess group differences (TD v. DD) in parent and teacher involvement in transition preparation activities. To address hypothesis one, separate scores reflecting Total Involvement in transition practices were developed for parents, preschool teachers, and kindergarten teachers, and independent samples *t*-tests were used to compare overall group differences (TD v. DD) in parent and teacher involvement in transition preparation activities using the Total Involvement scores. Independent samples *t*-tests were also used to compare group differences (TD v. DD) in total parent and teacher concerns. In order to address hypotheses two and three, chi-

square analyses were conducted by group (TD and DD) with respect to parent and teacher endorsement of individual items on the FEIT and TPOT reflecting use of specific transition practices. Group differences were investigated with respect to generic practices (e.g., FEIT item 50; attend kindergarten registration) as well as high-quality, individualized preparation activities (e.g., FEIT item 46; home visits) and practices reflecting cross-site teacher collaboration (e.g., TPOT item 5k; coordinate curriculum).

In order to address the second aim of the study, Pearson correlation coefficients were used to examine the relation between preschool child problem behavior, adaptive behavior, and social skills and parent and teacher involvement in transition preparation activities. Specifically, five Pearson correlation coefficients were calculated: 1) parent-reported total problem behavior score on the SSIS-P and Total Involvement in transition score, 2) preschool teacher-reported total problem behavior score on the SSIS-T and Total Involvement in transition score, 3) total adaptive behavior score on Vineland-II and Total Involvement in transition score, 4) parent-reported total social skills score on the SSIS-P and Total Involvement in transition score, and 5) preschool teacher-reported total social skills score on the SSIS-T and Total Involvement in transition score. These correlations were calculated utilizing Total Involvement scores for families, preschool teachers, and kindergarten teachers, yielding a total of 15 correlation coefficients.

Pearson correlation coefficients were also calculated to assess additional relations between measures. The following relations were also of interest to the current study: (1) the relation between parent- and teacher-reported measures of child behavior, (2) the relation between preschool and kindergarten teacher-reported measures of child behavior, and (3) the relation among various school outcome measures. A Kindergarten Transition

Outcomes Composite score was developed given that relations among measures were sufficiently high (i.e., Pearson correlations of 0.50 or higher). Three measures comprised the composite score; kindergarten teacher-reported social skills (SSIS-T Social Skills Total), kindergarten teacher-reported problem behavior (SSIS-T Problem Behaviors Total) and student-teacher relationships (STRS Total). The Transition Success Composite thus reduced the number of outcome variables (McIntyre et al., 2006).

Regression analyses. To address the third aim of the study, hierarchical linear regression analyses were conducted in order to examine the relative predictive power of child behavior and transition preparation variables with respect to kindergarten transition outcomes. Separate regression analyses were conducted for both TD and DD groups, which allowed for assessment of differences in the predictive power of kindergarten transition preparation activities for each group. In addition, an exploratory regression analysis was conducted for the entire sample.

Results

Power Analyses

Post-hoc power analyses were conducted to estimate power given the obtained sample sizes at Time 1 (DD n = 52; TD n = 52), Time 2 (DD n = 43; TD n = 37), and Time 3 (DD n = 32; TD n = 25). These estimates were obtained through the use of G*Power software (Faul, Erdfelder, Lang, & Buchner, 2007). Specifying a moderate effect size (f^2) of 0.15, alpha of 0.05, and an obtained sample size of 52 (Time 1, both groups) with one tested predictor and four total predictors using a linear multiple regression test (fixed model, R^2 increase), power was found to be 0.78. Specifying these same input parameters, with an obtained sample size of 43 (Time 2, DD group), power

was found to be 0.70, and with an obtained sample size of 37 (Time 2, TD group), power was found to be 0.63. Again specifying these same input parameters, with an obtained sample size of 32 (Time 3, DD group), power was found to be 0.56, and with an obtained sample size of 25 (Time 3, TD group), power was found to be 0.45.

Demographics

Tables 3, 4, and 5 describe demographic characteristics of participating children and families across data collection periods (Time 1 and Time 2) by group (DD or TD). At Time 1, the average age of preschoolers did not differ by group and was found to be 59.25 months across DD and TD children. A significant difference was found for gender across groups. While 42 (80.8%) of the children in the DD group were male, only 29 (55.8%) of the children in the TD group were male, (χ^2 (1, N = 104) = 7.50, p = .006). Given that gender differed across disability status groups, it was entered as a covariate in all subsequent analyses examining group differences. In every case, when group differences were found on predictor or dependent behavioral variables, the effects remained significant when gender was covaried. Therefore, those analyses were not included. A significant difference was also found regarding type of preschool program. Fifty (96.2%) of the DD children attended a special education preschool, compared with only 26 (50.0%) of TD children. The remaining two children in the DD group (3.8%) and 26 children in the TD group (50.0%) attended a Head Start program (χ^2 (1, N = 104) = 28.15, p < .001). In addition, a significant difference was found for race by group. While only five (9.6%) children in the DD group were Black/African-American, 24 (46.2%) of the children in the TD group were Black/African-American, (χ^2 (1, N = 104) = 20.41, p = .002). At Time 1, 52 (100.0%) of the children in the DD group had an active IEP and

received related services (e.g., speech, occupational, physical therapies). On average, DD children received 2.3 different therapeutic services (*SD* = 0.9) at Time 1. Within the DD group, 17 (32.7%) had a speech delay, 17 (32.7%) had global developmental delays, 12 (23.1%) had an autism spectrum disorder, and 6 (11.5%) had another delay/disability. Children who were categorized in the 'other' delay/disability category had a variety of impairments (e.g., ADHD, sensory processing disorder).

At Time 2 (kindergarten entry) participating children remained in the same group (i.e., DD, TD) according to child developmental status at Time 1 (preschool). The average age of kindergarten students did not differ by group and was found to be 63.33 months across DD and TD groups at Time 2. Similar to Time 1, a significant difference in child gender was detected across groups; specifically, while the majority (81.4%) of children in the DD group were male, just more than half (59.5%) of children in the TD group were male, (χ^2 (1, N = 80) = 4.67, p = .031). Also similar to Time 1 demographics, a significant difference by group with respect to race was found, (χ^2 (1, N = 80) = 12.66, p = .049). While only 9.3% of children in the DD group were Black/African-American, more than one-third (35.1%) of the children in the TD group were Black/African-American. A significant difference was also found regarding type of kindergarten classroom by group (χ^2 (3, N = 80) = 31.91, p < .001). The majority of children in the TD group (78.4%) were in general education kindergarten classrooms compared with only 16.3% of children in the DD group. Conversely, the majority of children in the DD group (69.8%) were in inclusion kindergarten classrooms compared with 21.6% of children in the TD group. Additionally, 6 (14.0%) of children in the DD group were in self-contained special education settings for at least a portion of the day. At Time 2, 32 (74.4%) children

in the DD group had an active IEP. One child in the TD group (2.7%) had been evaluated over the summer and had an IEP and received related services in kindergarten. Thirty-five children in the DD group (81.4%) received related services in kindergarten; on average, these children received 1.83 (*SD* = 1.41) related services. In the DD group at Time 2, 11 (25.6%) of children had an autism spectrum disorder, nine (20.9%) had a speech delay, seven (16.3%) had global developmental delays, five (11.6%) had another delay/disability, and ten (23.3%) did not have a diagnosis and had been declassified. In the TD group at Time 2, one child (2.7%) had been labeled with a speech delay and 36 (97.3%) did not have a diagnosis.

There were no significant differences between groups for parent demographic variables at either time point. The majority of respondents (79.8% overall) for both the DD and TD groups were biological mothers and reported a mean age of 36.3 years (*SD* = 7.7) and 33.7 years (*SD* = 7.4), respectively. Roughly two-thirds of respondents in both groups reported to have some college education or higher and were employed part- or full-time. While approximately two-thirds of respondents in both groups reported to have an annual household income at or below $55,000, the remaining third reported annual incomes that exceeded this figure. More than half of respondents in both the DD and TD groups reported to be married or living with a partner (67.3% and 57.7%, respectively) while sole caregiver households represented 19.2% of the DD sample and 30.8% of the TD sample. In addition, 30 families from the DD group (57.7%) and 23 families from the TD group (44.2%) reported to be receiving some type of government aid.

Preschool teachers (*N* = 40) also served as participants at Time 1. Table 6 describes demographics of participating preschool teachers. The great majority of the

teachers were White/Caucasian (90.0%) and female (97.5%). The majority of teachers had a master's degree (70.0%) and were certified in early childhood special education (65.0%). Teachers reported having taught in their current placement for an average of 5.4 years (*SD* = 6.4), and the majority reported having exclusively taught preschool (57.5%). The majority (80.0%) of teachers worked at special education preschool programs, while the remaining 20% worked at a Head Start program. The clear majority (90.0%) of the teachers reported teaching in an inclusion classroom. Overall, the results indicate that the participating teachers were well-educated and experienced in early childhood education.

Kindergarten teachers (*N* = 49) also served as participants at Time 3. Table 7 describes demographics of participating kindergarten teachers. Teachers represented 40 different elementary schools in Central New York. Most (*n* = 42) teachers had only one participating student, while six had two participating students and one teacher had three participating students. All of the teachers were White/Caucasian and the great majority were female (95.9%). The majority of teachers had a master's degree (95.9%) and a permanent teaching certification (87.8%). The majority of teachers were certified in elementary education (83.7%), and about one-third were certified in special education (34.7%). Teachers reported having taught in their current placement for an average of 10.4 years (*SD* = 7.4), and the majority reported having taught other grade levels in the past (81.6%). More than half (55.1%) of teachers reported teaching in general education classroom settings, while 40.8% reported teaching in inclusion classrooms and 4.1% reported teaching in self-contained special education settings. Overall, the results indicate that the participating teachers were well-educated and had a high level of experience in elementary education.

Attrition

Given that participant attrition occurred in the present sample, univariate analyses (i.e., independent samples *t* tests and chi-square analyses) were conducted to examine potential differences in the group of participants that completed the study (i.e., participated in data collection from Time 1 through Time 3) and the group of participants that did not complete the study, regardless of the phase of data collection at which they ceased participation. Potential differences in key demographic variables, family and teacher involvement variables, and child behavioral variables at Time 1 were explored.

Groups of study completers and non-completers did not differ according to child disability status group (i.e., DD or TD), child gender, or child age. However, significant group differences were found on several family socio-demographic variables. Specifically, families that did not complete the study had lower incomes (M = 2.91, SD = 2.63) compared with families that did complete the study (M = 5.77, SD = 3.48), (t(1,97) = 4.64, p <.001). In addition, caregivers in families that did not complete the study had lower levels of education (M = 12.94, SD = 2.94) compared with caregivers that did complete the study (M = 15.52, SD = 3.33), (t(1,101) = 4.13, p <.001). Families of non-Caucasian children (60.8%) were also more likely to drop out of the study prior to its completion than families of Caucasian children (30.2%), (χ^2 (1, N = 104) = 9.82, p = .002). Finally, families of children attending Head Start (71.4%) were more likely to drop out of the study compared with families of children not attending Head Start (35.5%), (χ^2 (1, N = 104) = 10.65, p = .001). No group differences with respect to study completion or non-completion were found for parent or preschool teacher overall involvement. In addition, no differences were discerned on any child behavioral variables at Time 1,

including parent-reported social skills and problem behavior, teacher-reported social skills and problem behavior, and adaptive behavior.

Family Concerns and Involvement in Transition

The first aim of the study was to descriptively explore differences in parent and teacher involvement in transition preparation activities between groups of DD and TD children. This was achieved with respect to parents by administering the Family Experiences and Involvement in Transition (FEIT; McIntyre et al., 2007), which examined transition practices and concerns across the transition period (Spring and Fall 2009).

Family concerns. Significant group differences were found in Total Family Transition Concerns ($t(1, 102) = 6.68$, $p < .001$) and ($t(1, 77) = 6.09$, $p < .001$) with families in the DD group reporting more concerns at both Time 1 and Time 2 than families in the TD group (see Tables 8 and 9). The Total Concerns score (range 10 – 39) was the sum of the rating of each concerns item on the questionnaire, with higher scores indicating more concerns. Significant differences were also detected in Total Concerns scores when using gender and type of preschool program as covariates at Time 1 ($F(3, 100) = 15.43$, $p < .001$) and gender and type of kindergarten classroom as covariates at Time 2 ($F(3,75) = 13.76$, $p < .001$). As depicted in Tables 8 and 9, families in the DD group also reported more concerns across all individual items (e.g., getting along with peers, behavior problems) with the exception of the item "separating from family" at Time 1 and Time 2 and the item "other concerns" at Time 2. A paired-samples *t*-test suggests that on average, parents in this sample reported a decrease in Total Concerns across the transition period, with significantly greater concerns in preschool at Time 1 (*M*

= 20.5; *SD* = 7.6) than at kindergarten entry at Time 2 (*M* = 19.1; *SD* = 7.0), (*t*(79) = 2.07, *p* = .041). A strong, positive correlation was found between parent concerns at Time 1 and Time 2 (*r* = 0.70, *p* <.001).

Family involvement. Families in this sample reported utilizing, on average, 8.70 kindergarten transition practices (*SD* = 2.42, range 0 - 13) from the 14 options available on the FEIT. Across the entire sample, the most frequently utilized practices were attending kindergarten registration (92.5%), monthly contact with preschool staff (90.0%), and annual meetings with preschool staff (88.8%). Conversely, parents were least likely to report receiving a phone call (13.8%) or a home visit (2.5%) from kindergarten teachers.

A Total Family Involvement score reflecting family involvement across the transition period was created by summing the transition practices items that parents indicated to "have" at the end of the preschool year (Time 1) and the additional transition practices items that caregivers reported to "have" at kindergarten entry (Time 2). Higher scores indicated more involvement in transition preparation activities. A significant difference was found in overall family involvement across the transition period by group, (*t*(1, 78) = 2.59, *p* = .012), with parents in the DD group reporting more overall involvement (*M* = 9.33, *SD* = 2.39) compared with parents in the TD group (*M* = 7.97, *SD* = 2.27). This effect remained significant when child gender, type of preschool program, and type of kindergarten classroom were entered as covariates (F(4,75) = 4.95 *p* = .001). In addition, significant differences were found by group with respect to endorsement of individual practices (see Table 10). Specifically, families of children with DD were significantly more likely to report engaging in several individualized, high-

intensity transition practices, including attending a transition planning meeting with preschool staff, attending a transition planning meeting with kindergarten staff, being a member of a transition planning team, and receiving a phone call from their child's kindergarten teacher.

In addition, Total Family Involvement scores were found to correlate with several indices of family socioeconomic status such that families of higher socioeconomic status reported more overall involvement. Specifically, total family involvement in transition preparation activities was found to correlate positively and significantly with family income (r = 0.26, p = .026) and highest parental grade completed (r = 0.24, p = .032). Parents of children not receiving free/reduced lunch in school reported higher involvement (M = 9.33, SD = 1.88) than parents of children who were receiving free/reduced lunch (M = 7.58, SD = 2.99), (t(1, 64) = 2.92, p = .005).

Parent-Reported Preschool Child Behavioral Variables

Social skills and problem behavior. Preschool child problem behavior and social skills data were collected via parent report using the Social Skills Improvement System – Parent Form (SSIS-P; Gresham & Elliott, 2008) during the spring of the child's preschool year (Time 1). Variables of interest were Total Social Skills and Total Problem Behavior standard scores. The mean Total Social Skills standard score was 98.39 (SD = 17.53; Range 40 - 128), and the mean Total Problem Behaviors standard score was 106.52 (SD = 17.55; Range 77 - 160). Parent-reported Total Social Skills and Total Problem Behavior scores were correlated, (r = -0.55, p <.001). A significant difference was found by group for Total Social Skills scores, such that children in the DD group (M = 92.19, SD = 18.98) had lower scores compared with children in the TD group (M = 104.71, SD

= 13.37), ($t(1, 101) = -3.86$, $p < .001$). Similarly, a significant group difference was detected for Total Problem Behaviors scores, such that children in the DD group (M = 113.67, SD = 17.79) had higher scores compared with children in the TD group (M = 99.37, SD = 14.19), ($t(1, 102) = 4.54$, $p < .001$). The overall distribution of the Total Social Skills variable was negatively skewed (skewness = -0.58; kurtosis = 0.29), indicating that many parents reported high levels of child social skills, while the Total Problem Behaviors variable was positively skewed (skewness = 0.72; kurtosis = 0.25), indicating that many parents reported low levels of child problem behavior.

Adaptive behavior. Preschool child adaptive behavior data were collected via parent report using the Vineland-II survey interview form (Sparrow et al., 2005) via a telephone interview during the Spring wave of data collection (Time 1). The variable of interest was overall adaptive behavior, as quantified by the Adaptive Behavior Composite (ABC) standard score. The mean Adaptive Behavior Composite score for the overall sample was 86.28 (SD = 16.99; Range 43 - 119). A significant difference was detected by group in Adaptive Behavior Composite scores such that children in the DD group (M = 75.44, SD = 13.34) had significantly lower scores compared with children in the TD group (M = 99.62, SD = 10.10), ($t(1, 85) = -9.35$, $p < .001$).

Teacher Concerns and Involvement in Transition

The first aim of the study was to descriptively explore differences in parent and teacher involvement in transition preparation activities between groups of DD and TD children. This was achieved with respect to teachers by administering the TPOT (Quintero & McIntyre, 2009), which examined transition practices and concerns of

preschool teachers at Time 1 (spring of preschool) and kindergarten teachers at Time 3 (fall of kindergarten).

Preschool teacher concerns and involvement. A significant difference was detected in overall preschool teacher concerns ratings by group ($t(1, 95) = 6.93$, $p < .001$) with teachers reporting significantly more concerns for children with DD ($M = 2.12$, $SD = 0.92$) compared with TD children ($M = 0.85$, $SD = 0.88$). This effect remained significant when child gender and type of preschool program were entered as covariates, ($F(3,93) = 15.69$, $p < .001$).

Preschool teachers in this sample reported engaging in an average of 7.82 transition practices ($SD = 3.02$, range 2-14) from the 14 practices listed on the TPOT. Across the entire sample, the most frequently utilized practices were monthly contact with families (96.9%), providing written communication regarding transition to families (88.8%), and transition planning meetings with students' preschool teams (82.7%). Conversely, preschool teachers were least likely to report receiving a phone call from their student's future kindergarten teacher (21.4%) or coordinating curriculum with kindergarten teachers (18.4%).

A Total Preschool Teacher Involvement score reflecting teacher involvement in transition practices was created by summing the transition practices items that preschool teachers reported to engage in at Time 1, with higher scores indicating more involvement. A significant difference was found in overall preschool teacher involvement by group, ($t(1, 95) = 3.64$, $p < .001$), with teachers reporting more overall involvement on behalf of DD children ($M = 8.82$, $SD = 2.47$) compared with involvement on behalf of TD children ($M = 6.72$, $SD = 3.21$). This effect remained significant when child gender and type of

preschool program were entered as covariates, ($F(3,93) = 4.45$, $p = .006$). In addition, significant differences were found by group with respect to endorsement of individual practices (see Table 11). Specifically, preschool teachers of children with DD were significantly more likely than teachers of TD children to report involvement in several individualized, high-intensity transition practices, including participating in meetings with the student's school team, participating in transition planning meetings with the student's kindergarten team, participating as a member of a transition planning team, receiving a phone call from the student's future kindergarten teacher, completing a home visit for the student, and having a kindergarten teacher visit their preschool classroom. Several of these items also reflected cross-site teacher collaboration (i.e., transition planning meeting with kindergarten team, phone calls and classroom visits from kindergarten teachers).

Kindergarten teacher concerns and involvement. There were no significant differences detected in overall kindergarten teacher concerns ratings by group ($t(1, 55) = 1.40$, $p = .167$). Kindergarten teacher concerns at Time 3 were significantly correlated with preschool teacher concerns at Time 1 ($r = .32$, $p = .019$).

Kindergarten teachers in this sample reported engaging in an average of 6.84 transition practices ($SD = 2.88$, range 0-14) from the 14 practices listed on the TPOT. Across the entire sample, the most frequently utilized practices were holding orientation sessions for parents (96.5%), monthly contact with families (87.7%), and holding orientation sessions for students (86.0%). Conversely, kindergarten teachers were least likely to report completing a home visit for their student (5.3%) or coordinating curriculum with preschool teachers (12.3%).

A Total Kindergarten Teacher Involvement score reflecting teacher involvement in transition practices was created by summing the transition practices items that kindergarten teachers reported to engage in at Time 3, with higher scores indicating more involvement. No significant differences were detected with respect to overall kindergarten teacher involvement by group, ($t(1,55) = 0.65$, $p = .519$). Furthermore, few differences were found by group with respect to use of individual transition practices, with the exception of more teachers reporting to engage in meetings with the student's school team for DD children and more teachers reporting to provide written communication regarding transition to parents of TD children (see Table 12).

Preschool Teacher-Reported Social Skills and Problem Behavior

Preschool child problem behavior and social skills data were collected via teacher report using The Social Skills Improvement System – Teacher Form (SSIS-T; Gresham & Elliott, 2008) during the Spring wave of data collection (Time 1). Variables of interest were Total Social Skills and Total Problem Behavior standard scores. The mean Total Social Skills standard score was 94.31 ($SD = 15.57$; Range 40 - 128), and the mean Total Problem Behaviors standard score was 108.96 ($SD = 14.20$; Range 82 - 142). Preschool teacher-reported Total Social Skills and Total Problem Behavior scores were correlated, ($r = -0.50$, $p < .001$). A significant difference was found by group for Total Social Skills scores, such that children in the DD group ($M = 89.25$, $SD = 16.13$) had lower scores compared with children in the TD group ($M = 99.79$, $SD = 13.02$), ($t(1, 96) = -3.54$, $p = .001$). Similarly, a significant group difference was detected for Total Problem Behaviors scores, such that children in the DD group ($M = 113.33$, $SD = 12.82$) had higher scores compared with children in the TD group ($M = 103.51$, $SD = 14.08$), ($t(1, 90) = 3.50$, $p =$

.001). The overall distribution of the Total Social Skills variable was negatively skewed and leptokurtic (skewness = -0.75; kurtosis = 1.56), indicating that many parents reported high levels of child social skills and that scores clustered more in the center of the distribution compared to the shoulders.

Relations between Preschool Child Behavior and Parent and Teacher Involvement

In order to address the second aim of the study, relations between Total Family Involvement in transition scores and Total Social Skills (SSIS-P and SSIS-T), Total Problem Behavior (SSIS-P and SSIS-T), and the Adaptive Behavior Composite score (VABS-II) in preschool were examined. These same relations with child behavioral variables were also examined with respect to Total Preschool Teacher Involvement and Total Kindergarten Teacher Involvement in transition (see Table 13). Correlations between Total Family Involvement in transition and parent-reported social skills (r = -.06, p = .583), parent-reported problem behavior (r = -.09, p = .431), preschool teacher-reported social skills (r = -.14, p = .229), preschool teacher-reported problem-behavior (r = .05, p = .690) and adaptive behavior (r = -.14, p = .225) all failed to reach statistical significance. In contrast, correlations between Total Preschool Teacher Involvement in transition and parent-reported social skills (r = -.45, p < .001), parent-reported problem behavior (r = .34, p = .001), preschool teacher-reported social skills (r = -.35, p < .001), preschool teacher-reported problem-behavior (r = .42, p < .001) and adaptive behavior (r = -.46, p < .001) were all significant and in the anticipated direction such that preschool teachers had more involvement on behalf of children with higher levels of problem behavior and lower levels of adaptive behavior and social skills. However, correlations between Total Kindergarten Teacher Involvement in transition and parent-reported social

skills (r = .01, p = .937), parent-reported problem behavior (r = -.17, p = .199), preschool teacher-reported social skills (r = -.21, p = .124), preschool teacher-reported problem-behavior (r = .01, p = .926) and adaptive behavior (r = .04, p = .796) all failed to reach statistical significance.

Kindergarten Socio-Behavioral Outcomes

Social skills and problem behavior. Kindergarten child problem behavior and social skills data were collected via teacher report using the Social Skills Improvement System – Teacher Form (SSIS-T; Gresham & Elliott, 2008) during the Fall wave of data collection (Time 3). Variables of interest were Total Social Skills and Total Problem Behavior standard scores. The mean Total Social Skills standard score was 92.75 (*SD* = 15.83; Range 44 - 126), and the mean Total Problem Behaviors standard score was 102.33 (*SD* = 12.65; Range 83 - 135). A significant difference was found by group for Total Social Skills scores, such that children in the DD group (*M* = 87.84, *SD* = 17.16) had lower scores compared with children in the TD group (*M* = 99.04, *SD* = 11.43), (t(1, 55) = -2.81, p = .007). However, a significant group difference was not detected for Total Problem Behaviors scores, (t(1, 55) = 1.86, p = .068) (see Table 14). The overall distribution of the Total Social Skills variable was negatively skewed (skewness = -0.57; kurtosis = 0.79), indicating that many teachers reported high levels of child social skills.

Student-teacher relationships. Student-teacher relationship data were collected via kindergarten teacher report using the Student-Teacher Relationship Scale (STRS; Pianta, 2001) during the Fall wave of data collection (Time 3). The variable of interest was the raw Total STRS score, which can range from 28-140, with higher scores reflecting a more positive relationship. In the current sample, the mean Total raw score was 117.95

(*SD* = 11.72; Range 93-136). The distribution of this variable was negatively skewed (skewness = -0.46; kurtosis = -0.80), indicating that teachers tended to report relatively positive relationships with students. Significant differences were not found with respect to Total STRS scores by group, ($t(1,54) = -1.86$, $p = .068$) (see Table 14).

Kindergarten Academic Outcomes

Kindergarten teachers also completed the Academic Competence subscale of the Social Skills Improvement System – Teacher version (SSIS-T; Gresham & Elliott, 2008) for participating students. The mean Academic Competence standard score was 93.23 (*SD* = 17.29; Range 63-122). A significant group difference was detected such that DD students (*M* = 86.53; *SD* = 16.92) had lower Academic Competence scores than TD students (*M* = 101.80; *SD* = 13.85), ($t(1,55) = -3.66$, $p = .001$) (see Table 14).

Parent and Teacher Cross Informant Agreement

Moderate agreement was found between parents and preschool teachers at Time 1 regarding child social skills and problem behavior on the SSIS; significant correlations were found between informants on Total Social Skills, ($r = .49$, $p < .001$) and Total Problem Behavior, ($r = .40$, $p < .001$). Although moderate agreement was found between parent reports at Time 1 and kindergarten teacher reports at Time 3 of child social skills on the SSIS ($r = .65$, $p < .001$), the correlation between parent and kindergarten teacher reports of problem behavior was not significant ($r = .13$, $p = .324$). Finally, moderate correlations were discerned between preschool teacher reports at Time 1 and kindergarten teacher reports at Time 3 of child social skills ($r = .66$, $p < .001$) and problem behavior ($r = .51$, $p < .001$).

Relations among Kindergarten Outcomes

Moderate to high correlations were discerned among socio-behavioral kindergarten outcome variables (i.e., Total Social Skills and Total Problem Behavior standard scores on the SSIS-T and raw Total STRS scores). Total STRS scores were significantly correlated with both Total Social Skills (r = .66, p < .001) and Total Problem Behaviors (r = -.58, p < .001). In addition, Total Social Skills and Total Problem Behaviors scores were significantly correlated, (r = -.67, p < .001). Given the moderate to high correlations among school outcome variables, a Kindergarten Transition Outcomes Composite score was developed by transforming the Total Social Skills, Total Problem Behavior, and Total STRS standard scores to *z*-scores, adding, and dividing by three. The sign was reversed on the Total Problem Behavior score to reflect the direction of the Total Social Skills and Total STRS variables. Higher scores on the Kindergarten Transition Outcomes Composite *z*-score reflected more positive kindergarten outcomes (McIntyre et al., 2006). The mean Transition Outcomes Composite *z*-score was 0.00 (*SD* = 0.88; Range -1.89 to 1.67; skewness = -0.20, kurtosis = -0.69). A significant group difference was detected such that DD students (*M* = -0.26; *SD* = 0.92) had lower Transition Outcomes Composite *z*-scores than TD students (*M* = 0.31; *SD* = 0.71), (t(1,54) = -2.55, p = .014) (see Table 14).

Relations among Predictor Variables and Kindergarten Outcomes

Relations among key family, child, and transition preparation predictor variables and the Kindergarten Transition Outcomes Composite score were investigated both among DD and TD groups as well as among the entire sample (see Tables 15 and 16). Within the DD group, neither child gender (r = -.17, p = .365) nor family income (r = .12,

p = .519) were found to correlate with the Transition Outcomes Composite *z*-score. However, significant correlations were found between child adaptive behavior and the Transition Outcomes Composite (*r* = .47, *p* = .007) as well as between preschool teacher-reported problem behavior (*r* = -.62, *p* < .001) and the Transition Outcomes Composite. Although Total Family Concerns at Time 1 (*r* = -.15, *p* = .426) and Time 2 (*r* = -.08, *p* = .681) did not correlate with the Transition Outcomes Composite, Total Preschool Teacher Concerns correlated significantly with the Transition Outcomes Composite (*r* = -.49, *p* = .006). Finally, correlations between the Transition Outcomes Composite and Total Family Involvement (*r* = .05, *p* = .785), Total Preschool Teacher Involvement (*r* = -.23, *p* = .219), and Total Kindergarten Teacher Involvement (*r* = .13, *p* = .490) all failed to reach statistical significance (see Table 15).

Within the TD group, neither child gender (*r* = -.06, *p* = .771) nor family income (*r* = .16, *p* = .463) were found to correlate with the Transition Outcomes Composite. Although child adaptive behavior did not correlate significantly with the Transition Outcomes Composite (*r* = .28, *p* = .201) in the TD sample, child problem behavior, as reported by preschool teachers, was found to correlate with the Transition Outcomes Composite (*r* = -.49, *p* = .025). Although Total Family Concerns at Time 1 (*r* = -.16, *p* = .453) and Time 2 (*r* = -.14, *p* = .506) did not correlate with the Transition Outcomes Composite, Total Preschool Teacher Concerns correlated significantly with the Transition Outcomes Composite (*r* = -.47, *p* = .021). Finally, with respect to involvement in transition practices, although Total Family Involvement (*r* = -.07, *p* = .729) and Total Kindergarten Teacher Involvement (*r* = .03, *p* = .896) did not correlate with the Transition Outcomes Composite, Total Preschool Teacher Involvement was found to

correlate significantly with the Transition Outcomes Composite, (r = -.42, p = .048) (see Table 15).

In the overall sample, neither child gender (r = .00, p = .983) nor family income (r = .16, p = .245) were found to correlate with the Transition Outcomes Composite. However, a significant correlation was found between child adaptive behavior and the Kindergarten Outcomes Composite (r = .53, p < .001). Significant correlations emerged between both parent-reported problem behavior (r = -.28, p = .039) and preschool teacher-reported problem behavior (r = -.62, p < .001) with the Kindergarten Outcomes Composite, although the correlation between teacher-reported problem behavior was more robust. With respect to concerns, Total Family Concerns at Time 1 (r = -.30, p = .023) but not at Time 2 (r = -.23, p = .093) was found to correlate with the Kindergarten Outcomes Composite, however, the correlation between the Kindergarten Outcomes Composite and Total Preschool Teacher Concerns was decidedly more robust (r = -.56, p < .001). Finally, with respect to involvement in transition practices, while Total Family Involvement (r = -.08, p = .570) and Total Kindergarten Teacher Involvement (r = .06, p = .687) were not correlated with the Kindergarten Outcomes Composite, Total Preschool Teacher Involvement (r = -.37, p = .006) was significantly correlated with the Transition Outcomes Composite (see Table 16).

Predicting Kindergarten Transition Outcomes

The rationale for use of hierarchical regression analyses was theoretically driven. Although only preliminary empirical evidence (LoCasale-Crouch et al., 2008; Wildenger & McIntyre, 2008) exists indicating that kindergarten transition preparation variables are related to socio-behavioral child outcomes in school, there is ample evidence to suggest

that child adaptive and problem behavior both greatly impact transition outcomes. In addition, although adaptive and problem behavior represent within-child variables, transition practices may be conceptualized as independent of the child and therefore represent an important area of potential intervention for parents and teachers supporting children during transition. The ordering of the variables in the hierarchical regression analysis was intended to inform knowledge of effective interventions to improve transition experiences for children as they make this adjustment.

Family (e.g., annual income), child (e.g., gender, adaptive and problem behavior), parent and teacher concerns, and parent and teacher involvement variables were all explored as potential predictor variables in the regression models based on theoretically significant relations with early school outcomes. Ultimately, variables were selected based on the strength of correlations with the Transition Outcomes Composite (see Tables 15 and 16). The following four predictor variables comprised the full model: child adaptive behavior (VABS-II Adaptive Behavior Composite) was entered first (Step 1), followed by child problem behavior as reported by preschool teachers (SSIS-T Problem Behaviors Total) (Step 2), preschool teacher Total Concerns (Step 3), and finally, Total Preschool Teacher Involvement in transition practices (Step 4) on the Transition Outcomes Composite (i.e., dependent variable). This order of entry allowed the assessment of the independent contributions of each variable, above and beyond the combined effects of the previously entered predictor variables. The same regression model was applied to the DD group and the TD group. In addition, a third, exploratory regression using the same model was conducted for the entire sample given that there was

low power to detect statistically significant effects within DD and TD groups. Results of the regression analyses are presented in Tables 17, 18, and 19.

Table 17 displays the relative strength of each individual predictor variable over and above the combined effects of those already entered into the model for the DD group (n = 32). Child adaptive behavior accounted for 20.7% of the variance in the Transition Outcomes Composite (R^2 = .21, p = .013). Preschool teacher-reported problem behavior significantly explained 24.2% of variance in the Transition Outcomes Composite, above and beyond child adaptive behavior, (R^2 Δ = .24, p = .002). However, the inclusion of preschool teacher concerns did not significantly add to the model, (R^2 Δ = .01, p = .507). The final predictor of interest, Total Preschool Teacher Involvement, also did not explain unique variance in the Transition Outcomes Composite (R^2 Δ = .00, p = .791). The whole model accounted for 46.1% of the variance in transition outcomes for the DD group (R^2 = .46, p = .791).

Table 18 displays the relative strength of each individual predictor variable over and above the combined effects of those already entered into the model for the TD group (n = 25). Child adaptive behavior did not account for a significant portion of the variance in the Transition Outcomes Composite (R^2 = .05, p = .359). Similarly, the inclusion of preschool teacher-reported problem behavior did not significantly contribute to the model, (R^2 Δ = .13, p = .151). Preschool teacher concerns did not contribute unique variance to the model, (R^2 Δ = .08, p = .235), and the final predictor of interest, Total Preschool Teacher Involvement, also did not explain unique variance in kindergarten outcomes (R^2 Δ = .01, p = .743). The whole model accounted for 26.6% of the variance in kindergarten outcomes for the TD group (R^2 = .27, p = .743).

Given the low power to detect significant effects within DD and TD groups, as well as the fact that correlations between predictors and the Transition Outcomes Composite were found to be in the same direction across groups, an additional exploratory regression model was conducted among the entire sample at Time 3 ($N = 57$). Table 19 displays the relative strength of each individual predictor variable over and above the combined effects of those already entered into the model for the whole sample. Child adaptive behavior accounted for 28.6% of the variance in Transition Outcomes ($R^2 = .29$, $p < .001$). Preschool teacher-reported problem behavior significantly explained 16.0% of variance in Transition Outcomes, above and beyond child adaptive behavior, ($R^2 \Delta = .16$, $p = .001$); however, the inclusion of preschool teacher concerns did not significantly add to the model, ($R^2 \Delta = .02$, $p = .176$). The final predictor of interest, Total Preschool Teacher Involvement, also did not explain unique variance in kindergarten outcomes ($R^2 \Delta = .00$, $p = .780$). The whole model accounted for 47.0% of the variance in kindergarten outcomes across the entire sample ($R^2 = .47$, $p = .780$).

Discussion

The first aim of the study was to descriptively explore differences in parent and teacher involvement in transition preparation activities between groups of TD and DD children. Specifically, family experiences in transition (i.e., concerns and involvement) and preschool and kindergarten teacher transition practices and concerns were investigated. As hypothesized, families in this sample had higher overall concerns about children with developmental delays than they had about typically developing children both in the spring of preschool and in the early fall of kindergarten. In addition, caregivers of children in the DD group expressed more concerns about specific items,

such as following directions, getting along with peers and the teacher, kindergarten readiness, toileting, and ability to communicate needs, which appears to accurately reflect the higher needs and lower level of functioning of children in the DD group. Preschool teachers appeared to share family sentiments and were significantly more concerned about the children in the DD group transitioning to kindergarten.

In contrast, kindergarten teacher concerns did not differ by group; they expressed no more concerns about DD children than they did about TD children upon school entry, which clearly differs from the perceptions of parents and preschool teachers, and is different from what McIntyre et al. (2006) found. It is important to note that family concerns were found to decrease from the spring of preschool to the fall of kindergarten; therefore, the greater concerns on the part of both parents and teachers in the spring of preschool may reflect caregiver anxieties in anticipation of the impending transition. In addition, it was also the case that several students in the DD group in preschool had been declassified and no longer received special education services in kindergarten, perhaps making these students indistinguishable from their TD counterparts. The presence (or absence) of an educational disability classification is likely to impact teacher perceptions and concerns, which might also help to explain this finding. In addition, the sample in kindergarten at Time 3 was substantially smaller, which reduces the possibility of detecting significant differences between groups due to low power.

Extant studies of transition preparation activities have focused exclusively on the involvement of a single group of stakeholders, with kindergarten teacher transition practices being the most commonly examined (e.g., Early et al., 2001; Pianta et al., 1999; Schulting et al., 2005). In contrast, a single study has investigated preschool teacher

involvement (i.e., LoCasale-Crouch et al., 2008) and only one published study has examined family involvement (i.e., McIntyre et al., 2007). The current study has conceptualized transition preparation to encompass the involvement of multiple key stakeholders in the transition process (i.e., kindergarten teachers, preschool teachers, and families), which therefore represents a unique contribution to the transition literature.

Descriptive results indicate that parents in both groups were most likely to report engaging in transition practices that reflected partnerships and communication with preschool staff, including monthly contact and annual meetings with preschool. A generic activity at the kindergarten level (i.e., kindergarten registration) was also most commonly reported by families. Conversely, families were least likely to report individualized forms of contact with kindergarten teachers, such as phone calls and home visits. Preschool teacher reports corroborated those of families; the most frequently endorsed form of teacher involvement was monthly contact with their students' families. Preschool teachers also reported frequent involvement in transition planning meetings with students' preschool teams as well as providing written communication about transition to families. Conversely, preschool teachers reported low levels of communication and collaboration with kindergarten teachers; they were *least* likely to receive a phone call from or coordinate curriculum with a kindergarten teacher. Kindergarten teacher reports substantiated this finding; they were also very unlikely to report coordinating curriculum with preschool teachers. In addition, home visits were very rare among kindergarten teachers. In contrast, kindergarten teachers were *most* likely to report monthly contact with families and providing group kindergarten orientation sessions for students and families.

The descriptive family and teacher involvement findings from the current study corroborate the findings from the NCEDL survey of kindergarten teachers (Pianta et al., 1999) as well as prior research investigating family involvement in transition (i.e., McIntyre et al., 2007; Wildenger & McIntyre, 2008). Specifically, with respect to their interactions with elementary schools and kindergarten teachers, families reported the highest involvement in a generic type of transition activity (i.e., kindergarten screening) and kindergarten teachers were more likely to report utilizing generic, group-administered transition practices such as orientation sessions. On the other hand, families reported high levels of *both* generic and individualized forms of contact with preschool staff, which was verified by teacher reports of these activities. For example, both families and preschool teachers reported frequently engaging in individualized transition planning meetings. Preschool teachers in the current sample thus appear to engage in a mix of individualized and generic types of activities, consistent with previous research (i.e., LoCasale-Crouch et al., 2008) as well as best practices (Pianta & Kraft-Sayre, 2003). The results from family reports in the current study also suggest that kindergarten teachers may facilitate family-school communication less compared with preschool teachers, in line with prior research (e.g., Grace & Brandt, 2006; Rimm-Kaufman & Pianta, 2005). These results also suggest that preschool and kindergarten teacher collaboration is relatively low, which is especially concerning given that this practice in particular has been associated with improved child kindergarten outcomes (LoCasale-Crouch et al., 2008). It is also important to note that in the current sample, on average, total involvement of preschool teachers in transition practices was found to be higher compared with the involvement of kindergarten teachers, which corroborates previous

research (e.g., LaParo et al., 2003) suggestive of these same general teacher involvement differences. Finally, total transition involvement was significantly related to several family-level indicators of SES, namely, income, child receipt of free or reduced lunch in school, and parental education, such that higher-SES caregivers had higher involvement. This finding complements the school-level (Early et al., 2001; Pianta et al., 1999, 2001; Schulting et al., 2005) and corroborates the family-level (McIntyre et al., 2007; Wildenger & McIntyre, 2008) findings from previous research.

The current study was also the first to explicitly compare involvement in kindergarten transition practices between groups of children with and without disabilities. As hypothesized, group differences were found for total family involvement, such that caregivers of children with DD had higher involvement than caregivers of TD children. Also consistent with hypotheses, differences in family involvement were discerned with respect to several higher-intensity, more individualized transition practices, such that parents of children with DD were more likely to participate in transition planning meetings with both preschool and kindergarten staff, participate as members of transition planning teams, and receive a phone call from their child's new kindergarten teacher. As hypothesized, preschool teacher involvement was also found to differ by group such that teachers were more involved on behalf of children with DD than for TD children. Similar to family findings, preschool teachers also reported utilizing several higher-intensity, individualized transition practices significantly more often on behalf of students with DD. Specifically, preschool teachers were more likely to participate in meetings with the child's school team and in transition planning meetings with the child's kindergarten team. Preschool teachers were also more likely to serve as a member of a transition

planning team, to conduct home visits for their students, and to *receive* phone calls and classroom visits from the child's future kindergarten teacher when the child was in the DD group. Notably, several of these practices reflected higher preschool and kindergarten teacher collaboration on behalf of DD children, as hypothesized.

In contrast and contrary to hypotheses, the total involvement of kindergarten teachers did not differ according to group (DD v. TD). Similarly, there were few differences found with respect to individual transition practices, with the one exception being that kindergarten teachers were more likely to report attending meetings with the child's school team for students in the DD group, an individualized practice. Taken as a whole, the involvement of kindergarten teachers may reflect a more standardized implementation of transition preparation activities. In contrast, family and preschool teacher involvement may be influenced by child developmental status and corresponding needs, rather than a standardized battery of activities administered to all students. This finding echoes the results of Vaughn et al. (1999), who surveyed kindergarten teachers of children with special needs. Vaughn and colleagues found that kindergarten teachers rated transition practices for students with disabilities such as observing the child in preschool and discussing the kindergarten program with the preschool teacher, to be significantly more desirable than *feasible* to implement. Perhaps the teachers in the current sample were also impeded by the barriers to effective transition practices identified by kindergarten teachers in the NCEDL research (i.e., Pianta et al., 1999), such as limited time, lack of funding, and late generation of class lists, across typically developing children and children with disabilities. However, it is also possible that this finding may again reflect the smaller sample size at Time 3 and the corresponding

reduction in power that reduces the likelihood of detecting group differences. Regardless, given the fact that this is the first study to compare parent and teacher involvement in transition practices for DD and TD groups of children, these descriptive findings fill an important gap in the literature and provide a springboard for conducting future investigations.

The second aim of the study was to examine the relation between preschool child problem and adaptive behavior (including social skills) and parent and teacher involvement in kindergarten transition practices across the entire sample of children. In line with hypotheses, total preschool teacher involvement in transition practices was highly related to all preschool child behavioral variables (i.e., parent- and teacher-reported social skills, parent- and teacher-reported problem behavior, and adaptive behavior) such that teachers had higher transition involvement for children with lower socio-behavioral competence (i.e., lower social skills and adaptive behavior and higher problem behavior). However, contrary to hypotheses, the total involvement of families and kindergarten teachers in transition preparation activities were unrelated to all indices of preschool child behavior. Therefore, it appears that in addition to having generally higher involvement for children receiving special education services, preschool teacher transition practices are individualized to meet the specific behavioral needs of the child, regardless of label or disability classification. Kindergarten teacher transition practices, on the other hand, appear to be implemented independently of the presence of a disability classification as well as child behavioral needs and level of functioning. Therefore, the data from this investigation cohere to suggest that preschool teachers may individualize their transition intervention efforts to meet the needs of the child and family while

kindergarten teachers tend to implement a uniform set of transition activities across children and families, in line with prior research (e.g., Pianta et al., 1999; Vaughn et al., 1999). The involvement of families in this sample appears to be more closely related to indices of socio-economic status such as income and parental education than child variables. This may reflect differences in both time and resources that families have available to devote to transition preparation activities on behalf of their child. Given that earlier, more individualized, and higher-intensity transition preparation activities have been regarded as "best practices" in the transition literature (e.g., Pianta et al., 1999), this study suggests that preschool teacher behavior adheres most closely to a best practices model of transition involvement.

The importance of child social and behavioral competencies for positive early school outcomes for both children with special needs and typically developing peers is well-recognized. However, only two empirical studies (LoCasale-Crouch et al., 2008; Wildenger & McIntyre, 2008) have begun to establish an association between kindergarten transition preparation activities and child socio-behavioral outcomes for general education students. Furthermore, no studies to date have compared the relation between transition practices and child outcomes between special education and typically developing samples of children. Thus, the third and primary aim of the current study was to examine the relationship between kindergarten transition preparation activities and child socio-behavioral outcomes in kindergarten among both typically developing children (TD) and children with developmental delays and disabilities (DD). Results showed children in the DD group to have poorer transition outcomes than children in the TD group, which replicates prior research (i.e., McIntyre et al., 2006). DD children had

significantly lower social skills and academic competence as well as lower scores on the Kindergarten Transition Outcomes Composite. Analyses showed the total involvement of preschool teachers to be correlated with the Transition Outcomes Composite score, an overall index of social skills, problem behavior, and student-teacher relationships in kindergarten. Specifically, a negative correlation between these two variables suggested that preschool teachers had higher involvement for students with poorer overall kindergarten outcomes, which likely reflects the fact that preschool teachers had greater involvement for DD children and children with lower adaptive and higher problem behavior in preschool.

Results of hierarchical linear regression analyses showed that higher adaptive behavior and lower problem behavior in preschool significantly predicted positive kindergarten transition outcomes for children in the DD group as well as for the overall sample. However, total involvement of preschool teachers in transition practices did not predict unique variance in kindergarten outcomes, for either group or the overall sample, above and beyond adaptive behavior, problem behavior, and preschool teacher concerns. Furthermore, the hypothesis that transition preparation would be a more robust predictor of kindergarten outcomes for children in the DD group was not supported; there was a negligible difference (i.e., one percent) in the change in R-squared value reflecting the contribution to the model of transition practices between TD and DD groups.

The importance of adaptive behavior as a predictor of early school outcomes is consistent with previous research on socio-behavioral kindergarten adjustment among children with and without disabilities (i.e., McIntyre et al. 2006). Additionally, the finding that higher adaptive behavior and lower problem behavior in preschool predicted

positive kindergarten outcomes for children in the current sample is consistent with the survival skills literature on kindergarten transition for children with disabilities (e.g., Atwater et al., 1994; Carta et al., 1990; Rule et al., 1990). The finding that preschool teacher involvement failed to predict unique variance in transition outcomes differs from the results of the LoCasale-Crouch et al. (2008) study, which found that children had more positive social competencies and fewer problem behaviors when they attended pre-kindergarten classrooms in which more transition practices were implemented. In fact, the opposite relationship emerged in the present study, with higher preschool teacher involvement correlated with less positive kindergarten outcomes. This may reflect the fact that the present sample included both children with and without disabilities, and therefore contained several children with very low overall socio-behavioral functioning in contrast to the relatively more homogenous, higher-functioning general education sample used in the LoCasale-Crouch et al. (2008) study. The differences between the present findings and those of LoCasale-Crouch and colleagues (2008) may also reflect measurement differences, as transition practices were examined at the level of the individual child and family in the current study, and at the classroom/teacher level in the LoCasale-Crouch et al. (2008) study. Therefore, it is unclear to the extent that a broader measure of transition practices at the classroom or preschool program level may have been a more effective predictor of kindergarten outcomes.

Given that the present study is the first to examine this relation among a mixed sample of TD and DD children, it may be the case that the involvement of various caregivers truly did *not* have a significant impact on kindergarten outcomes, particularly when compared with the high predictive power of child adaptive and problem behavioral

variables in the present sample. The absolute lack of prior research to create a context for these findings makes this explanation a distinct possibility. However, the low power at Time 3 in kindergarten certainly raises concerns regarding the weak ability to detect significant effects within the regression models. In particular, it is important to note that although the DD group had higher mean problem behavior and lower STRS total scores than the TD group in kindergarten, these differences did not reach statistical significance, possibly again due to low power. In contrast, significant group differences were evident for both parent- and teacher-reported problem behavior scores in preschool, when analyses were conducted with a larger sample. The fact that the groups appeared more similar behaviorally in kindergarten may help to explain the finding that transition involvement was not a more robust predictor of kindergarten outcomes for the DD group than the TD group, as predicted.

The current study was the first to present explicit comparisons of the involvement of families and teachers in transition practices across groups of children with and without developmental delays, and therefore fills an important gap in the extant literature on kindergarten transition. In addition, transition practices were uniquely conceptualized in the current investigation to include parent, preschool teacher, and kindergarten teacher involvement components. Given that this is the sole outcomes study to measure involvement in this fashion, this investigation represents another important contribution to the empirical literature. The longitudinal nature of the current study constitutes a clear strength as only one outcomes study to date (i.e., LoCasale-Crouch et al., 2008) traverses the entire transition period. The data from the present study were collected from multiple informants (i.e., parents, preschool teachers, and kindergarten teachers) at several points

in time (i.e., spring of preschool; early and late fall of kindergarten) and across various contexts (i.e., home and school). The nature of the data collection in this study therefore allowed rich comparisons across informants, time, and setting, which we regard as an additional strength. Consistent with prior literature, significant, albeit moderate correlations were found between parent and teacher reports as well as preschool and kindergarten teacher reports of social skills and problem behavior in this sample. Other studies that have examined cross-informant behavioral ratings (e.g., McConaughy, Stanger, & Achenbach, 1992; McIntyre et al., 2006; Stanger, McConaughy, & Achenbach, 1992) have found moderate correlations at best. The observed moderate levels of agreement between informants in this study regarding the same constructs can most likely be explained by the influence of behavioral specificity, differing contexts (i.e., home and school), discrepant expectations between parents and teachers, and different available comparisons (i.e., comparing target children to their siblings as opposed to peers in their classroom) (McIntyre et al., 2006). Child development over time may have also impacted the strength of correlations between preschool and kindergarten variables.

The regression models in this study utilized variables gleaned from parent- and teacher-reported preschool data to predict a kindergarten outcomes composite score. Therefore, the regression models essentially spanned a seven-month period of time from predictors to criterion (i.e., transition outcomes). The longitudinal nature of the regression models increases their validity, as predictors and outcomes were distinct both theoretically and temporally. Finally, the high level of experience and credentials of the teachers in this sample constitutes an additional strength of this study. The majority of

preschool teachers held master's degrees and a certification in early childhood special education, while the great majority of kindergarten teachers held master's degrees and were certified in elementary education. It therefore seems reasonable to assume that teacher-reported measures likely had a high degree of validity.

Study Limitations

Although the longitudinal nature of the current investigation constitutes a significant conceptual strength, it simultaneously leads to corresponding methodological weaknesses. Perhaps the most obvious limitation of the study is the participant attrition that occurred over the course of the seven-month investigation. From the spring of preschool to the fall of kindergarten, 24 families were lost due to attrition. Although the majority of families were retained from Time 1 to Time 2 (77%), the kindergarten wave of data collection (i.e., Time 3) was characterized by relatively low kindergarten teacher participation, in part due to bureaucratic issues associated with specific school districts. For example, several administrators prohibited willing kindergarten teachers from participating in the study. Therefore, complete kindergarten outcome data was only obtained for approximately half (N = 57) of the original sample of 104. The attrition and associated reduction in sample size led to a corresponding decrease in statistical power. This decreased power was problematic particularly with respect to the reduced ability to detect statistically significant group differences (e.g., teacher concerns and involvement) and correlations between predictor and criterion variables in regression analyses at Time 3. Therefore, it is unclear whether the null findings in the current study were due to an actual lack of effect or simply due to low statistical power. In addition, the attrition in the present study was non-random, and was associated with several family socio-

demographic variables. That is, families of lower socioeconomic status (i.e., lower income and caregiver education level) as well as families of non-Caucasian children and families of children enrolled in Head Start programs were less likely to participate in the study through its completion. These findings are consistent with the literature on attrition in longitudinal research involving children and families, which suggests that study non-completion is indeed related to indices of lower family socioeconomic status (e.g., Aylward, Hatcher, Stripp, Gustafson, & Leavitt, 1985; Janus & Goldberg, 1997). The nonrandom attrition in this investigation introduces a significant threat to external validity, as the participants who remained in the study through Time 3 less closely reflected the sample characteristics at Time 1. Additionally, it may be difficult to generalize results involving Time 3 analyses to other populations of children and families, particularly those experiencing risk factors such as low socioeconomic status.

The design of the current investigation was correlational, which precludes drawing conclusions about causal relationships. For example, although preschool teacher involvement in transition practices was found to be positively correlated with child problem behavior, it remains unclear whether greater child problem behavior caused increased teacher involvement. It is possible that the opposite is true (i.e., teacher involvement impacted child problem behavior), or that an intervening third variable may better explain this relationship. Additionally, if transition preparation had indeed predicted improved child socio-behavioral kindergarten adjustment as hypothesized in the regression models, it would have been impossible to determine whether the variable of interest was responsible for the improved outcomes.

The developmental status groups (i.e., DD and TD) in the current study were unequal on several important dimensions, which reflects the nonrandom sampling methodology utilized. Specifically, groups of children were found to be significantly different with respect to gender, race, type of preschool program, and type of kindergarten classroom. Many of these important group differences were interrelated, for example, several of the typically developing children in the sample were drawn from one Head Start preschool site, therefore, there was a higher proportion of African-American children in the TD group, consistent with the demographics of families served by that agency. The fact that gender was unevenly distributed across disability status groups such that there were relatively more males in the DD group is consistent with the published literature suggesting that the prevalence of developmental disabilities in childhood is higher for males than females (e.g., Chiurazzi & Oostra, 2000; Yeargin-Allsopp, Drews-Botsch, & Van Naarden Braun, 2007). Although the group differences represent a methodological limitation, it is important to note that these variables were included as covariates in the analyses involving group comparisons. In all cases, the effects remained significant even after accounting for the group differences.

Given that children were drawn from a single type of preschool program model (i.e., special class integrated setting), it is also a distinct possibility that parent and teacher involvement for children in the current sample does not reflect that of the greater population. Specifically, given that many children in these programs had disabilities and were receiving special education services, it may be the case that these programs had relatively high-quality transition models to best serve these special needs children and families. Therefore, the typically developing children that attended these programs may

have had parents and teachers with higher involvement than they might have if their children attended another type of preschool program (e.g., a pre-kindergarten program in a public school district or private day care). This nonrandom sampling constitutes a methodological limitation that may negatively impact external validity, or the ability to generalize these results to other populations. However, it is important to note that some variability was evident in the number of transition practices utilized both by preschool teachers and parents.

There are several limitations inherent in the use of parent- and teacher-reported measures in the current study. Selection bias is a primary concern, as it is likely that parents with a higher degree of school involvement responded to the survey and chose to participate in the study. Therefore, the current sample of families may have greater involvement in transition compared with the wider population of parents, which also potentially limits the ability to generalize these results. In addition, self-report social desirability biases may have impacted parent and teacher reports of child behavior, specifically; it is possible that parents and teachers under-reported child problem behavior and over-estimated child social skills, adaptive behavior, and the quality of student-teacher relationships. Perhaps most significantly, parents and teachers may have reported more transition involvement than they actually engaged in. A final concern is the exclusive use of indirect measures of child social and behavioral functioning in this study. Research and theory generally emphasize the benefits of direct as compared with indirect measurement, particularly with regard to the assessment of child socio-behavioral skills (Gresham & Elliott, 1987; Walker et al., 1992). Direct observational behavioral assessment measures involve a direct sampling of the target behaviors

themselves and thus, require fewer inferences and have higher validity than more indirect forms of assessment (Goldfried & Kent, 1972). Thus, the use of only behavioral rating scales and the lack of inclusion of direct behavioral observations to measure kindergarten outcomes is a limitation. However, given the nature and scope of the study, particularly the fact that children transitioned to kindergarten in numerous schools and districts, the exclusive use of indirect, teacher-reported measures was clearly the most feasible option.

Future Research Directions

Despite its significance, the transition to kindergarten is an under-studied area of research and several major gaps remain in the empirical literature. Currently, very few outcomes studies have begun to demonstrate that involvement in kindergarten transition preparation activities positively impacts child kindergarten outcomes. Therefore, there is a need for additional studies to explore the relation between transition practices and a range of child outcomes, including academic, social, behavioral, and emotional adjustment. In addition, future outcomes studies should examine transition practices among samples of both children with developmental delays and typically developing children. Several important differences were found in the involvement of families and teachers of DD and TD children in the current study. Therefore, future research is needed to substantiate these preliminary findings. Given that the present investigation was the first to compare the relation between transition practices and child outcomes between groups of DD and TD children, there is a need for additional studies to address this area of research in particular, using larger samples that will allow for more robust comparisons. Research on outcomes will inform our knowledge of the effectiveness of kindergarten transition programming, an area of identified need (Eckert et al., 2008).

Future research on child outcomes would continue to benefit from utilizing longitudinal designs in which children are followed from preschool to kindergarten and data on transition preparation and child adjustment are collected across the entire transition period. In the current study, a longitudinal design allowed for a more complete documentation of transition preparation activities over the course of the process. The current study, although longitudinal, was relatively brief. The collection of follow-up data at later points in time may also inform knowledge of the stability of child kindergarten outcomes. For example, it may be important to examine whether variables such as adaptive behavior, problem behavior, and transition preparation, all found to predict successful transition in past research, also reliably predict child adjustment throughout the early school years. Notably, the current study was the first in which data on transition practices were collected from families, preschool teachers, and kindergarten teachers, which also resulted in a more comprehensive measurement of transition preparation. Given that important differences emerged in patterns of involvement across stakeholders in the present study, it is important to continue to assess the involvement of all key groups of caregivers during transition to replicate and substantiate these initial findings. The examination of the involvement of only a single group (e.g., kindergarten teachers) may not fully capture the breadth of the transition preparation activities actually utilized.

As noted by others (Schulting et al., 2005), there is a need for randomized controlled trials examining kindergarten transition interventions to determine whether transition preparation plays a causal role in improved child outcomes. Children and families could be assigned to receive various combinations of kindergarten transition preparation activities in order to allow researchers to tease apart which specific transition

practices or elements of those practices are the most effective. Correlational research (i.e., LoCasale-Crouch et al., 2008) has begun to suggest that certain practices, such as communication and collaboration between preschool and kindergarten teachers about particular students or the curriculum, predict positive child outcomes in particular. Therefore, experimental intervention studies would substantiate and further clarify the nature of these correlational findings. In a different vein, future research would do well to utilize both direct (i.e., observations) and indirect (i.e., behavior rating scales) methods of assessment of kindergarten outcomes in order to more validly and comprehensively evaluate child adjustment.

Implications for Practice

The results of this study suggest that preschool teacher involvement in transition practices most closely reflects best practices as discussed in the kindergarten transition literature (e.g., National Education Goals Panel, 1998; Pianta et al., 1999, 2001; Pianta & Kraft-Sayre , 2003; Rimm-Kaufman & Pianta, 2000). In the current sample, preschool teachers had frequent communication with families and engaged in high-intensity, individualized transition practices such as transition planning meetings in addition to lower-intensity practices such as providing written communication regarding transition to families. Most importantly, preschool teachers in the present study also adapted their activities to meet the individual needs of children and families; they had higher involvement for children with disabilities as well as for children with lower social and behavioral competencies. Conversely, kindergarten teachers in this sample appeared to implement a “standardized” set of transition practices that was less individualized with regard to child needs and level of functioning. Kindergarten teachers did not have higher

involvement for children with disabilities or for those students with lower adaptive behavior and greater problem behavior. Kindergarten teachers were also most likely to engage in generic, lower-intensity transition practices overall. Thus, it is likely that elementary schools opt to offer a uniform group of more generic, low-intensity transition preparation options to families, which may not reflect best practices. The results of this study therefore suggest that it would be beneficial for greater emphasis to be placed on transition preparation at the kindergarten/elementary school level. If lack of resources is a barrier, funding kindergarten transition programming could be a target for district or state-level funding in order to offer high-quality, individualized transition programming to all families and children. Transition initiatives could also include the improvement of teacher training programs to emphasize strategies to facilitate kindergarten transition success for both students with and without disabilities. This could be accomplished both through teacher education programs and continuing professional development opportunities for educators.

The results of the current study also suggest that collaboration between preschool and kindergarten teachers occurs very infrequently, consistent with prior research (Pianta et al., 2001). It may be the case that teachers experience barriers such as lack of time, financial resources, and the late generation of class lists, as identified in the Pianta et al. (1999) study that impede collaboration. Prior research (i.e., LoCasale-Crouch et al., 2008) has suggested that children in pre-kindergarten classrooms in which preschool teachers discussed curricula or specific children with kindergarten teachers have significantly more positive social competencies and lower problem behaviors in kindergarten. Therefore, the results of this study suggest that increased opportunities for

preschool and kindergarten teacher collaboration and communication may be an important target of intervention. In order to address this issue, it may be helpful for school districts to build in opportunities for kindergarten teacher collaboration with early education professionals in the community. For example, kindergarten teachers could have paid professional development days dedicated to visits to and observations of preschool classrooms and meetings with early educators in the spring, prior to transition. This type of cross-site communication and collaboration may be particularly important for children with developmental delays or disabilities given the challenges these children face transferring adaptive skills to new kindergarten environments. Therefore, it would be helpful to identify future kindergarten teachers of these students in particular, prior to transition, in order to facilitate early, preventive transition preparation activities such as collaborative planning meetings with families, preschool and kindergarten staff.

It is also important that strong partnerships among families and educational professionals in both preschools and kindergartens are forged in order to create continuity between early education and kindergarten environments and most effectively support children during this developmental period. The results of the current study suggest that family involvement is related to several socio-demographic variables such as parental income and education level such that lower-SES families may have less involvement in transition practices. In order to ensure that all children, particularly those with disabilities and special needs, receive adequate transition programming, school professionals can make concerted efforts to reach out to low-SES families in particular during transition. Transition programming at the school or district level could include initiatives to engage low-SES families early in their child's schooling. For example, the decrease in home-

school communication from preschool to kindergarten as noted in prior research (i.e., Rimm-Kaufman & Pianta, 1999; 2005) could be a target of intervention. Communication journals, school-home notes, and phone calls to caregivers at regular intervals may facilitate frequent, positive two-way communication during transition for all families. Efforts to involve low-SES families appear to be particularly important given that prior research (i.e., Schulting et al., 2005; LoCasale-Crouch et al., 2008) has found transition preparation activities to be especially beneficial for children experiencing socio-economic risk factors.

The findings from the present study also suggest that child adaptive and problem behavior are important predictors of kindergarten outcomes for children with disabilities, consistent with prior research. Therefore, as suggested by others (e.g., McIntyre et al., 2006), early intervention efforts should target increasing adaptive behaviors and social skills and decreasing maladaptive problem behaviors in order to facilitate positive transitions. In particular, important survival skills as noted in the special education transition literature (e.g., Carta et al., 1990; Rule et al., 1990), such as compliance and appropriate peer-social behaviors (e.g., sharing, taking turns) could be targeted. This might be accomplished through a combination of intervention efforts directed at children (e.g., direct, targeted behavior therapies) and caregivers (e.g., parent training). These intervention elements could also be conceptualized specifically as part of kindergarten transition programming for children with developmental delays, behavioral concerns, or other risk factors. The kindergarten transition represents an important early childhood developmental milestone. It is also a unique opportunity for educators and families to partner in order to meet the individual needs of children and foster early school success.

Appendix A

Preschool Program Director Recruitment Letter

Dear Program Director, April 2009

My name is Leah Wildenger, and I am a graduate student in the School Psychology program at Syracuse University. I wanted to inform you of a research project that I will be conducting in the Spring of 2009 with Dr. Laura Lee McIntyre, a school psychologist and professor at Syracuse University. We are investigating the transition to kindergarten for both special and general education students and would like to extend the invitation for your program to participate this Spring.

As you know, the kindergarten transition can be a challenging event for children, families, and teachers, especially if the student has a developmental delay or disability. We are interested in examining kindergarten preparation activities and their impact on social and behavioral child outcomes in kindergarten. We are also interested in examining whether these practices and their impact differ across two groups of students, those with developmental delays and/or disabilities and those who are typically developing. We are gathering information from parents and teachers. There will be no direct contact with your students. We hope that families and teachers at your program site can be included in our study.

Study procedures involve four stages: (1) Recruitment of families, (2) Parent completion of questionnaires, (3) Preschool teacher completion of questionnaires, and (4) Kindergarten teacher completion of questionnaires.

Recruitment of families: Once we have permission from you, the program director, we would like to schedule a brief meeting with your preschool teachers to describe the study procedures, allow opportunities to ask questions, and obtain consent from teachers to participate. Teachers who consent to participate will be asked to disseminate study materials to students in their classroom who are in their final year of preschool. Families who are interested in participating in the study will be encouraged to contact the researcher directly.

Parent completion of questionnaires: Parents will complete a consent form and two short questionnaires about their child's behavior and their child's transition preparation activities. Parents will mail their materials to the researcher in a postage-paid self-addressed envelope that will be included in their study packet. Once the researcher receives completed packets from families, she will contact them by phone and administer an assessment of their child's adaptive behavior. Parents will receive a small honorarium of $10 for their participation.

Preschool teacher completion of questionnaires: Once parents have completed their packet, the teachers of participating students will be contacted and asked to complete a background questionnaire and two short questionnaires, the first on transition to kindergarten (5-10 min) and the second on child behavior (15 min) for each participating student they have in their classroom. Participating teachers will be asked to complete their questionnaires outside of work hours so as not to interfere with their classroom obligations. Preschool teachers will receive a small honorarium of $25 for their participation.

Kindergarten teacher completion of questionnaires: In the fall, during transition to kindergarten, parents will be contacted by phone and asked briefly about their behavioral involvement in transition. They will also be asked to provide contact information for their child's new kindergarten teacher. Additionally, families will be asked if they would be willing to deliver a packet of questionnaires to the kindergarten teacher to complete. If parents agree, the researcher will send kindergarten teacher packets directly to families. Kindergarten teachers will be asked to return study materials directly to the researcher and will be provided with a small honorarium.

This research study will help us begin to understand the ways that kindergarten transition practices relate to important child social and behavioral kindergarten outcomes for students with and without disabilities. This is a vastly under-represented area of research; therefore, this study will increase our knowledge of the most effective ways to help children make a smooth transition to kindergarten. The ultimate goal for professionals is to design interventions and programs for families and schools to make the kindergarten transition process more successful for both children with developmental delays or disabilities and typically developing children.

We hope that you will agree that this is an important area of investigation. We would like to invite your preschool teachers and the families to participate. Participation in this project is voluntary, so it is entirely up to you whether or not you would like to partake. Parent and teacher participants will provide consent to participate and will be advised that their participation is voluntary and confidential. They may choose to withdraw at any point during the study without penalty.

We would be happy to discuss this project with you in more detail. Please feel free to contact me, Leah Wildenger (315-794-8013; lkwilden@syr.edu) or Dr. McIntyre (315-443-2705; llmcinty@syr.edu) with questions or concerns. We look forward to speaking with you!

Best wishes,

Leah Wildenger, M.S.
Doctoral Candidate, School Psychology

Laura Lee McIntyre, Ph.D.
Assistant Professor of Psychology

Appendix B

Parental Consent Form

The Transition to Kindergarten: Impact of Transition Preparation on Socio-Behavioral Outcomes for Children with and without Disabilities

April 2009

Dear Parent or Guardian,

My name is Leah Wildenger, and I am a graduate student in the School Psychology program at Syracuse University. I am inviting you to participate in a research project that I am conducting with Dr. Laura Lee McIntyre. Participation in this project is voluntary and confidential, so you may choose whether or not you would like participate. If you have any questions about the project after reading the description below, please feel free to contact me (phone: 315-794-8013; email: lkwilden@syr.edu) or Dr. McIntyre (phone: 315-443-2705; email: llmcinty@syr.edu). You may also direct your questions to the Syracuse University Institutional Review Board (315-443-3013) if you have questions regarding your rights as a participant, if you have questions, concerns, or complaints that you wish to address to someone other than the investigator, or if you cannot reach the investigator.

The kindergarten transition can be a challenging event for children, their families, and their teachers. We are interested in examining kindergarten preparation activities utilized by parents, preschool teachers, and kindergarten teachers during transition. There will be no direct contact with or observation of your child. If you agree to participate in the study, you will receive an informational packet for you to fill out and return to us (a self-addressed, postage paid return envelope will be included). The packet will contain one questionnaire that asks for family background information and current concerns and transition practices and one questionnaire that focuses on the behavior and social skills of your child. We anticipate that it will take approximately 35-40 minutes to complete this packet. The packet does not have to be filled out during one time period, and can be completed at different times. Once we receive your completed packet, we will contact you by phone and conduct an interview regarding your child's adaptive behavior. This phone interview is anticipated to take between 20-60 minutes. During the initial time of data collection, you will have the opportunity to indicate whether or not you are interested in participating in a Fall 2009 follow-up once your child has entered kindergarten. In the Fall, we will contact you by phone and briefly discuss your Fall transition preparation activities. We will also ask you for the contact information of your child's new kindergarten teacher and obtain your permission for us to contact the kindergarten teacher so that we can examine the outcome of the kindergarten transition.

All information collected about your family will be kept confidential. We will assign a number to your responses, and only we will have the key to indicate which number belongs to which participant. Data will not be disclosed to any school officials or outside parties. In published reports or conference presentations of the study results, we will remove all personally identifying information to protect the confidentiality of participants. You may feel minimal discomfort filling out questionnaires regarding family background information or information about your child's social skills or behavior; however, your participation in the study is strictly confidential and voluntary and you may choose to skip any questions you are uncomfortable with.

We are also interested in obtaining information from your child's current preschool and future kindergarten teachers. Once we've received your consent and completed questionnaires, we will send your child's preschool teacher similar questionnaires regarding transition practices and child behavior. As stated above, we will ask you for permission for us to send a packet of questionnaires to your child's new kindergarten teacher in the Fall of 2009. The packet will contain similar questionnaires regarding transition practices and child behavior as well as a questionnaire focused on your child's relationship with his or her kindergarten teacher. Your child's teachers will be encouraged to contact us directly with questions about participation. The teachers will also be provided with a self-addressed, postage paid envelope to return the completed material directly to us. The teacher's information will be kept confidential as well.

The transition to kindergarten is an under-researched area, for both typically developing children and children with special needs. We hope to expand our knowledge base by exploring kindergarten transition from both parent and teacher perspectives. A benefit of this study is that information learned may help develop more effective programs to help children, their families, and teachers prepare for kindergarten transition. Furthermore, participants will have an opportunity to think about and reflect on the child's transition process, perhaps increasing awareness about this important developmental milestone. By participating, you may gain the satisfaction of assisting in an area of research that is not often the subject of studies. The risks involved in participating are minimal.

As a token of our appreciation, if you consent to participate, you will receive a small honorarium of $10 as our way of saying thank you. If you consent to participate in the follow-up assessment in the Fall of 2009, you will receive another $10 honorarium at that time. By consenting, you are also providing permission for the researchers to obtain information about your child from his or her teachers. If, at any time, you no longer wish to participate, you have the right to withdraw from the project without penalty. This will not impact receipt of the honoraria Please sign and return one copy of this consent form and keep the other copy for your records. Thank you for considering this request.

Sincerely,

Leah K. Wildenger, M.S.	Laura Lee McIntyre, Ph.D.
Doctoral Candidate, School Psychology	Assistant Professor of Psychology

All of my questions have been answered and I give permission to participate in the research project, as well as have the researchers obtain information from my child teachers.

_____	_____
Printed name of Parent/Guardian	Date
_____	_____
Signature of Parent/Guardian	Investigator Signature/Date

Appendix C

Preschool Teacher Consent Form

The Transition to Kindergarten: Impact of Transition Preparation on Socio-Behavioral Outcomes for Children with and without Disabilities

April 2009

Dear Preschool Teacher,

My name is Leah Wildenger, and I am a graduate student in the School Psychology program at Syracuse University. I am inviting you to participate in a research project that I am conducting with Dr. Laura Lee McIntyre. Participation in this project is voluntary and confidential, so you may choose whether or not you would like participate. If you have any questions about the project after reading the description below, please feel free to contact me (phone: 315-794-8013; email: lkwilden@syr.edu) or Dr. McIntyre (phone: 315-443-2705; email: llmcinty@syr.edu). You may also direct your questions to the Syracuse University Institutional Review Board (315-443-3013) if you have questions regarding your rights as a participant, if you have questions, concerns, or complaints that you wish to address to someone other than the investigator, or if you cannot reach the investigator.

The kindergarten transition can be a challenging event for children, their families, and their teachers. We are interested in examining the impact of preparation activities utilized by parents, preschool teachers, and kindergarten teachers during transition on child social and behavioral kindergarten outcomes. We are also interested in examining whether these practices and their impact differ across typically developing students and students with developmental delays or disabilities. There will be no direct contact with or observation of your students. If you agree to participate in the study, we will ask you to distribute a packet of questionnaires to the parents of the students in your class.

Once parents have consented to participate and completed a packet of questionnaires, they will be instructed to mail their materials directly to us at Syracuse University in a postage-paid self-addressed envelope. Upon receipt of parent packets, we will contact you and request that you complete a short background information questionnaire, a questionnaire on kindergarten transition as well as a questionnaire on child social skills and problem behavior (20-30 minutes total completion time) for each participating student in your classroom. The transition questionnaire asks about your concerns and transition practices for that student. Once you've completed your materials, we ask that you return them to us in the provided self-addressed, postage paid envelope. The questionnaires do not have to be filled out during one sitting; however, we do hope you'll be able to complete them in 2-3 weeks. We ask that you complete these outside of school work hours, so as not to interfere with classroom obligations.

All information collected from you will be kept confidential. We will assign a number to your responses, and only we will have the key to indicate which number belongs to which

participant. Data will not be disclosed to any school officials or outside parties. In published reports or conference presentations of the study results, we will remove all personally identifying information to protect the confidentiality of participants. You may feel minimal discomfort filling out a questionnaire about your concerns regarding a specific student; however, your participation in the study is strictly confidential and voluntary and you may choose to skip any questions you are uncomfortable with.

The transition to kindergarten is an under-researched area for both typically developing children and children with special needs. We hope to expand our knowledge base by exploring kindergarten transition from both parent and teacher perspectives and by examining the relationship between transition practices and important child kindergarten outcomes. A benefit of this study is that information learned may help develop more effective programs to help children, their families, and teachers prepare for kindergarten transition. Furthermore, participants will have an opportunity to think about and reflect on the preschool child's transition process, perhaps increasing awareness about this important developmental milestone. By participating, you may gain the satisfaction of assisting in an area of research that is not often the subject of studies. The risks involved in participating are minimal. As stated, you may feel some discomfort in filling out questionnaires regarding your student; however, you may choose to skip any questions you are uncomfortable with at no penalty.

Obtaining information from a teacher's perspective is valuable because children may exhibit different skills and behaviors in the school setting. As a token of appreciation for your participation in this study, you will receive a small honorarium of $25 total. If, at any time, you no longer wish to participate, you have the right to withdraw from the project without penalty. This will not impact receipt of the honorarium. Please sign and return one copy of this consent form and keep the other copy for your records. Thank you for considering this request.

Sincerely,

Leah K. Wildenger, M.S.
Doctoral Candidate, School Psychology

Laura Lee McIntyre, Ph.D.
Assistant Professor of Psychology

All of my questions have been answered and I give permission to participate in the research project.

_____ _____

Printed Name of Teacher — Date

_____ _____

Signature of Teacher — Investigator Signature/Date

Appendix D

Kindergarten Teacher Consent Form

The Transition to Kindergarten: Impact of Transition Preparation on Socio-Behavioral Outcomes for Children with and without Disabilities

October 2009

Dear Kindergarten Teacher,

My name is Leah Wildenger, and I am a graduate student in the School Psychology program at Syracuse University. I am inviting you to participate in a research project that I am conducting with Dr. Laura Lee McIntyre. Participation in this project is voluntary and confidential, so you may choose whether or not you would like participate. If you have any questions about the project after reading the description below, please feel free to contact me (phone: 315-794-8013; email: lkwilden@syr.edu) or Dr. McIntyre (phone: 315-443-2705; email: llmcinty@syr.edu). You may also direct your questions to the Syracuse University Institutional Review Board (315-443-3013) if you have questions regarding your rights as a participant, if you have questions, concerns, or complaints that you wish to address to someone other than the investigator, or if you cannot reach the investigator.

The kindergarten transition can be a challenging event for children, their families, and their teachers. We are interested in examining the impact of preparation activities utilized by parents, preschool teachers, and kindergarten teachers during transition on child social and behavioral kindergarten outcomes. We are also interested in examining whether these practices and their impact differ across typically developing students and students with developmental delays or disabilities. There will be no direct contact with or observation of your students. If you agree to participate in the study, we will ask you to fill out a packet of questionnaires regarding the participating student(s) in your classroom that will allow us to assess their social and behavioral kindergarten adjustment.

As part of their ongoing participation in this study, the parent(s) in your classroom have agreed to deliver a packet of study materials to you. If you agree to participate, we request that you sign this consent form and complete a short background information questionnaire as well as three brief questionnaires for each participating student in your classroom. The questionnaires assess: 1) your concerns and transition practices for that student, 2) child social skills and problem behavior, and 3) your relationship with the student. We estimate that it will take you approximately 30-40 minutes total, per child, to complete the questionnaires. Once you've completed your materials, we ask that you return them to us in the provided self-addressed, postage paid envelope. The questionnaires do not have to be filled out during one sitting; however, we do hope you'll be able to complete them in 2-3 weeks. We ask that you complete these outside of school work hours, so as not to interfere with classroom obligations.

All information collected from you will be kept confidential. We will assign a number to your responses, and only we will have the key to indicate which number belongs to which

participant. Data will not be disclosed to any school officials or outside parties. In published reports or conference presentations of the study results, we will remove all personally identifying information to protect the confidentiality of participants. You may feel minimal discomfort filling out a questionnaire about your concerns regarding a specific student; however, your participation in the study is strictly confidential and voluntary and you may choose to skip any questions you are uncomfortable with.

The transition to kindergarten is an under-researched area for both typically developing children and children with special needs. We hope to expand our knowledge base by exploring kindergarten transition from both parent and teacher perspectives and by examining the relationship between transition practices and important child kindergarten outcomes. A benefit of this study is that information learned may help develop more effective programs to help children, their families, and teachers prepare for kindergarten transition. Furthermore, participants will have an opportunity to think about and reflect on the child's transition process, perhaps increasing awareness about this important developmental milestone. By participating, you may gain the satisfaction of assisting in an area of research that is not often the subject of studies. The risks involved in participating are minimal. As stated, you may feel some discomfort in filling out questionnaires regarding your student; however, you may choose to skip any questions you are uncomfortable with at no penalty.

Obtaining information from a kindergarten teacher's perspective is valuable because children may exhibit different skills and behaviors in the school setting. Additionally, your reports will serve as our primary measure of child kindergarten adjustment. As a token of appreciation for your participation in this study, you will receive a small honorarium of $10 per student. If, at any time, you no longer wish to participate, you have the right to withdraw from the project without penalty. This will not impact receipt of the honorarium. We want to reiterate that we encourage you to contact us prior to filling out the questionnaires if you should have any questions or concerns about your participation. Please sign and return one copy of this consent form and keep the other copy for your records. Thank you for considering this request.

Sincerely,

Leah K. Wildenger, M.S.
Doctoral Candidate, School Psychology

Laura Lee McIntyre, Ph.D.
Assistant Professor of Psychology

All of my questions have been answered and I give permission to participate in the research project.

_____ _____

Printed Name of Teacher Date

_____ _____

Signature of Teacher Investigator Signature/Date

Appendix E

Family Experiences and Involvement in Transition

Family Experiences & Involvement in Transition

Please return by June X, 2009. Thank you for your time!

1) Child's name: _____

2) Child's date of birth: _____ Age: _____

3) Child's gender:
   1) Male
   2) Female

4) What is your child's race/ethnic background?
   1) White
   2) Black or African American
   3) Hispanic/Latino of any race: _____
   4) Asian: _____
   5) Native Hawaiian or Other Pacific Islander: _____
   6) American Indian or Alaskan Native: _____
   7) Two or more races: _____
   8) Other: _____

5) Is your child currently receiving special education services in accordance with an Individualized Education Plan (IEP)?
   0) No (Skip to #9)
   1) Yes (continue with questions #6-8)

6) <u>What is your child's primary</u> diagnosis?
   (1) Developmental Delay
   (2) Speech/Language Delay
   (3) Autism Spectrum Disorder (autism, PDD, Asperger)
   (4) Other: _____

7) <u>When</u> was child diagnosed with primary diagnosis?
   (1) At birth or infancy (0-11 months)
   (2) One-year old (12-23 months)
   (3) Two-years old (24-35 months)
   (4) Three-years old (36-47 months)
   (5) Four-years old (48-59 months)
   (6) Five-years old (60-71 months)
   (7) Unknown

8) Does your child currently receive related services (e.g., speech therapy, occupational therapy) in addition to special educational supports?
   0) No
   1) Yes (please specify)_____
   2) Don't Know

9) What type of educational program is your child enrolled in this year (September 2008-June 2009)?
   1) Nursery school
   2) Daycare (center-based or home-based)
   3) Special Education Preschool (3-5 years old): _____
   4) Pre-Kindergarten (Pre-K) in a public school
   5) Head Start
   6) Other: _____

10) Name of School/Preschool Program: _____

11) Teacher's Name: _____

12) What are the primary concerns for your child as he/she transitions to kindergarten?

_____

_____

Please tell us how much each of the following areas concerned you as your child transitions to kindergarten. Circle the number that describes how concerned you were, using the scale below.

	No Concerns	**A few**	**Some**	**Many Concerns**
13) Academics (e.g., knowing the alphabet)	1	2	3	4
14) Behavior problems (e.g., tantrums)	1	2	3	4
15) Following directions	1	2	3	4
16) Getting along with other children	1	2	3	4
17) Getting along with the teacher	1	2	3	4
18) Getting used to a new school	1	2	3	4
19) Child being ready for kindergarten	1	2	3	4
20) Separating from family	1	2	3	4
21) Toilet training	1	2	3	4
22) Ability to communicate needs	1	2	3	4
23) Other: _____	1	2	3	4

Help in Transition Planning:

Which of the following would be helpful as you plan for your child's transition to kindergarten?
Please check yes or no.

	YES	NO
24) More information about your child's **current preschool** program.		
25) More information about your child's **future kindergarten** program.		
26) More information about your child's skills (e.g., strengths and weaknesses).		
27) More information about your child's **future/**new teacher.		
28) More information about your child's **future/**new school.		
29) More information about kindergarten **academic** expectations.		
30) More information about kindergarten **behavior** expectations.		
31) More information about how your child's **preschool** is preparing for transition.		
32) More information on how the **kindergarten** program is preparing for transition		
33) More information on what you should be doing to prepare for the transition.		
34) Increased emotional support and encouragement from preschool school staff.		
35) Increased emotional support and encouragement from your family.		
36) Other:		
37) I don't think I needed any help.		

Behavioral Involvement in Transition:
What kinds of involvement do you have (or would like to have) in your child's transition to kindergarten?
Please check only one box (have, want, don't have/want) for each type of involvement.
Additionally, please rate how important each of the following activities are using the scale below:

1=Not important 2=A little important 3=Somewhat important 4=Very important

	PLEASE CHECK ONLY ONE			Rate on 1-4 scale
	HAVE	WANT	DON'T HAVE/WANT	IMPORTANCE
38) Monthly contact (e.g., phone, visit) with your child's **preschool** teacher.				
39) Annual meetings with your child's **preschool** teacher/school staff.				
40) Attend a transition planning meeting with				

1=Not important 2=A little important 3=Somewhat important 4=Very important

	PLEASE CHECK ONLY ONE			Rate on 1-4 scale
	HAVE	WANT	DON'T HAVE/WANT	IMPORTANCE
41) Attend a transition planning meeting with your child's **kindergarten** staff.				
42) Visit your child's kindergarten classroom and/or elementary school with your child.				
43) Are a member of a transition planning tean at your child's **preschool**				
44) Attend a transition information meeting at your child's **preschool or kindergarten.**				
45) Receive a phone call from your child's kindergarten teacher.				
46) Receive a home visit from your child's kindergarten teacher over the summer.				
47) Attend a kindergarten orientation session.				
48) Receive written communication regarding transition from your child's **preschool** (e.g., letter or flier).				
49) Receive written communication regarding transition from your child's **kindergarten or elementary school** (e.g., letter or flier).				
50) Attend kindergarten registration.				
51) Attend a kindergarten open house.				

52) Are there any additional forms of involvement that you have had that were not listed above?

_____

_____

53) Are there any additional forms of involvement you would like to see included in the transition process?_____

_____

Some Information About You:

54) Are you primary caregiver?
- 0) No
- 1) Yes

55) What is your gender?
- 1) Male
- 2) Female

56) What is your relationship to your child?
1) Biological Parent
2) Step Parent
3) Adoptive Parent
4) Other relative
5) Legal guardian
6) Other (specify) _____

57) What is your age? _____

58) What is your race/ethnic background?
1) White
2) Black or African American
3) Hispanic/Latino of any race: _____
4) Asian: _____
5) Native Hawaiian or Other Pacific Islander: _____
6) American Indian or Alaskan Native: _____
7) Two or more races: _____
8) Other: _____

59) What is your marital status?
1) Married or living with partner
2) Separated
3) Divorced
4) Single
5) Other _____

60) Are you employed?
0) No
1) Yes; Part-Time
2) Yes; Full-Time

61) What is the highest grade you have completed? (1-12=HS; 13-16=College; 16+ Post-college)
Please circle your response.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

62) What is your highest degree obtained?
0) None
1) HS Diploma/GED
2) Vocational Degree/Certificate
3) Associates Degree (2-year college degree)
4) Bachelor's Degree (4-year college degree)
5) Master's Degree
6) Doctorate (e.g., Ph.D, M.D.)

63) Does your family/child qualify for government aid programs (e.g., public assistance, SSI, Medicaid)?
0) No
1) Yes
2) Don't Know

64) Will your child receive free or reduced lunch in kindergarten through the school district?

0) No
1) Yes
2) Don't Know

65) What is your annual total family income? If unsure, how much do you make per month? _____

1) $14,999 or less
2) $15,000-24,999
3) $25,000-34,999
4) $35,000-44,999
5) $45,000-54,999
6) $55,000-64,999
7) $65,000-74,999
8) $75,000-84,999
9) $85,000-99,999
10) $100,000+

66) Total number of children (younger than 18 years) living in the home: _____

Please list the ages of all children living in the home: ____ _____ _____ _____ _____

67) Total number of adults (including you) living in the home involved in childcare: _____

Can we contact you in the Fall once your child begins kindergarten to participate for a follow-up survey?

☐ Yes

☐ No

Please provide contact information:

Name:
_____

Address:
_____

Phone Number:
_____

Email:
_____

Please return the completed questionnaire in the enclosed self-addressed envelope.

THANK YOU FOR YOUR HELP!

Appendix F

Vineland Adaptive Behavior Scales-II: Survey Interview Form

Communication

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

Receptive

1) Turns eyes and head toward sound.	2	1	0	DK
2) Looks toward parent or caregiver when hearing parent's or caregiver's voice.	2	1	0	DK
3) Responds to his or her name spoken (for examples, turns toward speaker, smiles, etc.)	2	1	0	DK
4) Demonstrates understanding of the meaning of the word *no*, or word or gesture with the same meaning (for example, stops current activity briefly).	2	1	0	DK
5) Demonstrates understanding of the meaning of the word *yes*, or word or gesture with the same meaning (for example, continues activity, smiles, etc.).	2	1	0	DK
6) Listens to story for at least 5 minutes (that is, remains relatively still and directs attention to the storyteller or reader).	2	1	0	DK
7) Points to at least three major body parts when asked (for example, nose, mouth, hands, feet, etc.).	2	1	0	DK
8) Points to common objects in a book or magazine as they are named (for example, dog, car, cup, key, etc.).	2	1	0	DK
9) Listens to instructions.	2	1	0	DK
10) Follows instructions with one action and one object (for example, "Bring me the book"; "Close the door"; etc.).	2	1	0	DK
11) Points to at least five minor body parts when asked (for example, fingers, elbows, teeth, toes, etc.).	2	1	0	DK
12) Follow instructions with two actions or an action and two objects (for example, "Bring me the crayons and the paper"; "Sit down and eat your lunch"; etc.).	2	1	0	DK
13) Follows instructions in "if-then" form (for example, "If you want to play outside then put your things away"; etc.).	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

14) Listens to a story for at least 15 minutes.	2	1	0	DK
15) Listens to a story for at least 30 minutes.	2	1	0	DK
16) Follows three-part instructions (for example, "Brush your teeth, get dressed, and make your bed; etc.).	2	1	0	DK
17) Follows instructions or directions heard 5 minutes before.	2	1	0	DK
18) Understands sayings that are not meant to be taken word for word (for example, "Button your lip"; "Hit the road", etc.).	2	1	0	DK
19) Listens to an informational talk for at least 15 minutes.	2	1	0	DK
20) Listens to an informational talk for at least 30 minutes.	2	1	0	DK

Expressive

1) Cries or fusses when hungry or wet.	2	1	0	DK
2) Smiles when you smile at him or her.	2	1	0	DK
3) Makes sounds of pleasure (for example, coos, laughs, etc.).	2	1	0	DK
4) Makes nonword baby sounds (that is, babbles).	2	1	0	DK
5) Makes sounds or gestures (for example, waves arms) to get parent's or caregiver's attention.	2	1	0	DK
6) Makes sounds or gestures (for example, shakes head) if he or she wants an activity to stop or keep going.	2	1	0	DK
7) Waves goodbye when another person waves or parent or caregiver tells him or her to wave.	2	1	0	DK
8) Says "Da-da," "Ma-ma," or another name for parent or caregiver (including parent's or caregiver's first name or nickname).	2	1	0	DK
9) Points to object he or she wants that is out of reach.	2	1	0	DK
10) Points or gestures to indicate preference when offered a choice (for example, "Do you want this one or that one?"; etc.).	2	1	0	DK
11) Repeats or tries to repeat common words immediately upon hearing them.	2	1	0	DK
12) Names at least three objects (e.g., bottle, dog, favorite toy, etc.).	2	1	0	DK
13) Says one-word requests (for example, *up, more, out,* etc.).	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

14) Uses first names or nicknames of brothers, sisters, or friends, or says their names when asked.	2	1	0	DK
15) Answers or tries to answer with words when asked a question.	2	1	0	DK
16) Names at least 10 objects.	2	1	0	DK
17) States own first name or nickname (for example, Latesha, Little Sister, etc.) when asked.	2	1	0	DK
18) Uses phrases with a noun and a verb (for example, "Katie stay"; "Go home"; etc.).	2	1	0	DK
19) Asks questions by changing inflection of words or simple phrases (for example, "Mine?"; "Me go?"; etc.); grammar is not important.	2	1	0	DK
20) Says at least 50 recognizable words.	2	1	0	DK
21) Uses simple words to describe things (for example, *dirty*, *pretty*, *big*, *loud*, etc.).	2	1	0	DK
22) Asks questions beginning with *what* or *where* (for example, "What's that?"; "Where doggie go?"; etc.).	2	1	0	DK
23) Uses negatives in sentences (for example, "Me no go"; "I won't drink it"; etc.); grammar is not important.	2	1	0	DK
24) Tells about experiences in simple sentences (for example, "Ginger and I play"; "Dan read me a book"; etc.).	2	1	0	DK
25) Says correct age when asked.	2	1	0	DK
26) Says at least 100 recognizable words.	2	1	0	DK
27) Uses *in*, *on*, or *under* in phrases or sentences (for example, "Ball go under chair"; "Put it on the table"; etc.).	2	1	0	DK
28) Uses *and* in phrases or sentences (for example, "Mom and Dad"; "I want ice cream and cake"; etc.).	2	1	0	DK
29) Says first and last name when asked.	2	1	0	DK
30) Identifies and names most common colors (that is, red, blue, green, yellow, orange, purple, brown, and black).	2	1	0	DK
31) Asks questions beginning with *who* or *why* (for example, "Who's that?"; "Why do I have to go?"; etc.).	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

32) Uses present tense verbs ending in *ing* (for example, "Is singing"; "Is playing"; etc.).	2	1	0	DK
33) Uses possessives in phrases or sentences (for example, "That's her book"; "This is Carlos's ball"; etc.).	2	1	0	DK
34) Uses pronouns in phrases or sentences; must use correct gender and form of pronoun, but sentences need not be grammatically correct (for example, "He done it"; "They went"; etc.).	2	1	0	DK
35) Asks questions beginning with *when* (for example, "When is dinner?"; "When can we go home?"; etc.).	2	1	0	DK
36) Uses regular past tense verbs (for example, *walked, baked,* etc.); May use irregular past tense verbs ungrammatically (for example, "I runned away"; etc.).	2	1	0	DK
37) Uses *behind* or *in front of* in phrases or sentences (for example, "I Walked in front of her"; "Terrell is behind you"; etc.).	2	1	0	DK
38) Pronounces words clearly without sound substitutions (for example, does not say "wabbit" for "rabbit", "Thally" for "Sally", etc.).	2	1	0	DK
39) Tells basic parts of a story, fairy tale, or television show plot; does not need to include great detail or recount in perfect order.	2	1	0	DK
40) Says month and day of birthday when asked.	2	1	0	DK
41) Modulates tone of voice, volume, and rhythm appropriately (for example, does not consistently speak too loudly, too softly, or in a monotone, etc.).	2	1	0	DK
42) Tells about experiences in detail (for example, tells who was involved, where activity took place, etc.).	2	1	0	DK
43) Gives simple directions (for example, on how to play a game or how to make something).	2	1	0	DK
44) Uses *between* in phrases or sentences (for example, "The ball went between the cars"; etc.).	2	1	0	DK

Written

1) Identifies one or more alphabet letters as letters and distinguishes them from numbers.	2	1	0	DK
2) Recognizes own name in printed form.	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

3) Identifies at least 10 printed letters of the alphabet.	2	1	0	DK
4) Prints or writes using correct orientation (for example, in English From left to right; in some languages from right to left or top to bottom).	2	1	0	DK
5) Copies own first name.	2	1	0	DK
6) Identifies all printed letters of the alphabet, upper- and lowercase.	2	1	0	DK
7) Prints at least three simple words from example (for example, *cat, see, bee*, etc.).	2	1	0	DK
8) Prints or writes own first and last name from memory.	2	1	0	DK
9) Reads at least 10 words aloud.	2	1	0	DK
10) Prints at least 10 simple words from memory (for example, *hat, ball, the*, etc.).	2	1	0	DK
11) Reads simple stories aloud (that is, stories with sentences of three to five words).	2	1	0	DK

Daily Living

Personal

1) Opens mouth when food is offered.	2	1	0	DK
2) Eats solid foods (for example, cooked vegetables, chopped meats, etc.).	2	1	0	DK
3) Sucks or chews on finger foods (for example, crackers, cookies, toast, etc.).	2	1	0	DK
4) Drinks from a cup or glass; may spill.	2	1	0	DK
5) Lets someone know when he or she has wet or soiled diapers or pants (for example, points, vocalizes, pulls at diaper, etc.).	2	1	0	DK
6) Feeds self with spoon; may spill.	2	1	0	DK
7) Sucks from straw.	2	1	0	DK
8) Takes off clothing that opens in the front (for example, a coat or sweater); does not have to unbutton or unzip the clothing.	2	1	0	DK
9) Pulls up clothing with elastic waistbands (for example, underwear or sweatpants).	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

10) Feeds self with fork; may spill.	2	1	0	DK
11) Drinks from cup or glass without spilling.	2	1	0	DK
12) Feeds self with spoon without spilling.	2	1	0	DK
13) Urinates in toilet or potty chair.	2	1	0	DK
14) Puts on clothing that opens in the front (for example, a coat or sweater); does not have to zip or button the clothing.	2	1	0	DK
15) Asks to use toilet.	2	1	0	DK
16) Defecates in toilet or potty chair.	2	1	0	DK
17) Is toilet-trained during the day.	2	1	0	DK
18) Zips zippers that are fastened at the bottom (for example, in pants, on backpacks, etc.).	2	1	0	DK
19) Wipes or blows nose using tissue or handkerchief.	2	1	0	DK
20) Is toilet-trained during the night.	2	1	0	DK
21) Puts shoes on correct feet; does not need to tie laces.	2	1	0	DK
22) Fastens snaps.	2	1	0	DK
23) Holds spoon, fork, and knife correctly.	2	1	0	DK
24) Washes and dries face using soap and water.	2	1	0	DK
25) Brushes teeth.	2	1	0	DK
26) Buttons large buttons in front, in correct buttonholes.	2	1	0	DK
27) Covers mouth and nose when coughing and sneezing.	2	1	0	DK
28) Buttons small buttons in front, in correct buttonholes.	2	1	0	DK
29) Connects and zips zippers that are not fastened at the bottom (for example, in jackets, sweatshirts, etc.).	2	1	0	DK
30) Turns faucets on and adjusts temperature by adding hot or cold water.	2	1	0	DK
31) Wears appropriate clothing during wet or cold weather (for example, raincoat, boots, sweater, etc.).	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

Domestic

1) Is careful around hot objects (for example, the stove or oven, an open fire, etc.).	2	1	0	DK
2) Helps with simple household chores (for example, dusts, picks up clothes or toys, feeds pet, etc.).	2	1	0	DK
3) Clears unbreakable items from own place at table.	2	1	0	DK
4) Cleans up play or work area at end of an activity (for example, finger painting, model building, etc.).	2	1	0	DK
5) Puts away personal possessions (for example, toys, books, magazines, etc.).	2	1	0	DK

Community

1) Demonstrates understanding of function of telephone (for example, pretends to talk on phone, etc.).	2	1	0	DK
2) Talks to familiar person on telephone.	2	1	0	DK
3) Uses TV or radio without help (for example, turns equipment on, Accesses channel or station, selects program, etc.). *You may mark "N/O" for No Opportunity if there is no TV or radio in the home.*	2	1	0	DK N/O
4) Counts at least 10 objects, 1 by 1.	2	1	0	DK
5) Is aware of and demonstrates appropriate behavior while riding in car (for example, keeps seat belt on, refrains from distracting driver, etc.).	2	1	0	DK
6) Demonstrates understanding of the function of money (for example, says, "Money is what you need to buy things at the store"; etc.).	2	1	0	DK
7) Uses sidewalk (where available) or shoulder of road when walking or Using wheeled equipment (skates, scooter, tricycle, etc.).	2	1	0	DK
8) Demonstrates understanding of function of clock (for example, says, "Clocks tell time"; "What time can we go?"; etc.).	2	1	0	DK
9) Follows household rules (for example, no running in the house, no jumping on the furniture, etc.).	2	1	0	DK
10) Demonstrates computer skills necessary to play games or start programs with computer turned on; does not need to turn computer on by self. *You may mark "N/O" for No Opportunity if there is no computer in the home.*	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

11) Summons to the telephone the person receiving a call or indicates that the person is not available.	2	1	0	DK
12) Identifies penny, nickel, dime, and quarter by name when asked; does not need to know the value of coins.	2	1	0	DK
13) Looks both ways when crossing streets or roads.	2	1	0	DK

Socialization

Interpersonal Relationships

1) Looks at face of parent or caregiver.	2	1	0	DK
2) Watches (that is, follows with eyes) someone moving by crib or bed for 5 seconds or more.	2	1	0	DK
3) Shows two or more emotions (e.g., laughs, cries, screams, etc.).	2	1	0	DK
4) Smiles or makes sounds when approached by a familiar person.	2	1	0	DK
5) Makes or tries to make social contact (for example, smiles, makes noises, etc.).	2	1	0	DK
6) Reaches for familiar person when person holds out arms to him/her.	2	1	0	DK
7) Shows preference for certain people and objects (for example, smiles, reaches for or moves toward person or object, etc.).	2	1	0	DK
8) Shows affection to familiar persons (for example, touches, hugs, kisses, cuddles, etc.).	2	1	0	DK
9) Imitates or tries to imitate parent's or caregiver's facial expressions (for example, smiles, frowns, etc.).	2	1	0	DK
10) Moves about looking for parent or caregiver or other familiar person nearby.	2	1	0	DK
11) Shows interest in children the same age, other than brothers or sisters (for example, watches them, smiles at them, etc.).	2	1	0	DK
12) Imitates simple movements (for example, claps hands, waves goodbye, etc.).	2	1	0	DK
13) Uses actions to show happiness or concern for others (for example, hugs, pats arm, holds hands, etc.).	2	1	0	DK
14) Shows desire to please others (for example, shares a snack or toy, tries to help even if not capable, etc.).	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

15) Demonstrates friendship-seeking behavior with others the same age (for example, says, "Do you want to play?" or takes another child by the hand, etc.).	2	1	0	DK
16) Imitates relatively complex actions as they are being performed by another person (for example, shaving, putting on makeup, hammering nails, etc.).	2	1	0	DK
17) Answers when familiar adults make small talk (for example, if asked, "How are you?" says "I'm fine"; if told, "You look nice," says, "Thank you"; etc.)	2	1	0	DK
18) Repeats phrases heard spoken before by an adult (for example, "Honey, I'm home"; "No dessert until you clean your plate"; etc.).	2	1	0	DK
19) Uses words to express own emotions (for example, "I'm happy"; "I'm scared"; etc.).	2	1	0	DK
20) Has best friend or shows preference for certain friends (of either sex) over others.	2	1	0	DK
21) Imitates relatively complex actions several hours after watching Someone else perform them (for example, shaving, putting on makeup, hammering nails, etc.).	2	1	0	DK
22) Uses words to express happiness or concern for others (for example, Says, "Yeah! You won"; "Are you all right?"; etc.).	2	1	0	DK
23) Acts when another person needs a helping hand (for example, holds door open, picks up dropped items, etc.).	2	1	0	DK
24) Recognizes the likes and dislikes of others (for example, says, "Chow likes soccer"; "Susie doesn't eat pizza"; etc.).	2	1	0	DK
25) Shows same level of emotion as others around him or her (for Example, does not downplay or overdramatize a situation, etc.).	2	1	0	DK
26) Keeps comfortable distance between self and others in social situations (for example, does not get too close to another person when talking, etc.).	2	1	0	DK
27) Talks with others about shared interests (for example, sports, TV shows, summer plans, etc.).	2	1	0	DK

Play and Leisure Time

1) Responds when parent or caregiver is playful (for example, smiles, laughs, claps hands, etc.).	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

2) Shows interest in where he or she is (for example, looks or moves around, Touches objects or people, etc.).	2	1	0	DK
3) Plays simple interaction games with others (for example, peek-a-boo, patty-cake, etc.).	2	1	0	DK
4) Plays near another child, each doing different things.	2	1	0	DK
5) Chooses to play with other children (for example, does not stay on the edge of a group or avoid others).	2	1	0	DK
6) Plays cooperatively with one or more children for up to 5 minutes.	2	1	0	DK
7) Plays cooperatively with more than one child for more than 5 minutes.	2	1	0	DK
8) Continues playing with another child with little fussing when parent or caregiver leaves.	2	1	0	DK
9) Shares toys or possessions when asked.	2	1	0	DK
10) Plays with others with minimal supervision.	2	1	0	DK
11) Uses common household objects or other objects for make-believe activities (e.g., pretends a block is a car, a box is a house, etc.).	2	1	0	DK
12) Protects self by moving away from those who destroy things or cause injury (e.g., those who bite, hit, throw things, pull hair, etc.).	2	1	0	DK
13) Plays simple make-believe activities with others (e.g., plays dress-up, pretends to be superheroes, etc.).	2	1	0	DK
14) Seeks out others for play or companionship (e.g., invites others home, goes to another's home, plays with others on playground, etc.).	2	1	0	DK
15) Takes turns when asked while playing games or sports.	2	1	0	DK
16) Plays informal, outdoor group games (e.g., tag, jump rope, catch, etc.).	2	1	0	DK
17) Shares toys or possessions without being asked.	2	1	0	DK
18) Follows rules in simple games (relay races, spelling bees, electronic games, etc.).	2	1	0	DK
19) Takes turns without being asked.	2	1	0	DK
20) Plays simple card or board games based only on chance (e.g., Go Fish, Crazy Eights, Sorry, etc.).	2	1	0	DK

Response Options: 2=Usually, **1**=Sometimes or Partially, **0**=Never, **DK**=Don't Know

Coping Skills

1) Changes easily from one at-home activity to another.	2	1	0	DK
2) Says "thank you" when given something.	2	1	0	DK
3) Changes behavior depending on how well he or she knows another person (for example, acts differently with family member than with stranger, etc.).	2	1	0	DK
4) Chews with mouth closed.	2	1	0	DK
5) Says "please" when asking for something.	2	1	0	DK
6) Ends conversations appropriately (for example, says, "Good-bye"; "See you later"; etc.).	2	1	0	DK
7) Cleans or wipes face and hands during and/or after meals.	2	1	0	DK
8) Responds appropriately to reasonable changes in routine (for example, Refrains from complaining, etc.).	2	1	0	DK

Appendix G

Social Skills Improvement System – Parent Form

Social Skills

	How often?				How important?		
	Never	Seldom	Often	Almost Always	Not Important	Important	Critical
1. Expresses feelings when wronged.	0	1	2	3	0	1	2
2. Follows household rules.	0	1	2	3	0	1	2
3. Tries to understand how you feel.	0	1	2	3	0	1	2
4. Says “thank you”.	0	1	2	3	0	1	2
5. Asks for help from adults.	0	1	2	3	0	1	2
6. Takes care when using other people’s things.	0	1	2	3	0	1	2
7. Pays attention to your instructions.	0	1	2	3	0	1	2
8. Tries to make others feel better.	0	1	2	3	0	1	2
9. Joins activities that have already started.	0	1	2	3	0	1	2
10. Takes turns in conversations.	0	1	2	3	0	1	2
11. Says when there is a problem.	0	1	2	3	0	1	2
12. Works well with family members.	0	1	2	3	0	1	2
13. Forgives others.	0	1	2	3	0	1	2
14. Speaks in appropriate tone of voice.	0	1	2	3	0	1	2
15. Stands up for others who are treated unfairly.	0	1	2	3	0	1	2
16. Is well-behaved when unsupervised.	0	1	2	3	0	1	2
17. Follows your directions.	0	1	2	3	0	1	2
18. Tries to understand how others feel.	0	1	2	3	0	1	2
19. Starts conversations with peers.	0	1	2	3	0	1	2
20. Uses gestures or body appropriately with others.	0	1	2	3	0	1	2
21. Resolves disagreements with you calmly.	0	1	2	3	0	1	2
22. Respects the property of others.	0	1	2	3	0	1	2
23. Makes friends easily.	0	1	2	3	0	1	2
24. Says “please”.	0	1	2	3	0	1	2
25. Questions rules that may be unfair.	0	1	2	3	0	1	2
26. Takes responsibility for her/his own actions.	0	1	2	3	0	1	2
27. Completes tasks without bothering others.	0	1	2	3	0	1	2
28. Tries to comfort others.	0	1	2	3	0	1	2
29. Interacts well with other children.	0	1	2	3	0	1	2
30. Responds well when others start a conversation or activity.	0	1	2	3	0	1	2

	How often?				How important?		
	Never	Seldom	Often	Almost Always	Not Important	Important	Critical
31. Stays calm when teased.	0	1	2	3	0	1	2
32. Does what she/he promised.	0	1	2	3	0	1	2
33. Introduces herself/himself to others.	0	1	2	3	0	1	2
34. Takes criticism without getting upset.	0	1	2	3	0	1	2
35. Says nice things about herself or himself without bragging.	0	1	2	3	0	1	2
36. Makes a compromise during a conflict.	0	1	2	3	0	1	2
37. Follows rules when playing games with others.	0	1	2	3	0	1	2
38. Shows concern for others.	0	1	2	3	0	1	2
39. Invites others to join in activities.	0	1	2	3	0	1	2
40. Makes eye contact when talking.	0	1	2	3	0	1	2
41. Tolerates peers when they are annoying.	0	1	2	3	0	1	2
42. Takes responsibility for her/his own mistakes.	0	1	2	3	0	1	2
43. Starts conversations with adults.	0	1	2	3	0	1	2
44. Responds appropriately when pushed or hit.	0	1	2	3	0	1	2
45. Stands up for herself or himself when treated unfairly.	0	1	2	3	0	1	2
46. Stays calm when disagreeing with others.	0	1	2	3	0	1	2

Problem Behaviors

	How often?			
	Never	Seldom	Often	Almost Always
47. Has difficulty waiting for turn.	0	1	2	3
48. Repeats the same thing over and over.	0	1	2	3
49. Forces others to act against their will.	0	1	2	3
50. Has stereotyped motor behaviors.	0	1	2	3
51. Fidgets or moves around too much.	0	1	2	3
52. Keeps others out of social circles.	0	1	2	3
53. Is inattentive.	0	1	2	3
54. Acts without thinking.	0	1	2	3
55. Becomes upset when routines change.	0	1	2	3
56. Is aggressive toward people or objects.	0	1	2	3
57. Withdraws from others.	0	1	2	3
58. Has temper tantrums.	0	1	2	3
59. Does things to make others feel scared.	0	1	2	3
60. Breaks into or stops group activities.	0	1	2	3
61. Has low energy or is lethargic.	0	1	2	3
62. Uses odd physical gestures in interactions.	0	1	2	3

	How often?			
	Never	**Seldom**	**Often**	**Almost Always**
63. Bullies others.	0	1	2	3
64. Acts anxious with others.	0	1	2	3
65. Talks back to adults.	0	1	2	3
66. Says nobody likes her/him.	0	1	2	3
67. Gets distracted easily.	0	1	2	3
68. Acts sad or depressed.	0	1	2	3
69. Is preoccupied with object parts.	0	1	2	3
70. Disobeys rules or requests.	0	1	2	3
71. Has sleeping problems.	0	1	2	3
72. Lies or does not tell the truth.	0	1	2	3
73. Gets embarrassed easily.	0	1	2	3
74. Says bad things about self.	0	1	2	3
75. Has nonfunctional routines or rituals.	0	1	2	3
76. Cheats in games or activities.	0	1	2	3
77. Acts lonely.	0	1	2	3
78. Fights with others.	0	1	2	3
79. Has eating problems.	0	1	2	3

Appendix H

Teacher Demographics Form

Teacher Information Form

Directions: Please complete the Teacher Information Form and return with additional materials by June xx, 2009 in the enclosed envelope.

Your name: _____ Email address: _____

1) School: _____ Phone number: _____

2) Type of classroom:
    1) Inclusion
    2) Self-contained

3) How many years have you been teaching in your current placement? _____

4) Have you taught any other grades?
    0) No
    1) Yes (Specify which grades and for how long) _____

5) Are you certified/credentialed in early childhood special education?
    0) No
    1) Yes

6) What is your gender?
    1) Female
    2) Male

7) What is your race/ethnic background?
    1) White
    2) Black or African American
    3) Hispanic/Latino of any race: _____
    4) Asian: _____
    5) Native Hawaiian or Other Pacific Islander: _____
    6) American Indian or Alaskan Native: _____
    7) Two or more races: _____
    8) Other: _____

8) Highest degree obtained:
    1) Vocational Degree/ Child Development Associate (CDA)
    2) Associates Degree (2-year college degree)
    3) Bachelor's Degree (4-year college degree)
    4) Master's Degree
    5) Doctorate (e.g., Ed.D., Ph.D.)

Thank you for your time!

Appendix I

Teachers' Perceptions on Transition

Teachers' Perceptions on Transition

Please answer the questions below regarding the following student: _____

1) How long have you known this student?
    1) Less than one year (2008-2009 school year only)
    2) Two academic school years (2007-2008 & 2008-2009)
    3) More than two school years

2) How long have you taught this student?
    1) Less than one year (2008-2009 school year only)
    2) Two academic school years (2007-2008 & 2008-2009)
    3) More than two school years

3) What concerns do you have regarding the transition process for this student? _____

_____

_____

_____

4) Overall, how concerned are you about this student's transition to kindergarten?
    0) No Concerns
    1) Minimal Concerns
    2) Some Concerns
    3) Many Concerns
    4) VERY Many Concerns

Behavioral Involvement in Transition:

When and what kinds of involvement do you engage in during your student's transition to kindergarten? Please check only one box (Fall, Spring, Summer, Continual, Do not practice) for each type of involvement. Additionally, please rate how important each of the following activities are using the scale below:

1=Not important 2=A little important 3=Somewhat important 4=Very important

	PLEASE CHECK ONLY ONE					Rate on 1-4 scale
	FALL	SPRING	SUMMER	CONTINUAL	N/A	IMPORTANCE
5a) Monthly contact (e.g., phone, visit) with your student's parents.						
5b) Meetings with student's school team.						
5c) Transition planning meeting with your student's **preschool** team.						
5d) Transition planning meeting with your student's **kindergarten** team.						

	PLEASE CHECK ONLY ONE					Rate on 1-4 Scale
	FALL	SPRING	SUMMER	CONTINUAL	N/A	IMPORTANCE
5e) Preschool students visit kindergarten classroom.						
5f) Preschool students visit **assigned** kindergarten classroom.						
5g) Participate as a member of a transition planning team.						
5h) Receive a phone call from your student's former preschool/future kindergarten teacher.						
5i) Complete a home visit for your student.						
5j) Provide written communication regarding transition to your student's family.						
5k) Work with preschool/kindergarten teacher to coordinate curriculum.						
5l) Have a preschool/kindergarten teacher visit your classroom.						
5m) Give orientation about kindergarten for your students.						
5n) Give orientation about kindergarten for parents.						

6) Are there any additional forms of involvement that you have had that were not listed above?_____

_____

_____

7) Are there any additional forms of involvement you would like to see included in the transition process?_____

_____

_____

8) What are some barriers that you feel may prevent you from engaging in transition practices?

_____

_____

9) Other comments:

_____

_____

THANK YOU FOR YOUR HELP!

Appendix J

Social Skills Improvement System – Teacher Form

Social Skills

	How often?				**How important?**		
	Never	Seldom	Often	Almost Always	Not Important	Important	Critical
1) Asks for help from adults.	0	1	2	3	0	1	2
2) Follows your directions.	0	1	2	3	0	1	2
3) Tries to comfort others.	0	1	2	3	0	1	2
4) Says “please”.	0	1	2	3	0	1	2
5) Questions rules that may be unfair.	0	1	2	3	0	1	2
6) Is well-behaved when unsupervised.	0	1	2	3	0	1	2
7) Completes tasks without bothering others.	0	1	2	3	0	1	2
8) Forgives others.	0	1	2	3	0	1	2
9) Makes friends easily.	0	1	2	3	0	1	2
10) Responds well when others start a conversation or activity.	0	1	2	3	0	1	2
11) Stands up for herself/himself when treated unfairly.	0	1	2	3	0	1	2
12) Participates appropriately in class.	0	1	2	3	0	1	2
13) Feels bad when others are sad.	0	1	2	3	0	1	2
14) Speaks in appropriate tone of voice.	0	1	2	3	0	1	2
15) Says when there is a problem.	0	1	2	3	0	1	2
16) Takes responsibility for her/his own actions.	0	1	2	3	0	1	2
17) Pays attention to your instructions.	0	1	2	3	0	1	2
18) Shows kindness to others when they are upset.	0	1	2	3	0	1	2
19) Interacts well with other children.	0	1	2	3	0	1	2
20) Takes turns in conversations.	0	1	2	3	0	1	2
21) Stays calm when teased.	0	1	2	3	0	1	2
22) Acts responsibly when with others.	0	1	2	3	0	1	2
23) Joins activities that have already started.	0	1	2	3	0	1	2
24) Says “thank you”.	0	1	2	3	0	1	2
25) Expresses feelings when wronged.	0	1	2	3	0	1	2
26) Takes care when using other people’s things.	0	1	2	3	0	1	2
27) Ignores classmates when they are distracting.	0	1	2	3	0	1	2
28) Is nice to others when they are feeling bad.	0	1	2	3	0	1	2
29) Invites others to join in activities.	0	1	2	3	0	1	2
30) Makes eye contact when talking.	0	1	2	3	0	1	2
31) Takes criticism without getting upset.	0	1	2	3	0	1	2
32) Respects the property of others.	0	1	2	3	0	1	2

	How often?				How important?		
	Never	Seldom	Often	Almost Always	Not Important	Important	Critical
33) Participates in games or group activities.	0	1	2	3	0	1	2
34) Uses appropriate language when upset.	0	1	2	3	0	1	2
35) Stands up for others who are treated unfairly.	0	1	2	3	0	1	2
36) Resolves disagreements with you calmly.	0	1	2	3	0	1	2
37) Follows classroom rules.	0	1	2	3	0	1	2
38) Shows concern for others.	0	1	2	3	0	1	2
39) Starts conversations with peers.	0	1	2	3	0	1	2
40) Uses gestures or body appropriately with others.	0	1	2	3	0	1	2
41) Responds appropriately when pushed or hit.	0	1	2	3	0	1	2
42) Takes responsibility for part of a group activity.	0	1	2	3	0	1	2
43) Introduces herself/himself to others.	0	1	2	3	0	1	2
44) Makes a compromise during a conflict.	0	1	2	3	0	1	2
45) Says nice things about herself/himself without bragging.	0	1	2	3	0	1	2
46) Stays calm when disagreeing with others.	0	1	2	3	0	1	2

Problem Behaviors

	How often?			
	Never	Seldom	Often	Almost Always
47) Acts without thinking.	0	1	2	3
48) Is preoccupied with object parts.	0	1	2	3
49) Bullies others.	0	1	2	3
50) Becomes upset when routines change.	0	1	2	3
51) Has difficulty waiting for turn.	0	1	2	3
52) Does things to make others feel scared.	0	1	2	3
53) Fidgets or moves around too much.	0	1	2	3
54) Has stereotyped motor behaviors.	0	1	2	3
55) Forces others to act against their will.	0	1	2	3
56) Withdraws from others.	0	1	2	3
57) Has temper tantrums.	0	1	2	3
58) Keeps others out of social circles.	0	1	2	3
59) Breaks into or stops group activities.	0	1	2	3
60) Repeats the same thing over and over.	0	1	2	3
61) Is aggressive toward people or objects.	0	1	2	3
62) Gets embarrassed easily.	0	1	2	3
63) Cheats in games or activities.	0	1	2	3

	How often?			
	Never	Seldom	Often	Almost Always
64) Acts lonely.	0	1	2	3
65) Is inattentive.	0	1	2	3
66) Has nonfunctional routines or rituals.	0	1	2	3
67) Fights with others.	0	1	2	3
68) Says bad things about self.	0	1	2	3
69) Disobeys rules or requests.	0	1	2	3
70) Has low energy or is lethargic.	0	1	2	3
71) Gets distracted easily.	0	1	2	3
72) Uses odd physical gestures in interactions.	0	1	2	3
73) Talks back to adults.	0	1	2	3
74) Acts sad or depressed.	0	1	2	3
75) Lies or does not tell the truth.	0	1	2	3
76) Acts anxious with others.	0	1	2	3

	Lowest 10%	Next Lowest 20%	Middle 40%	Next Highest 20%	Highest 10%
Academic Competence					
77) Compared with other students in my classroom, the overall academic performance of this student is:	1	2	3	4	5
78) In reading, how does this student compare with other students?	1	2	3	4	5
79) In mathematics, how does this student compare with other students?	1	2	3	4	5
80) In terms of grade-level expectations, this student's skills in reading are:	1	2	3	4	5
81) In terms of grade-level expectations, this student's skills in mathematics are:	1	2	3	4	5
82) This student's overall motivation to succeed academically is:	1	2	3	4	5
83) Compared with other students in my classroom, this student's intellectual functioning is:	1	2	3	4	5

Appendix K

Student Teacher Relationship Scale

Please reflect on the degree to which each of the following statements currently applies to your relationship with this child. Using the point scale below, CIRCLE the appropriate number for each item.

1 **Definitely does not apply**	**2** **Does not really apply**	**3** **Neutral, not sure**	**4** **Applies somewhat**	**5** **Definitely applies**

1) I share an affectionate, warm relationship with this child.	1	2	3	4	5
2) This child and I always seem to be struggling with each other.	1	2	3	4	5
3) If upset, this child will seek comfort from me.	1	2	3	4	5
4) This child is uncomfortable with physical affection or touch from me.	1	2	3	4	5
5) This child values his/her relationship with me.	1	2	3	4	5
6) This child appears hurt or embarrassed when I correct him/her.	1	2	3	4	5
7) When I praise this child, he/she beams with pride.	1	2	3	4	5
8) This child reacts strongly to separation from me.	1	2	3	4	5
9) This child spontaneously shares information about him/herself.	1	2	3	4	5
10) This child is overly dependent on me.	1	2	3	4	5
11) This child easily becomes angry with me.	1	2	3	4	5
12) This child tries to please me.	1	2	3	4	5
13) This child feels that I treat him/her unfairly.	1	2	3	4	5
14) This child asks for my help when he/she really does not need help.	1	2	3	4	5
15) It is easy to be in tune with what this child is feeling.	1	2	3	4	5
16) This child sees me as a source of punishment and criticism.	1	2	3	4	5

1 **Definitely does not apply**	2 **Does not really apply**	3 **Neutral, not sure**	4 **Applies somewhat**	5 **Definitely applies**

17) This child expresses hurt or jealousy when I spend time with other children.	1	2	3	4	5
18) This child remains angry or is resistant after being disciplined.	1	2	3	4	5
19) When this child is misbehaving, he/she responds well to my look or tone of voice.	1	2	3	4	5
20) Dealing with this child drains my energy.	1	2	3	4	5
21) I've noticed this child copying my behavior or ways of doing things.	1	2	3	4	5
22) When this child is in a bad mood, I know we're in for a long and difficult day.	1	2	3	4	5
23) This child's feelings toward me can be unpredictable or can change suddenly.	1	2	3	4	5
24) Despite my best efforts, I'm uncomfortable with how this child and I get along.	1	2	3	4	5
25) This child whines or cries when he/she wants something from me.	1	2	3	4	5
26) This child is sneaky or manipulative with me.	1	2	3	4	5
27) This child openly shares his/her feelings and experiences with me.	1	2	3	4	5
28) My interactions with this child make me feel effective and confident.	1	2	3	4	5

Table 1

Empirical Investigations of Kindergarten Transition for Children with Disabilities (N = 14)

Study	Goals	Participants	*N*	Methodology	Results
Beckoff & Bender (1989)	Compare kindergarten and preschool teachers' instructional strategies and perceptions of requisite child skills for successful transition to regular kindergarten classrooms.	Preschool teachers Kindergarten teachers	67 63	Survey	Preschool teachers considered child social and academic skills to be more critical for K entry than K teachers. Groups of teachers also differed in perceptions of utility and use of instructional strategies.
Carta, Atwater, Schwarz, & Miller (1990)	Determine the degree of difference in structural factors and response requirements between special education preschool and regular education kindergarten environments	Gen. Ed. K children Spec. Ed. preschool children	9 11	Direct observations using ecobehavioral assessment instrument ESCAPE	Major differences exist between preschool and K environments (e.g., instructional arrangement, activity type). Preschool children are more often actively engaged in activities compared with K children.
Conn-Powers, Ross-Allen, & Holburn (1990)	Present and evaluate satisfaction with a collaborative school transition planning model in implementing a transition process and addressing transition-related challenges.	Parents School professionals (i.e., service providers and administrators)	28 90	Survey	Parents and professionals expressed a high degree of satisfaction with transition planning procedures and personal involvement as well as with child placement decisions in kindergarten.
Fowler, Chandler, Johnson, & Stella (1988)	Describe two transition planning instruments that identify family and child needs, family involvement in transition planning, and areas of family and school responsibility	Parents	30	Transition Planner interviews conducted during the fall (TP1) and spring (TP2) of preschool	Parents rated opportunities for family involvement in transition planning and program selection as well as characteristics of receiving programs and future teachers as most important.
Hains (1992)	Examine the impact of environmental manipulations (i.e., reduced teacher support, child behavioral checklist) intended to promote independent work with limited teacher attention	Preschool children	11	Multiple baseline across subjects design; direct behavioral observations	Preliminary support for both interventions (i.e., reduced teacher attention, behavioral checklist) was obtained for promoting work completion and child on-task behaviors during independent activities.

(table continues)

Study	Goals	Participants	*N*	Methodology	Results
Hamblin-Wilson & Thurman (1990)	Assess parent involvement in, preparation for, and satisfaction with the transition process from early intervention to special education kindergarten programs	Parents	91	Survey	Most parents indicated that they participated in transition activities and received more support from EI than K. The most highly educated parents and those that felt most supported were most satisfied.
Hutinger & Johanson (2000)	Evaluate the implementation of an early childhood special education comprehensive technology system that incorporated activities to facilitate transition into public school kindergartens for children	Children Teachers	317 43	Modified naturalistic paradigm using a mixed methods strategy incorporating qualitative and quantitative methods	Positive child (e.g., increased attending behaviors, fine- and visual-motor, social skills) and family outcomes; increased staff technology skills. Child transition success was mixed; largely dependent on policies of receiving school districts.
Johnson, Chandler, Kerns, & Fowler (1986)	Explore and summarize the experiences and perceptions of parents during their child's transition from a specialized preschool to a kindergarten program	Parents	19	Face-to-face interviews (i.e., Retrospective Transition Interview)	Parents expressed both concerns and satisfaction regarding their child's experience in transition, their own involvement, and the impact of transition on their family.
Le Ager & Shapiro (1995)	To determine the effectiveness of a template-matching kindergarten transition intervention focused on aligning major environmental and behavioral differences between preschool and kindergarten	Preschool children Intervention Assessment Only Control	61 20 20 21	Direct observations using ecobehavioral assessment instruments ESCAPE and ACCESS; teacher ratings	Template matching revealed differences in classroom ecology and behaviors. Intervention was successful in more closely aligning environments and student behavior and facilitating a successful transition.
McIntyre, Blacher, & Baker (2006)	Examine factors predictive of an adaptive transition to school for children with and without intellectual disability.	Children – TD Children – ID Mothers K teachers	43 24 67 67	Child assessments and parent and teacher behavior ratings at child age 60m, direct observations of delay of gratification tasks at child age 36m	Children with ID had poorer school adaptation. Self-regulation ability and parent- and teacher-reported social skills were positively related to adaptation. Social skills uniquely predicted adaptation to school, after accounting for child IQ and adaptive behavior.

(table continues)

Study	Goals	Participants	*N*	Methodology	Results
Redden, Forness, Ramey, Ramey, Brezeusek, & Kavale (2001)	Examine elementary special education identification rates in a national sample of Head Start children provided with systematic transition programming and a comparison sample of Head Start children without such experiences.	Children	7,079	Random assignment to conditions; school record review, psychoeducational assessments, teacher ratings	The total percentage of children eligible for special education in the transition group was higher than the non-transition group. Fewer children who had received transition programming were identified as MR and ED in 3rd grade; more were identified as SL.
Rimm-Kaufman & Pianta (1999)	Examine rates and characteristics of contact between families and schools in preschool and kindergarten both cross-sectionally and longitudinally	Preschool teachers K teachers Children – year 1 Children – year 2	13 23 290 71	Family-school contacts recorded using a daily diary method	Teacher-family contact occurred more frequently in preschool than kindergarten. Contact became more school-initiated, formal, and negative as children transitioned to kindergarten.
Rule, Fiechtl, & Innocenti (1990)	Describe the development and implementation of a curriculum to teach special education preschool children survival skills necessary to participate in common activities in regular kindergarten classrooms	Children Special Education teachers	18 2	Direct observations of kindergarten environment and child behavior; teacher ratings	Most children mastered the target survival skills, and teachers indicated that these skills improved in the regular classroom environment. Follow-up data suggests that children maintained survival skills after transitioning to kindergarten.
Vaughn, Reiss, Rothlein, & Tejero (1999)	Determine and explore perceptions of kindergarten teachers regarding the desirability and feasibility of transition practices intended to enhance kindergarten outcomes for children with special needs.	Kindergarten teachers	31	Survey	Teachers rated transition enhancement practices as significantly more desirable than feasible. Most teachers felt unprepared to teach children with special needs, although somewhat confident that they could make necessary adaptations.

Table 2

Empirical Investigations of Kindergarten Transition Practices for Typically Developing Children (N = 10)

Study	Goals	Participants	*N*	Methodology	Results
Desimone, Payne, Fedoravicius, Henrich, & Finn-Stevenson (2004)	Describe the results of implementation of a kindergarten transition intervention featuring preschool programs located within elementary schools	Pre-K teachers K teachers Parents	20 22 53	Focus groups conducted with parents and teachers; qualitative analysis of overarching themes	Intervention increased comfort level of parents and children and increased communication between pre-K and K teachers
Early, Pianta, & Cox (1999)	Explore demographic features of kindergarten classrooms and teachers pertinent in the transition	K teachers	3,595	NCEDL National survey	K classrooms differed according to several demographic variables; K teachers had little formal transition training
Early, Pianta, Taylor, & Cox (2001)	Associate a variety of kindergarten teacher and classroom variables with the use of specific types of kindergarten transition practices	K teachers	3,595	NCEDL National survey	Teachers with formal transition training utilized more transition practices; larger class sizes and late receipt of class lists linked to fewer practices *before* K entry
Grace & Brandt (2006)	Identify and synthesize beliefs about child and school kindergarten readiness held by key stakeholders in Hawaii	Pre-K teachers K teachers Parents Administrators	204 301 2153 124	Qualitative analysis of parent and teacher focus group data; quantitative analysis of statewide survey data	Child socio-emotional characteristics, school-related behaviors and skills, and physical health were viewed as critical for K readiness by all groups of stakeholders
McIntyre, Eckert, Fiese, DiGennaro, & Wildenger (2007)	Identify family experiences (i.e., concerns, needs) and involvement in kindergarten transition programming	Parents/Primary Caregivers	132	Family Experiences and Involvement survey	Parents wanted more transition information, expressed concerns about child academic skills and behavior, and wanted to take an active role in transition planning

(table continues)

LoCasale-Crouch, Mashburn, Downer, & Pianta (2008)	Examine the association between pre-kindergarten transition practices and child socio-behavioral and academic outcomes in kindergarten	K students	722	NCEDL pre-K teacher survey; quantitative analysis of student socio-behavioral and academic outcomes	There was a positive association between number of pre-K transition practices and child socio-behavioral competencies in K; effect stronger for low-SES children
Pianta, Cox, Taylor, & Early (1999)	Describe teachers' use of common kindergarten transition practices as well as identify barriers to implementing those practices	K teachers	3,595	NCEDL National survey	Most common transition practices were low intensity, involved generic contact, and occurred following the start of K; in particular within low-SES districts
Pianta, Kraft-Sayre, Rimm-Kaufman, Gercke, & Higgins (2001)	Assess outcomes of the NCEDL's Kindergarten Transition Intervention; (i.e., participant perceptions of relationships and activities)	Pre-K teachers K teachers Family workers Mothers	10 31 7 90	Surveys Family interviews	Mothers viewed pre-K teachers as the most helpful source of social support during transition; individual contact between pre-K and K teachers is infrequent
Rimm-Kaufman, Pianta, & Cox (2000)	Examine kindergarten teachers' judgments of amount and type of child problems during kindergarten transition	K teachers	3,595	NCEDL National survey	Approximately half of children had difficult transitions; top teacher-reported concern is difficulty following directions
Schulting, Malone, & Dodge (2005)	Assess the impact of transition practices on student academic outcomes in kindergarten	K students K teachers	17,212 2,991	Survey; quantitative analysis of student academic outcomes	Positive association between number of K teacher-reported transition practices and child academic outcomes at the end of K; effect stronger for low-SES children

Table 3

Child Demographics by Group at Time 1 (DD n = 52 and TD n = 52)

Variable	DD *n* (%)	TD *n* (%)	*t* or χ^2
Gender – Male	42 (80.8)	29 (55.8)	$\chi^2 = 7.50$**
Age in Months *M* (SD)	58.92 (3.76)	59.58 (3.87)	*t* = -0.87
Race			$\chi^2 = 20.41$**
White/Caucasian	33 (63.5)	20 (38.5)	
Black/African-American	5 (9.6)	24 (46.2)	
Hispanic/Latino	2 (3.9)	2 (3.9)	
Asian	1 (1.9)	1 (1.9)	
American Indian or Alaskan Native	0 (0.0)	1 (1.9)	
Two or more races	10 (19.2)	3 (5.8)	
Other	1 (1.9)	1 (1.9)	
Individualized Education Plan (IEP)	52 (100.0)	0 (0.0)	--
Primary Diagnosis			--
Developmental Delay	17 (32.7)	--	
Speech Delay	17 (32.7)	--	
Autism Spectrum Disorder	12 (23.1)	--	
Other	6 (11.5)	--	
None	0 (0.0)	52 (100.0)	
Receive Related Services	52 (100.0)	0 (0.0)	--
Number of Different Therapies *M* (SD)	2.3 (0.9)	0 (0.0)	--
Preschool Program			$\chi^2 = 28.15$***
Special Education Preschool	50 (96.2)	26 (50.0)	
Head Start	2 (3.8)	26 (50.0)	

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

Table 4

Child Demographics by Group at Time 2 (DD n = 43 and TD n = 37)

Variable	DD *n* (%)	TD *n* (%)	*t* or χ^2
Gender – Male	35 (81.4)	22 (59.5)	$\chi^2 = 4.67$*
Age in Months *M* (SD)	63.05 (3.82)	63.65 (4.32)	*t* = -0.66
Race			$\chi^2 = 12.66$*
White/Caucasian	27 (62.8)	17 (46.0)	
Black/African-American	4 (9.3)	13 (35.1)	
Hispanic/Latino	2 (4.7)	2 (5.4)	
Asian	1 (2.3)	0 (0.0)	
American Indian or Alaskan Native	0 (0.0)	1 (2.7)	
Two or more races	9 (20.9)	3 (8.1)	
Other	0 (0.0)	1 (2.7)	
Individualized Education Plan (IEP)	32 (74.4)	1 (2.7)	--
Primary Diagnosis			--
Developmental Delay	7 (16.3)	0 (0.0)	
Speech Delay	9 (20.9)	1 (2.7)	
Autism Spectrum Disorder	11 (25.6)	0 (0.0)	
Other	5 (11.6)	0 (0.0)	
None	10 (23.3)	36 (97.3)	
Receive Related Services	35 (81.4)	1 (2.7)	--
Number of Different Therapies *M* (SD)	1.8 (1.4)	0.1 (0.3)	--
Type of Kindergarten Classroom			$\chi^2 = 31.91$***
General Education	7 (16.3)	29 (78.4)	
Inclusion	30 (69.8)	8 (21.6)	
Self-Contained Special Ed.	6 (14.0)	0 (0.0)	

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

Table 5

Family Demographics by Group at Time 1 (DD n = 52 and TD n = 52)

Variable	DD *n* (%)	TD *n* (%)	*t* or χ^2
Respondents			$\chi^2 = 5.28$
Biological Mother	39 (75.0)	44 (84.6)	
Biological Father	4 (7.7)	4 (7.7)	
Adoptive Mother	5 (9.6)	0 (0.0)	
Other Relative	2 (3.9)	2 (3.9)	
Legal Guardian	2 (3.9)	2 (3.9)	
Age in Years *M* (SD)	36.3 (7.7)	33.7 (7.4)	$t = 1.76$
Education			$\chi^2 = 3.18$
None	7 (13.5)	7 (13.5)	
High School/GED	10 (19.2)	15 (28.9)	
Some College	16 (30.8)	9 (17.3)	
B.S. or Higher	18 (34.6)	21 (40.4)	
Employed Part/Full-time	33 (63.5)	36 (69.2)	$\chi^2 = 0.24$
Household (Living with partner)	35 (67.3)	30 (57.7)	$\chi^2 = 1.03$
Sole-Caregiver Household	10 (19.2)	16 (30.8)	$\chi^2 = 1.85$
Annual Family Income			$\chi^2 = 0.56$
$14,999 or less	14 (26.9)	12 (23.1)	
$15,000 - $54,999	20 (38.5)	22 (42.3)	
$55,000 - $99,999	8 (15.4)	7 (13.5)	
$100,000 or more	7 (13.5)	9 (17.3)	
Receive Government Aid	30 (57.7)	23 (44.2)	$\chi^2 = 2.92$

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

Table 6

Preschool Teacher Demographics at Time 1 (N =40)

Variable	*N (%)*
Gender - Female	39 (97.5)
Race - White/Caucasian	36 (90.0)
Years Teaching in Current Placement *M* (SD)	5.4 (6.4)
Preschool Teaching Experience Only	23 (57.5)
Education – Degree Level	
Master's	28 (70.0)
Bachelor's	5 (12.5)
Associate's	5 (12.5)
Vocational/CDA	1 (2.5)
Certification in Early Childhood Special Ed.	26 (65.0)
Type of Classroom	
Inclusion	36 (90.0)
Self-Contained	1 (2.5)
General Education	3 (7.5)
Preschool Program	
Special Education Preschool	32 (80.0)
Head Start	8 (20.0)
Number of Participating DD Students *M* (SD)	1.3 (1.2)
Number of Participating TD Students *M* (SD)	1.4 (1.9)

Table 7

Kindergarten Teacher Demographics at Time 3 (N = 49)

Variable	*N (%)*
Gender - Female	47 (95.9)
Race - White/Caucasian	49 (100.0)
Years Teaching in Current Placement *M* (SD)	10.4 (7.4)
Kindergarten Teaching Experience Only	9 (18.4)
Education – Degree Level	
Master's	47 (95.9)
Bachelor's	2 (4.1)
Certification Type	
Permanent	43 (87.8)
Provisional	6 (12.2)
Area of Specialization/Certification	
Elementary Education	41 (83.7)
Early Childhood	9 (18.4)
Special Education	17 (34.7)
Other	18 (36.7)
Type of Classroom Setting	
General Education	27 (55.1)
Inclusion	20 (40.8)
Self-Contained Special Education	2 (4.1)

Table 8

Family Concerns by Group at Time 1 (DD n = 52 and TD n = 52)

	DD	TD	
Variable	*M* (SD)	*M* (SD)	*t*
Total Concerns	24.3 (7.5)	16.0 (4.9)	6.68***
Academics	2.08 (1.15)	1.46 (.80)	3.04**
Behavior problems	2.56 (1.20)	1.85 (.94)	3.38**
Following directions	2.67 (1.00)	1.63 (0.91)	5.53***
Getting along with peers	2.31 (1.06)	1.52 (0.75)	4.38***
Getting along with teacher	1.90 (0.91)	1.20 (0.57)	4.72***
Getting used to a new school	2.77 (1.08)	2.27 (0.95)	2.51*
Kindergarten readiness	2.69 (1.09)	1.75 (0.97)	4.62***
Separation from family	1.67 (0.92)	1.56 (0.85)	0.66
Toilet training	2.04 (1.24)	1.08 (0.44)	5.29***
Ability to communicate needs	2.79 (1.26)	1.42 (0.67)	6.92***
Other concerns	0.83 (1.62)	0.25 (0.88)	2.26*

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

Table 9

Family Concerns by Group at Time 2 (DD n = 43 and TD n = 37)

	DD	TD	
Variable	*M* (SD)	*M* (SD)	*t*
Total Concerns	22.7 (7.4)	14.8 (2.8)	6.09***
Academics	2.58 (1.14)	1.44 (0.74)	5.35***
Behavior problems	2.56 (1.24)	1.61 (0.77)	4.15***
Following directions	2.79 (1.01)	1.86 (0.76)	4.65***
Getting along with peers	2.02 (1.10)	1.33 (0.54)	3.63**
Getting along with teacher	1.79 (1.04)	1.17 (0.45)	3.57**
Getting used to a new school	2.40 (1.22)	1.75 (0.81)	2.82**
Kindergarten readiness	2.23 (1.21)	1.25 (0.60)	4.67***
Separation from family	1.60 (0.85)	1.33 (0.72)	1.52
Toilet training	1.79 (1.04)	1.06 (0.23)	4.52***
Ability to communicate needs	2.33 (1.13)	1.36 (0.59)	4.86***
Other concerns	0.65 (0.43)	0.65 (1.38)	0.01

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

Table 10

Family Involvement in Transition Practices Across Time 1 and 2 (DD n = 43 and TD n = 37)

Variable	DD	TD	χ^2
	N (%)	*N* (%)	
Monthly contact with preschool teacher	39 (90.7)	33 (89.2)	0.05
Annual meetings with preschool staff	40 (93.0)	31 (83.8)	1.70
Attended transition planning meeting with preschool staff	36 (83.7)	19 (51.4)	9.70**
Attended transition planning meeting with kindergarten staff	29 (67.4)	14 (37.8)	7.01**
Visit kindergarten class or elementary school	35 (81.4)	30 (81.8)	0.00
Member of transition planning team at preschool	13 (30.2)	3 (8.1)	6.08*
Attended a transition information meeting at preschool or kindergarten	23 (53.5)	17 (46.0)	0.45
Phone call from kindergarten teacher	10 (23.3)	1 (2.7)	7.08**
Home visit from kindergarten teacher	2 (4.7)	0 (0.0)	1.77
Attended a kindergarten orientation session	35 (81.4)	28 (75.7)	0.39
Received written communication regarding transition from preschool	29 (67.4)	25 (67.6)	0.00
Received written communication regarding transition from kindergarten	31 (72.1)	31 (83.8)	1.56
Attended kindergarten registration	42 (97.7)	32 (86.5)	3.59
Attended a kindergarten open house	35 (81.4)	31 (83.8)	0.08

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

Table 11

Preschool Teacher Involvement in Transition Practices at Time 1 (DD n = 51 and TD n = 47)

Variable	DD	TD	χ^2
	N (%)	*N* (%)	
Monthly contact with family	51 (100.0)	44 (93.6)	3.36
Meetings with student's school team	47 (92.2)	22 (46.8)	23.15***
Transition planning meeting with student's preschool team	45 (88.2)	36 (76.6)	1.75
Transition planning meeting with student's kindergarten team	33 (64.7)	11 (23.4)	16.24***
Preschool students visit kindergarten classroom	27 (52.9)	22 (46.8)	0.37
Preschool students visit assigned kindergarten classroom	14 (27.5)	17 (36.2)	0.86
Member of transition planning team	35 (68.6)	10 (21.3)	22.08***
Receive phone call from kindergarten teacher	17 (33.3)	4 (8.5)	8.95**
Complete a home visit for student	39 (76.5)	22 (46.8)	9.16**
Provide family with written communication regarding transition	46 (90.2)	41 (87.2)	0.22
Coordinate curriculum with kindergarten teacher	9 (17.6)	9 (19.1)	0.04
Kindergarten teacher visit to preschool classroom	30 (58.8)	10 (21.3)	14.27***
Provide kindergarten orientation to students	29 (56.9	35 (74.5)	3.35
Provide kindergarten orientation to parents	28 (54.9)	31 (66.0)	1.25

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

Table 12

Kindergarten Teacher Involvement in Transition Practices at Time 3 (DD n =32 and TD n = 25)

Variable	DD	TD	χ^2
	N (%)	*N* (%)	
Monthly contact with family	29 (90.6)	21 (84.0)	0.57
Meetings with student's school team	24 (75.0)	8 (32.0)	10.54**
Transition planning meeting with student's preschool team	11 (34.4)	6 (24.0)	0.72
Transition planning meeting with student's kindergarten team	21 (65.6)	16 (64.0)	0.02
Preschool students visit kindergarten classroom	22 (68.8)	17 (68.0)	0.00
Preschool students visit assigned kindergarten classroom	18 (56.3)	17 (68.0)	0.82
Member of transition planning team	10 (31.3)	4 (16.0)	1.76
Receive phone call from preschool teacher	5 (15.6)	4 (16.0)	0.00
Complete a home visit for student	2 (6.3)	1 (4.0)	0.14
Provide family with written communication regarding transition	15 (46.9)	20 (80.0)	6.50*
Coordinate curriculum with preschool teacher	5 (15.6)	2 (8.0)	0.76
Preschool teacher visit to kindergarten classroom	4 (12.5)	4 (16.0)	0.14
Provide kindergarten orientation to students	29 (90.6)	20 (80.0)	1.31
Provide kindergarten orientation to parents	31 (96.9)	24 (96.0)	0.03

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

Table 13

Correlations between Preschool Child Behavioral Variables and Parent and Teacher Involvement

Variable	1	2	3	4	5	6	7	8
1. Total Family Involvement	1.00							
2. Total Preschool Teacher Involvement	.17	1.00						
3. Total Kindergarten Teacher Involvement	.03	.01	1.00					
4. Total Social Skills - Parent (SSIS-P)	-.06	-.45***	.01	1.00				
5. Total Problem Behavior – Parent (SSIS-P)	-.09	.34**	-.17	-.55***	1.00			
6. Total Social Skills – Teacher (SSIS-T)	-.14	-.35***	-.21	.49***	-.14	1.00		
7. Total Problem Behavior - Teacher (SSIS-T)	.05	.42***	.01	-.40***	.40***	-.50***	1.00	
8. Total Adaptive Behavior (VABS-2)	-.14	-.46***	.04	.69***	-.42***	.54***	-.48***	1.00

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

Table 14

Kindergarten Outcomes by Group (DD n =32 and TD n = 25)

Variable	DD	TD	*t*
	M (SD)	*M* (SD)	
Total Social Skills – SSIS – T	87.8 (17.2)	99.0 (11.4)	-2.81**
Total Problem Behavior – SSIS – T	105.0 (13.2)	98.9 (11.3)	1.86
Total Academic Competence – SSIS – T	86.5 (16.9)	101.8 (13.9)	-3.66**
Total STRS	115.4 (12.3)	121.1 (10.3)	-1.86
Transition Outcomes Composite *z*-score	-0.3 (0.9)	0.3 (0.7)	-2.55*

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

Table 15

Correlations between Predictor Variables and Kindergarten Outcomes by Group (DD n = 32; TD n = 25)

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Transition Outcomes Composite *z*-score	--	-.06	.16	.28	-.49*	-.05	-.16	-.14	-.47*	-.07	-.42*	.03
2. Child Gender	-.17	--	-.06	.33*	-.26	-.04	-.29*	-.09	-.13	.08	-.11	-.18
3. Total Family Income	.12	.13	--	.21	-.13	-.20	-.20	.16	-.12	.33	-.13	-.29
4. Adaptive Behavior Composite (VABS)	.47**	-.10	.13	--	-.32	-.30	-.37*	-.15	-.23	.29	-.32	.50*
5. Total PB – SSIS-T (pre)	-.62***	.10	-.17	-.30*	--	.25	.33*	-.08	.36*	-.14	.62***	-.33
6. Total PB – SSIS-P	-.20	-.25	-.30*	-.10	.33*	--	.15	.31	.01	-.09	.31*	-.08
7. Tot. Family Concerns (Time 1)	-.15	-.02	.02	-.49***	.32*	.44**	--	.12	.45**	-.08	.27	-.11
8. Tot. Family Concerns (Time 2)	-.08	-.19	-.12	-.39*	.20	.54***	.70***	--	-.19	-.12	-.03	-.10
9. Tot. Pre. Teacher Concerns	-.49**	.15	-.38**	-.48**	.57***	.26	.29*	.31*	--	-.16	.34*	-.18
10. Total Family Involvement	.05	.24	.21	-.08	.03	-.35*	-.04	-.13	.15	--	-.18	-.27
11. Total Pre, Teacher Involvement	-.23	.02	-.02	-.25	.03	.17	.38**	.31*	-.01	.41**	--	-.28
12. Total K Teacher Involvement	.13	.14	.26	-.01	.08	-.33	.17	.17	.13	.21	.21	--

Note. *$p < .05$, **$p < .01$, ***$p < .001$. Values above the diagonal represent correlations among the TD group and values below the diagonal represent correlations among the DD group.

Table 16

Overall Correlations between Predictor Variables and Transition Outcomes (N = 57)

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Transition Outcomes Composite	--											
2. Child Gender	-.00	--										
3. Total Family Income	.16	.02	--									
4. Adaptive Behavior Composite (VABS)	.53***	.23*	.13	--								
5. Total PB – SSIS-T (preschool)	-.62***	-.19	-.17	-.48***	--							
6. Total PB – SSIS-P	-.28*	-.23*	-.23*	-.42***	.40***	--						
7. Total Family Concerns (Time 1)	-.30*	-.25**	-.05	-.66***	.44***	.48***	--					
8. Total Family Concerns (Time 2)	-.23	-.26*	-.04	-.59***	.28*	.59***	.70***	--				
9. Total Preschool Teacher Concerns	-.56***	-.16	-.21*	-.66***	.56***	.35***	.55***	.43***	--			
10. Total Family Involvement	-.08	.08	.26*	-.14	.05	-.09	.10	.05	.17	--		
11. Total Preschool Teacher Involvement	-.37**	-.15	-.09	-.46***	.42***	.34**	.43***	.27*	.34**	.17	--	
12. Total K Teacher Involvement	.06	-.05	.02	.04	.01	-.17	.13	.15	.06	.03	.01	--

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

Table 17

Summary of Hierarchical Regression Analysis for Variables Predicting the Kindergarten Transition Outcomes Composite in the DD group (n =32)

Variable	B	SE B	β
Step 1: Adaptive Behavior Composite (VABS-2)	.013	.013	.185
Step 2: Preschool Total Problem Behavior (SSIS-T)	-.036	.014	-.478
Step 3: Preschool Teacher Total Concerns	-.147	.217	-.130
Step 4: Preschool Teacher Total Involvement	-.018	.06	-.044

Note. R^2 = .21 (p = .013) for Step 1; R^2 Δ = .24 (p = .002) for Step 2; R^2 Δ = .01 (p = .507) for Step 3; R^2 Δ = .00 (p = .791) for Step 4.

Table 18

Summary of Hierarchical Regression Analysis for Variables Predicting the Kindergarten Transition Outcomes Composite in the TD group (n =25)

Variable	B	SE B	β
Step 1: Adaptive Behavior Composite (VABS-2)	.000	.022	.002
Step 2: Preschool Total Problem Behavior (SSIS-T)	-.018	.019	-.302
Step 3: Preschool Teacher Total Concerns	-.300	.266	-.286
Step 4: Preschool Teacher Total Involvement	-.028	.085	-.103

Note. R^2 = .05 (p = .359) for Step 1; R^2 Δ = .13 (p = .151) for Step 2; R^2 Δ = .08 (p = .235) for Step 3; R^2 Δ = .01 (p = .743) for Step 4.

Table 19

Summary of Hierarchical Regression Analysis for Variables Predicting the Kindergarten Transition Outcomes Composite in the Overall Sample (n =57)

Variable	B	SE B	β
Step 1: Adaptive Behavior Composite (VABS-2)	.006	.009	.115
Step 2: Preschool Total Problem Behavior (SSIS-T)	-.028	.010	-.417
Step 3: Preschool Teacher Total Concerns	-.206	.150	-.227
Step 4: Preschool Teacher Total Involvement	-.013	.047	-.037

Note. R^2 = .29 (p < .001) for Step 1; R^2 Δ = .16 (p = .001) for Step 2; R^2 Δ = .02 (p = .176) for Step 3; R^2 Δ = .00 (p = .780) for Step 4.

Figure Caption

Figure 1. Description of methods, measures, and informants to be utilized at each time point of the study.

Figure 1

TIME 1 PRESCHOOL (Spring 2009 – May/June)	**TIME 2 KINDERGARTEN ENTRY (September 2009)**	**TIME 3 KINDERGARTEN (October/November 2009)**
(*N* = 104) (DD *n* = 52; TD *n* = 52)	**(*N* = 80)** (DD *n* = 43; TD *n* = 37)	**(*N* = 57)** (DD *n* = 32; TD *n* = 25)
Parent: **FEIT** – transition practices; *questionnaire* **SSIS-P** – social skills, problem behavior; *questionnaire* **Vineland** 2– adaptive behavior; *phone interview*	**Parent:** **FEIT** – transition practices; *phone interview*	
Preschool Teacher: **Demographics Form** **TPOT –** transition practices; *questionnaire* **SSIS-T –** social skills, problem behavior; *questionnaire*		**Kindergarten Teacher:** **Demographics Form** **TPOT –** transition practices; *questionnaire* **SSIS-T –** social skills, problem behavior; *questionnaire* **STRS –** student-teacher relationship; *questionnaire*

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