Ready or not, here they come: a look at kindergarten readiness

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Abstract
This study examined the subject of kindergarten readiness. Both socially and academically mature and immature children were included in this study. An intervention model was presented for children who assessed behind their peers socially and academically. It was documented and reported that children who were assessed as below their peers socially and academically were able to make good progress through the intense one-on-one interventions performed; however, their growth was not enough to completely catch them up to their non-struggling peers. Results were shared and recommendations were made for future children academically and socially immature.
READY OR NOT, HERE THEY COME: A LOOK AT KINDERGARTEN READINESS

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ABSTRACT

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Ready or not—Here they come! A look at kindergarten readiness

Introduction

Description of Topic

Kindergarten once was a time for young children to play, explore, and practice social skills through peer interaction. Over the years more and more academic expectations and practices have been “pushed down” through the grades. Today kindergarten classrooms more resemble academic settings where many of the learning through play experiences have been marginalized in this academic atmosphere. Many parents are unaware of this transformation of the kindergarten classroom. Consequently, there are children who start kindergarten before their academic and social skills are sufficiently developed for them to predictably succeed. These children often struggle with school from the beginning. Once these children fall behind, it can be a struggle to for them to catch up with their peers. Research suggests that children, who arrive at kindergarten unprepared for success in school, have a difficult time closing that preparation gap. That gap often persists over time, especially for children with other barriers to success (Pavelchek, 2005). This paper will focus on children who start kindergarten when they are academically and socially less mature than their classmates. The researcher will examine whether these children, who start out their school careers behind, can catch up with their peers through intense one-on-one and small group interventions.

Rationale

As a kindergarten teacher, this topic is personally relevant to my teaching. It seems that year after year children enroll in kindergarten in my building who are not ready either academically or socially and struggle throughout elementary school. I want to learn if there
is something that can be done to help resolve this problem early on in their young lives and educational careers. I believe children should be successful and these children are often frustrated, even at the kindergarten level, because they are experiencing less success than parents and teachers would expect.

**Purpose of the Study**

The purpose of this study is to closely look at whether an intense one-on-one intervention model is effective in raising the academic and social appropriateness of kindergarteners who start kindergarten less mature than their peers.

**Significance of the Study**

This research is important because it is relevant to elementary teachers and kindergarten teachers in particular as it will help them better understand and serve young learners who begin kindergarten before they are academically or socially mature. This research may also be of value as it may describe an intervention model to help raise student achievement for those academically and socially less mature kindergarteners. This research may be a tool for overcoming the social and academic barriers these immature children face. If there is a way such students can achieve academic parity with their peers then it is important that all kindergarten teachers become aware of how this can be accomplished.

Yet, many teachers are faced with children who struggle both academically and socially each year in our classrooms. As teachers we want school to be a positive experience for all students. Unfortunately for those who struggle early on it is often not such a positive experience. If the intervention model described here can help teachers better serve these children then they can better meet their mission of providing all students with the opportunity for academic success.
Research Questions

The research questions guiding this research project were as follows:

- What is the influence of kindergarten readiness on student academic success?
- Are children who start kindergarten before district measures of academic preparedness suggest they are academically mature able, with specific targeted instruction and intervention, to catch their peers who start school with a higher level of academic maturity according to those same measures?
- Are children measured as socially or academically unprepared to start kindergarten but who start anyway able, with specific targeted intense small group and one-on-one instruction, to approximate peer academic performance by the end of kindergarten?
Literature Review

Kindergarten readiness is a much discussed and controversial topic. Should a child be ready for school, or should the school be ready for the child? There is substantial support in the literature for both perspectives. Both teachers and parents have differing opinions where this issue is concerned. Is there a right or wrong answer? Who gets to decide? What is best for the child? How do we decide? What information might inform the debate?

Certainly performance outcome data for selected kindergarten populations can provide some insight into the relative benefits of the kindergarten experience. So we might ask, what is the purpose of kindergarten? And, are there benefits to kindergarteners being in school if they are not necessarily academically or socially as developed as their typical classmate? In other words, for those with developmental concerns, does the level of kindergarten readiness predict student success in a kindergarten classroom? If the answer is yes and the prediction is for limited success can this prediction be countered successfully through systematic intervention?

A thorough examination of this issue requires explanation of a number of related and integrated literacy and readiness topics. This literature review will include a close examination of both academic readiness and social readiness, the importance of children being ready to start kindergarten, the importance of kindergartens and elementary schools being ready for all children, what parents can do to help decide if and when their child is ready to start school, and related health and socio-economic factors that may inhibit readiness.
Readiness Versus Emergent Literacy

The meaning of a child entering school ready to learn has been subjected to various interpretations by early childhood and elementary school teachers, administrators, policy makers, and families (Kagan, 1992). Some educators and clinicians embrace a naturalist or maturational perspective on school readiness. From that perspective, individual children mature at different rates and children who are immature are at risk for school failure (Ames, 1986).

In contrast, developmental theories emphasize that all children are ready to learn when the content of what is being learned, and the way the content is taught, is appropriate for the child’s developmental capabilities (Piaget, 1950; Vygotsky, 1978). From that perspective, learning comes from the interaction between a child’s individual abilities and the environment, including the child’s interactions and collaborations with adults and peers.

There are varying opinions on the strategies for teaching young children to read and write. Some educators believe that instruction in conventional literacy should be based on early, explicit, and intensive instruction in sound-letter relationships to develop children’s comprehension and decoding skills. Others emphasize immersion in language and literature (Johnson, 1999). Johnson also stated that before the concept of emergent literacy was introduced, it was believed that children must learn to read before they could learn to write. Some educators still believe that this approach is the best way to teach young children (Johnson, 1999).

In 1966, New Zealand researcher Marie Clay introduced the term emergent literacy to describe the behaviors seen in young children when they use books and writing materials to
imitate reading and writing activities, even though the children cannot read or write in the conventional sense (Ramsburg, 1998).

Some educators believe that children must reach a certain level of physical and neurological maturation before they are ready for reading and writing. This perspective, also called “emergent literacy” by its proponents, suggests that there is a point in time when a child is ready to begin to learn to read and write rather than a developmental continuum of reading and writing acquisition (Emergent Literacy Project, n.d.).

**Kindergarten Readiness**

In 1994, Congress enacted and President Clinton signed into law Goals 2000: *Educate America Act*. The goal of this act was that by the year 2000, all children in America would start school ready to learn (Espinosa, Thornburg, & Matthews, 1997). There were three objectives accompanying this goal. The first was that all children would have access to high-quality and developmentally appropriate preschool programs that help prepare children for school. The second objective was that every parent in the United States would be a child’s first teacher and devote time each day to helping such parent’s preschool child learn, and parents would have access to training and support that they need to accomplish those goals. The third and final objective is that children would receive the nutrition, physical activity experiences, and health care needed to arrive at school with healthy minds and bodies, to maintain the mental alertness necessary to be prepared to learn, and the number of low-birth weight babies would be significantly reduced through enhanced prenatal health systems (Espinosa, Thornburg, & Matthews, 1997). This goal and its objectives seemed to respond to the belief in the importance of school readiness for children and their families.
Yet, the results of a national survey of more than 7,000 kindergarten teachers conducted by the Carnegie Foundation for the Advancement of Teaching found that more than a third (35%) of all entering kindergarten students were judged as not ready for school (Espinosa, Thornburg, & Mathews, 1997). In this survey teachers were asked a general question about how prepared their children were for formal education along with specific questions on physical well-being, self-confidence, emotional maturity, language richness, general knowledge, and moral awareness. When participating teachers were asked to describe the areas in which children were the most behind, they most frequently sited a lack of proficiency in language development. Most teachers also identified emotional maturity, general knowledge level, and moral awareness as moderate or serious problems. Parent education was most frequently suggested as a way to improve children’s readiness for school. It appears that higher parental education might certainly have a positive correlation with the child’s education and school success.

In a more recent survey conducted by Dave Pavelchek (2005) similar results were reported. In an effort to learn about the school readiness of children in Washington State, and better understand teachers’ perspectives regarding school readiness, the Office of Superintendent of Public Instruction (OSPI) commissioned a survey of kindergarten teachers. Dave Pavelchek from Washington State University surveyed 398 kindergarten teachers on the topic of student preparedness for kindergarten. His results indicated that:

1) Teachers report that, overall, 44 percent (less than half) of the incoming students in 2004 were adequately prepared for kindergarten.

2) Teachers reported a significant lack of preparedness for all of the 24 specific indicators used in the survey. The low level of overall preparedness for kindergarten does not appear to be caused by a single factor, domain, or subset of factors.
3) Teacher comments included perceptions that student preparedness for school has decreased over time and school system expectations of academic progress in kindergarten have increased.

4) Most teachers reported that they routinely screen or assess incoming kindergartener students in order to inform instruction (79 percent).

5) Teachers report that nearly half (46 percent) of the entering students had previously attended a preschool or childcare.

6) Teachers received information about entering students from prior preschool teachers or childcare providers in only about one-third of the cases in which the teacher reported that there was a prior provider.

7) Student preparedness levels tended to be lower in classes with high rates of poverty.

In a study conducted by Espinosa, Thornburg, & Matthews (1997) of the beliefs of Missouri teachers, it was found that kindergarten teachers in rural Missouri appear to perceive fewer of their children as not ready to participate successfully in school (Espinosa, Thornburg, & Matthews, 1997). However, most of the Missouri teachers reported that children are less ready than they were five years ago and they repeatedly cite parents’ unavailability as the primary reason. Parent unavailability was connected to the fact that more parents worked and, therefore, had less time for individual attention for their children. Espinosa et al (1997) state, “The concept of quality time could be considered a myth. Quality time happens in the middle of quantity time. These kids are not getting the quantity time they need and deserve.” In Espinosa’s study, teachers have a clear understanding that young children’s developmental status is being compromised by the inaccessibility of their parents (Espinosa, Thornburg, & Mathews, 1997). They perceive that as the amount of time parents spend with their young children decreases, children’s readiness for school also decreases. However, when asked about the influences of childcare on children’s school
readiness, many of these same teachers cited a good preschool as important in preparing children for school (Espinosa, Thornburg, & Mathews, 1997).

According to Espinosa et al (1997), teachers who believed children were less ready today than five years ago all mentioned some type of neglect or breakdown of the family structure such as, “Dysfunctional families are very common,” “Babies having babies.” (Espinosa, Thornburg, & Mathews, 1997, p. 123). The same teachers participating in this study believe children are not receiving the nurturing and early stimulation they need because parents are more likely to be stressed, too young, on drugs, or simply unable to adequately parent. The teachers who stated that children are more ready today frequently mentioned a good preschool experience as contributing to the children’s academic preparedness (Espinosa, Thornburg, & Mathews, 1997). These findings also reveal serious concerns kindergarten teachers have regarding the quality of care many young children are receiving; reinforcing the belief among many kindergarten teachers that high quality preschool experiences can enhance young children’s readiness for school.

Concerns that some children from low income or less educated families may be doubly disadvantaged by being less likely to receive stimulating care at home and less likely to be enrolled in educationally oriented care outside the home have led policymakers to fund early education and child care programs targeted toward these children. One recent response has been the creation of pre kindergarten programs, early education programs funded by local school districts. Pre kindergarten has emerged in an arena that already includes several types of early childhood education and care programs such as Head Start, preschools, nursery schools, and center based day care centers. Although policymakers treat early education and child care as separate programmatic entities, early childhood experts argue that high quality
care and education involve the same key components: physical safety, warm and responsive child-caregiver interactions, and cognitively stimulating learning opportunities (Magnuson, Meyers, Ruhm, & Waldfogel, 2004).

In a preschool in which the curriculum is developmentally appropriate, children can and will be enthusiastic about the activities because teachers build and plan them around children's interests (Cassidy, Mims, Rucker, & Boone, 2003). The curricula in these types of classrooms are not only developmentally appropriate and child-centered, but they also serve to prepare children for kindergarten. It is critical that a developmentally appropriate curriculum be coupled with a developmentally appropriate assessment system that documents the progress of each child in the classroom (Cassidy, Mims, Rucker, & Boone, 2003).

**Academic and Social Readiness**

Typically, the results of kindergarten readiness testing place children in one of two categories of development; those classified as ready to start kindergarten and those who are not. There are different reasons why children could be classified in either category. For example Kagan (1992, 1994) suggests there are two types of readiness: readiness to learn and readiness for school. Readiness to learn emphasizes the developmental processes that form the basis for learning a particular subject matter or content. Readiness for school, on the other hand, implies that each child must attain a specific set of skills, such as listening, feeling confident, and following directions, before he or she is ready to enter kindergarten. From a social readiness perspective, children who are immature relative to peers, particularly in behavioral development, are at risk for school failure (Ames, 1986). Referring to Kagan's work, the distinctions he draws between readiness for school and readiness to learn can become contentious. In a study of parent and teacher views on developmental competencies
for kindergarten, Knudsen-Lindauer and Harris (1989) reported that teachers and parents have a different view on what is important at the kindergarten level. Teachers believe that what is most essential for school success is children’s readiness for school. Parents believe children should be ready to learn. Both teachers and parents agreed that the three most important skills for children entering kindergarten are listening, feeling confident, and following directions. Parents ranked counting, reading, and writing as being far more important than did teachers (Knudsen-Lindauer & Harris, 1989). Teachers reported thinking children’s enthusiasm, effective communication, and appropriate behaviors were critical kindergarten readiness skills (Heaviside & Ferris, 1993; Powell, 1995). Overall, teachers tended to view academic skills as less important than did parents (Olmsted & Lockhart, 1995; Harradine & Clifford, 1996).

Many teachers and researchers believe that a child’s ultimate success in school does not depend primarily on knowledge or academic skills (West, Germino-Hausken, & Collins, 1993). Rather, they view non-cognitive aspects of school readiness—such as a child’s physical health and motor coordination, emotional well-being, ability to cooperate with other children, curiosity, and eagerness to learn—as being equally or more important for school success (Kagen, Moore, & Bredekamp, 1995). The majority of teachers and parents rate a child’s ability to sit still and pay attention in class as essential or very important for school readiness (West, Germino-Hausken, & Collins, 1993). Teachers also rate children’s ability to communicate needs and wants to others as crucial for school success (Heaviside & Ferris, 1993).

Children who are socially mature when they begin kindergarten tend to be more successful than children whose social development is behind that of their peers (Espinosa,
Thornburg, & Matthews, 1997). Academics is not at the top of the list of what is important for young children to be able to do to be considered ready for school. Playing well with others, cooperating, listening, and paying attention in class are considered the essentials for success.

**Socially and Academically Mature Children and the Kindergarten Classroom**

Children's literacy development begins long before children start formal instruction in elementary school (Allington & Cunningham, 1996; Clay, 1991). Literacy development is nourished by social interactions with caring adults and exposure to literacy materials, such as children's storybooks (Sulzby, 1991). Children's literacy efforts are best supported by adult's interactions with children through reading aloud and conversation and by children’s social interactions with each other (McGee & Richgels, 1996). Children who are read to develop background knowledge about a range of topics and build a large vocabulary, which assists in later reading comprehension and development of reading strategies (Sulzby, 1985b; Sulzby, Buhle, & Kaiser, 1999). The International Reading Association and the National Association for the Education of Young Children (1998) confirm that the first eight years of a child's life are the most important years for literacy development, and that developmentally appropriate practices at home and at school are crucial for ensuring that children become successful readers. Some children, however, enter elementary school without a strong literacy background (Burns, Griffin, and Snow 1999). The children most at risk of developing reading problems are those who begin school with low language skills, less phonemic awareness and letter knowledge, and less familiarity with literacy tasks and underlying purposes. Successes or struggles with reading can be observed early in a child's life. Research done by Burns, Griffin, and Snow (1999) demonstrate that the more children
know about language and literacy before they begin formal schooling, the better equipped they are to succeed in reading.

Like early literacy development, children's cognitive, emotional, and physical readiness at the time of school entry has also been shown to be strongly related to later academic achievement and school completion (Ladd & Price, 1987; Reynolds, 1991; Schweinhart, Barnes, & Weikert, 1993). The educational psychologist Benjamin Bloom once remarked that, "early childhood is a time to learn how to learn" (D'Ordine, 2002). According to Piaget, young children need sensory experiences (i.e., see it, hear it, touch it) in their environment to enable them to construct reality. Universally, this period between infancy through age six is critical for hands-on, experiential learning (D'Ordine, 2002). D'Ordine (2002) stated that since learning begins at the concrete operational level, the learner could then generalize to the abstract. D'Ordine (2002) also noted that kindergarteners also benefit from engaging in gross motor as well as fine motor activities. Some have come to school having never used scissors or pencils and need lots of practice. Paper and pencil tasks are too overwhelming for many.

Research completed by Zeng & Zeng (2005) suggested that developmentally appropriate programs for children ages 0-8 help facilitate children's creative development, divergent thinking and verbal skills; in addition, young children attending child centered programs seemed more confident regarding their own mental abilities. In contrast, children exhibit more anxiety and stress in less developmentally appropriate environments. Developmentally inappropriate practices could produce detrimental effects on children's natural predisposition to learn because they stifle their intrinsic motivation to explore; more
seriously, they may be linked to psychological problems such as anxiety, a sense of guilt, inferiority, or learned helplessness (Zeng & Zeng, 2005).

According to the National Association for the Education of Young Children (NAEYC) guidelines for developmentally appropriate practice (1986), teachers can best enhance each child’s learning and development by creating a warm and responsive environment where children are motivated to engage in activities that are both personally meaningful and intellectually stimulating. To this end, teachers should try to get to know each child, their personality and their social and developmental status, so that they can select tasks that tap into what Vygotsky (1978) describes as the “zone of proximal development.” Teachers can provide scaffolding along the way, whenever necessary, so that a child not only has to work at the edge of his developing capacities but can persist through the tasks. Yet, currently many academic oriented early childhood programs insist on formal instruction, which typically includes drills of isolated skills out of proper contexts (Zeng & Zeng, 2005). It only seems appropriate that educators of pre kindergarten and kindergarten age children would be aware of these helpful learning tools identified above and apply them to their preschool and kindergarten programs.

Schools Need to be Ready For Children

The previous section detailed reasons why it is important for children to be classified as ready to start kindergarten. There is also the co-incidental issue of how important it is for schools to be ready for all types of children at all different stages of development. Why is it so important for children to be ready to enter kindergarten? After all, is it not the job of early educators to teach young children what they need to know to be successful students? There is substantial research suggesting schools should be ready for all children. According to
Cassidy, Mims, Rucker, and Boone (2003) the focus on readiness in early childhood education in the United States has increased dramatically in the face of growing concerns about the number of failing students and failing schools. The authors state that it is important to note that the concept of readiness cannot be addressed by focusing only on the children. We must scrutinize the environment into which they are entering (Cassidy, Mims, Rucker, & Boone, 2003). Consistent with Cassidy et al, the North Carolina Schools (2000) identified the “Cornerstones of Ready Schools” as part of their requisite components of school settings that allow children to be successful (Cassidy, Mims, Rucker, & Boone, 2003).

First, North Carolina teachers must have knowledge of growth and development of typically and atypically developing children; Second, teachers need knowledge of the strengths, interests, and needs of each individual child; Third, teachers need knowledge of the social and cultural contexts in which each child and family lives; Fourth, teachers must have the ability to translate developmental knowledge into developmentally appropriate practices (p. 194).

The concept of ready schools implies the need for flexibility to address individual differences in the physical environment, in the curriculum, and in the teaching strategies employed. The degree to which professionals in schools possess an in-depth knowledge of child development, and their ability to use this knowledge when making decisions about individual children, is a fundamental determinant of children’s success, regardless of their individual readiness (Cassidy, Mims, Rucker, & Boone, 2003). The research here seems to suggest that individualized instruction at the early childhood level would also help each child gain the skills necessary to be academically successful.

School readiness and school achievement are at the forefront of our country’s domestic social policy concerns. Unprecedented numbers of children start public kindergarten with major delays in language and basic academic skills. Children with these significant delays attend school in every state; they are not concentrated in only a few large
urban school districts or in desperately poor rural districts. Waiting until these children fail in school and then providing remedial, pull out, or compensatory programs or requiring them to repeat grades typically does not sufficiently help these children catch up with peers or achieve at grade level. Instead, research evidence affirms that children who do not have positive early transitions to school—that is, those children who have early failure experiences in school—are those most likely to become inattentive, disruptive, or withdrawn (Shonkoff & Phillips, 2000). Later, these same students are the most likely to drop out of school early; to engage in irresponsible or dangerous, or illegal behaviors; to become teen parents; and to depend on welfare and numerous public assistance programs for survival (Shonkoff & Phillips, 2000). What can be done to end this predictable scenario? There is compelling scientific evidence that this negative developmental cascade can be prevented. The prevention of school failure and the promotion of children's cognitive and linguistic development cannot wait until kindergarten or until children show signs of developmental delay. Rather, the commitment to improving k-12 academic achievement must begin by providing children in the pre-k years with a rich array of effective learning opportunities (Ramey & Ramey, 2004).

Unfortunately, a recurrent underlying assumption regarding readiness places the burden of becoming ready solely on young children and their families. All too often children are forced to be ready for an inappropriate environment that contains few of the components that would make it ready for them (Cassidy, Mims, Rucker, & Boone, 2003). Children are placed in kindergarten classrooms where the same curriculum is taught in the same way to all children, and the expectation is that all children will learn. Kindergarten classroom have become less individualized and less developmentally appropriate. In spite of the promising
language regarding ready schools and developmental readiness of individual children in recent reports on school readiness, the pervasive sentiment still seems to be that many young children are inadequately prepared for the rigors of an often-inflexible public school curriculum (Cassidy, Mims, Rucker, & Boone, 2003).

The available research on child-centered, developmentally appropriate curriculum models indicate that high quality, developmentally appropriate curricula have been shown to result in positive cognitive and social outcomes for young children (Cost, Quality, & Child Outcomes Study Team, 1995; Marcon, 1999; Schweinhart & Weikart, 1998). Children in these types of classrooms are enthusiastic about the activities because the teachers build and plan them around the children’s interests. Critical as well to a developmentally appropriate curriculum is a developmentally appropriate assessment system that documents individual student progress in the classroom (Cassidy, Mims, Rucker, & Boone, 2003).

**Enrollment Alternatives**

Parents have a big decision to make when they start contemplating whether or not their child is ready for kindergarten, as their choice will prove to be an important one in their child’s academic future. There are actions parents can take and questions they can ask themselves when trying to prepare to send their child to kindergarten.

Dr. Kaplan-Sanoff, coordinator of the Healthy Steps Initiative at Boston University, reports that school cut-off dates for kindergarten are highly arbitrary, often leaving parents of late summer and fall babies straddling the fence (Wang, 2000). Family issues and dynamics may influence parents’ decisions about their child’s ability to enter kindergarten. The prospect of saving a year’s worth of day care can be a motivator, as can a parent’s desire to return to the work force. Some parents may decide to start their child in the belief that if it is
too early the child can simply repeat kindergarten and all will be well. Available research
discourages this. In Wang’s (2000) retention research she found retention results in a higher
school dropout rate and more retention later on for children who are held back in
kindergarten. Dr. Kaplan-Sanoff writes that she has never met a parent who regretted
starting a child in school a year later. If there is concern that the child will have to struggle in
school, allow another year. “The greatest gift you can give to a child is his childhood,” she
said (p.29).

Dr. Kaplan-Sanoff identified six areas of development to consider in assessing
kindergarten readiness (Wang 2000).

1) First is the ability to master new experiences. How does the child respond
to novel events at home or in childcare? Children who can build on
familiar experiences will be able to adapt to new situations in school.

2) Second is some sort of experience in similar situations. Is the child ready
to sit in a circle? Wait in line? Share? Follow directions? Ask parents
how their child has done in any preschool or group care experience.

3) Third is the ability to tolerate separations from primary care givers. Can
the child be left with a babysitter? Can he or she form relationships with
other adults, such as a new teacher? Can the child eat and go to the
bathroom by himself, as he would be expected in school?

4) Fourth is the ability to control impulses. Can the child wait for a snack or
for his turn to go to the bathroom? Can the child be flexible and accept
substitutes? Upon entering school, children must be able to deal with their
needs and feelings in socially acceptable ways.

5) Fifth is appropriate play skills. Can the child play with others without
resorting to fighting or yelling? Children at this age should possess some
conflict resolution skills and be able to get along with their peers.

6) Sixth is a developmental delay. Children who have specific cognitive,
language, or sensory problems may have difficulty succeeding in the
classroom (p. 29).
Given Kaplan-Sanoff's list of readiness qualities, what can be done when parents answer no to many of the questions asked? What are the choices that they have in regards to their child and his or her education? As mentioned earlier, the two approaches parents and schools commonly use are 1) delaying the child's entry into kindergarten or, 2) retaining the child in kindergarten for an extra year. Giving children an extra year, through delayed entry, makes sense according to Holloway (2002), in view of the ample research suggesting that the youngest children tend to lag behind their classmates. Zill, Loomis, and West (1997) found that children whose kindergarten entry was delayed so that they started kindergarten when they were older performed better than their younger classmates in grades one and two. These researchers concluded that the extra year before starting kindergarten does not harm the children who are held out and may help most of them. In contrast, researchers discovered that children who repeated kindergarten were doing worse than their younger classmates on most school performance indicators by first or second grade. The retained students were much more likely to have problems concentrating, to perform below their capabilities, and to act up or disrupt the class. Zill, Loomis, and West (1997) concluded that repeating kindergarten had not helped those children and may have actually made matters worse.

"Do schools have alternatives to these two approaches?" asks Holloway (2003, p. 90). To reduce inequalities in students' opportunity for success in kindergarten, society must address the differences that exist among children before they start school (Coley 2002). The differences are real. In one study by University of Kansas psychologists Betty Hart and Todd Risley, it was estimated that by the time children growing up in poor families are four years old, they have heard 32 million fewer words that children of professionals (Levis, 2006). Coley (2002) recommends that policymakers identify children who are at risk for school
failure and make quality preschool experiences available to these children to ensure that they
have the opportunity to develop readiness skills. The NAEYC (2000) position statement on
school readiness (www.naeyc.org/resources/position_statements/psredy98.htm) points to a
different approach. Rather than attempting to “fix” children so that they meet specific
expectations of a kindergarten program, NAEYC suggests educators should realize that the
nature of children’s development and learning dictates two important school responsibilities.
First, schools must be able to respond to a diverse range of abilities within any group of
children, and, second, the curriculum in the early grades must provide meaningful contexts
for children’s learning rather than focusing primarily on isolated skill acquisition. Some
researchers view full-day kindergarten as one way of providing more support for children
who need it (Railsback & Brewster, 2002). Full-day kindergarten programs provide more
time to expose children to academic content and prepare them for first grade in an
emotionally relaxed atmosphere. Full-day kindergarten is viewed as a way not only to help
level the playing field for children with limited skills, but also to reduce the chances of their
being retained. A high-quality, developmentally appropriate kindergarten experience may
offer the best way to ensure early school success for children who enter school with a wide
range of readiness levels (Miller, 2002).

Health and Socio-Economic Factors in School Readiness

Medical factors explain why some children are not ready to start kindergarten.
Understanding the implications of various health issues can be helpful to parents whose
children struggle to prepare for kindergarten. These explanations can also give parents
predictable trajectories for the academic development of their child. A recent University of
Florida study (Hayes, 2003) reports that a rough start in kindergarten often can be traced to
low birth weight, which results in a difficult beginning in life. Children who weighed 2.3 pounds or less at birth were two to three times less likely than their peers of normal birth weight to be ready to begin kindergarten. This study of more than 100,000 Florida kindergarteners found that although there appear to be thirteen risk factors affecting a child’s readiness to start school, low birth weight as a predictor outweighs other significant causes, such as educational or economic disadvantage. The results of the study showed that children who had low birth weight were likely to be male, black, have a birth defect such as a neurological or cardiovascular defect, a mother with a lower educational level, a single-parent mother, or are living in poverty and at greatest risk for not being ready to start school (University of Florida, 2003). Typically, early intervention services such as Head Start have focused on children who live in poverty. While the early intervention service addresses the needs of many children who are at risk for not being ready to start school, it is also important that children with health-related conditions be identified and offered services specifically targeted to enhance school readiness (University of Florida, 2003).

In the first clinic of its kind in California, the University of California, Davis Medical Center, launched a new program that supports the developmental progression of premature and high-risk babies up to age five and offers family intervention services to help assure the children will be kindergarten ready (2002). While technological advances have allowed an increasing number of children born prematurely to survive, about one-third of these babies suffer learning disabilities and developmental delays that can follow them throughout their lives. Unfortunately, the learning disabilities these children experience are not recognized until a couple of years after they enter the school system when intervention can be too little, too late (Witt, 2002). The California program will identify pre term babies most at risk and
provide them and their families with multidisciplinary assessment and intervention services so that the children are ready to enter kindergarten when they are five years old.

There is an array of intellectual and medical issues that impact school readiness and require varying treatment protocols. However this study will examine children who have no discernable medical or intellectual impairments that might otherwise circumvent readiness. In other words, this study will look at children who, for all practical purposes have the capacity to be ready but are not.

Conclusions

The discussion of kindergarten readiness is multi-faceted. First is the issue of social readiness versus academic readiness. Research tends to support the idea that social readiness is more important than academic readiness (Olmsted & Lockhart, 1995; Harradine & Clifford, 1996). Teachers reported believing that they would be able to remediate the academic skills students’ need to be successful much more easily than they would be able to remediate appropriate school behaviors (Heaviside & Ferris, 1993; Powell, 1995). Second is the issue of children’s preparedness for kindergarten. Here the research suggests that literacy development starts long before children enter elementary school (Allington & Cunningham, 1996; Clay, 1991). Early attention to literacy development is essential for early elementary school success. A few key areas in early literacy development that were reported included: social interactions with caring adults, exposure to literacy materials such as children’s storybooks (Sulzby, 1991), adult interactions with children through reading aloud and conversation, and by children’s social interactions with each other (McGee & Richgels, 1996). Third was the tension between school readiness and schools being ready for all children regardless of their developmental level. This tension highlights the importance of
schools engaging in developmentally appropriate practices. The concept of ready schools implies the need for flexibility to address individual differences in the physical environment, in the curriculum, and in the teaching strategies employed (Cassidy, Mims, Rucker, & Boone, 2003). The fourth set of issues dealt with what parents need to know to help decide if their child is ready to start kindergarten or if it would be better to wait a year to start them. Research here suggests that there are several reasons why parents might be tempted to start their child in a kindergarten program regardless of readiness level. This section also reports the importance of giving a child his/her childhood and waiting to start them in a kindergarten program until they are ready. Much research speaks to the implications of starting a child in kindergarten too early only to hold them back later (Wang, 2000). Finally, this literature review discusses health and socio-economic reasons that help us understand why some children are not ready. One primary predictor sited in the literature for why children are not ready for school is low birth weight. Premature babies born with dramatically low birth weight are often less ready to start school than babies born within a normal birth weight range (University of Florida, 2003).

Ideally all children would begin kindergarten with the skills necessary to be successful both socially and academically; however, the reality is that research results are of two types and because of this some children begin school less ready and schools need to be prepared for this.
Methods

Assessment plays a large part in many kindergarten programs today. Many young students are assessed on their social and academic progress regularly. For this, professionals use a battery of assessments, which are part of the district’s assessment routines. This section will describe the different assessments used in this study to determine students to be either average relative to one school district’s norms for readiness or students deemed socially and academically immature. This section will also describe how these measures will be used to determine relative academic success for both groups. Further, the selection criteria and process for determining participants in this study will be described and the intervention protocol delineated.

The research questions that guided this study were: 1) What is the influence of kindergarten readiness on student academic success? 2) Are children who start kindergarten before district measures of academic preparedness suggest they are academically mature able, with specific targeted instruction and intervention, to catch their peers who start school with a higher level of academic maturity on those same measures? 3) Are children measured as socially or academically unprepared to start kindergarten but start anyway able, with specific targeted intense small group and one-on-one instruction, to approximate peer academic performance by the end of kindergarten?

This research adopts a case study research design. There are a limited number of students in the research sample. This study reports on two targeted students, David and Donald, who were identified through baseline testing and teacher observation to be below their peers both socially and academically and two comparison students, Bonnie and Lonny, who demonstrated average abilities both socially and academically on the same measures.
Setting

This study took place in a kindergarten classroom at an elementary school in a middle-sized school district in Iowa with a student population of approximately 436 students, 88 of those students are in kindergarten. The kindergarten classroom in which the research was conducted was made up of sixteen girls and fourteen boys. There were five African-American children, three Latino/a children, and twenty-two Caucasian children. Data collection was completed during the first eighteen weeks of the 2006-2007 school year.

Participants

Four kindergarten children, ages five to six years old, who attended elementary school in a middle size school district in Iowa are the subjects of this study. Two of the subjects were identified through baseline testing and teacher observation to be below their peers both socially and academically. The other two participants were chosen because they demonstrated average abilities on base line testing. The principal investigator also assessed via observation and anecdotal records the latter two children and determined that they were evidencing typical socialization skills relative to their peers. These anecdotal notes will be presented as part of the documentation of these students socially mature development.

The first child identified to be below his peers both socially and academically is called David (all names are pseudonyms). David is a five-year-old African American male. He lives in a single parent household in which his mother is the primary caregiver. According to his mother at preschool conferences, David did not receive any formal preschool experience of any kind. David’s mother expressed the belief that school is where David will learn school related content and not at home. The second child identified to be below his peers both socially and academically is called Donald. He is a six-year-old African
American student who lives in a single parent household where his mother is the primary caregiver. Donald had two years of Head Start prior to kindergarten enrollment. According to a report from Donald’s mother, Donald’s Head Start teachers were worried about the progress he was making in Head Start and had discussed their concerns with Donald’s mother several times during the last two years. In discussions with Donald’s mother it is clear she wants what is best for him, but sees it as the school’s responsibility to work with him and practice the skills in which he shows a deficit.

The first child identified as average, both socially and academically is Bonnie. Bonnie is a five-year-old white female. She lives in a two-parent household. According to her kindergarten enrollment form and discussions with her parents at conferences, Bonnie attended a private preschool for two years prior to beginning kindergarten. The second child identified as average, both socially and academically is Lonnie. Lonnie is a five-year-old white male. Lonnie lives in a two-parent household. Lonnie often talks about the games that they play at home that support what we are working on at school. Lonnie has discussed the preschool/daycare center he attended for two years prior to beginning kindergarten. In fact, he continues to go to the daycare center after school each day.

Procedures

Three pre reading assessments were administered to the four students. The first assessment focused on letter recognition. The classroom teacher administered the assessment in a one-on-one setting. Each child was asked to identify twenty-six upper case letters and twenty-six lower case letters by name. Each child was given a score according to how many letters he or she was able to identify out of fifty-two possible letters. Each child was tested within the first ten days of school to secure a baseline score and then tested again at the end
of nine weeks and eighteen weeks of school. Each child was given a report card grade based on the number of letters correctly identified at the completion of nine and eighteen weeks of kindergarten (see Appendix A). Upon the completion of the first nine weeks of school the range of scoring was as follows: children who identified forty-two or more letters were considered to have exceeded the district expectation, children who identified twenty-six to forty-one letters were considered to have met the district expectations, children who identified eleven to twenty-five letters were thought to be making progress toward district expectations, and children who scored zero to ten letters were considered to have not yet met district expectations. Upon completion of the first eighteen weeks of school the children were tested again and the scoring range was as follows: children who identified forty-six or more letters were considered to have exceeded the district expectation, children who identified forty to forty-five letters were considered to have met district expectations, children who identified twenty-one to thirty-nine letters were thought to be making progress toward district expectations, and children who scored zero to twenty letters were considered to have not yet met district expectations.

The second assessment focused on letter sounds. The classroom teacher administered this assessment in a one-on-one setting. Each child was asked to produce the sound that each of the twenty-six letters make. Each child was given a score of how many letter sounds he or she was able to produce out of twenty-six possible sounds. Each child was tested within the first ten days of school to secure a baseline score and then tested again at the end of nine weeks and eighteen weeks of school. Each child was given a report card grade based on the number of letter sounds produced correctly at the completion of nine and eighteen weeks of kindergarten (see Appendix A). Upon completion of the first nine weeks of school the
scoring range was as follows: children who produced twenty-one or more letter sounds were considered to have exceeded district expectations, children who produced thirteen to twenty letter sounds were considered to have met district expectations, children who produced six to twelve letter sounds were thought to be making progress towards district expectations, and children who produced zero to five letter sounds were considered to have not yet met district expectations. Upon completion of the first eighteen weeks of school the children were tested again and the scoring range was as follows: children who produced twenty-three or more letter sounds were considered to have exceeded district expectations, children who produced nineteen to twenty-two letter sounds were considered to have met district expectations, children who produced eleven to eighteen letter sounds were thought to be making progress towards district expectations, and children who produced zero to ten letter sounds were considered to have not yet met district expectations.

The third assessment focused on high frequency words. The high frequency words include a list of thirty-six words that each kindergarten student is expected to be able to recognize by sight by the end of the kindergarten school year. The classroom teacher administered this assessment in a one-on-one setting. Each child was asked to read a list of thirty-six kindergarten high frequency words chosen by the Harcourt Brace Reading Series adopted by the district. Each child was given a score according to how many high frequency words they were able to read out of thirty-six possible words. Each child was tested within the first ten days of school to secure a baseline score and then tested again at the end of nine weeks and eighteen weeks of school. Each child was given a report card grade based on the number of high frequency words read correctly at the completion of nine and eighteen weeks of kindergarten (see Appendix A). Upon completion of the first nine weeks of school the
scoring range was as follows: children who read eighteen or more high frequency words were considered to have exceeded district expectations, children who read four to seventeen high frequency words were considered to have met district expectations, children who read two to three high frequency words were thought to be making progress towards district expectations, and children who read zero to one high frequency words were considered to have not yet met district expectations. Upon completion of the first eighteen weeks of school the children were tested again and the range of scores was as follows: children who read twenty-five or more high frequency words were considered to have exceeded district expectations, children who read eighteen to twenty-four high frequency words were considered to have met district expectations, children who read thirteen to seventeen high frequency words were thought to be making progress towards district, and children who read zero to twelve high frequency words were considered to have not yet met district expectations.

The socialization assessments administered to David and Donald were completed on two separate continua. The first was an anecdotal record keeping procedure taken during regular classroom observation. The principal investigator observed David and Donald interacting with other children and conducting themselves in daily classroom routines, such as finding their table spots, lining up, working on classroom projects, and listening during group time. The principal investigator noted positive interactions and social behaviors as well as the interactions and social behaviors indicative of less mature children for comparison purposes. According to Dr. Kaplan-Sanoff (Wang, 2000) some of these indicative behaviors might include sitting in a circle, sharing, following directions, impulse control, taking turns, flexibility in routine, and accepting substitutes. These observations
were completed at random times throughout each school day during the eighteen-week semester.

The second assessment required the use of a checklist titled “Interactional Competencies” from the text Kidwatching (Owocki & Goodman, 2002). This checklist was used fifteen times, or approximately one time per week, with both David and Donald throughout the first eighteen weeks of school. The principal investigator observed David and Donald during playtime or during more intensive peer interactions to document how many of the listed behaviors were observed. Through these checklists the primary investigator watched for trends of proficient social behavior, emerging social behavior, and at risk social behavior from David and Donald compared to Bonnie and Lonny.

**Intervention Model**

The goal of the interventions used with David and Donald who were identified as eligible to receive intervention aligns with the research questions described earlier. The five-step intervention procedure is intended to aide in the academic and social growth and ultimate success of the identified students. The five-step intervention model includes the following: 1. To address deficits in letter recognition, letter sound production, and high frequency word identification as indicated on baseline testing as not meeting district expectations. Instruction was provided five days a week for ten minutes per session in a one-on-one learning environment with a kindergarten paraprofessional. 2. To address literacy skill deficits students also received another exposure to daily one-on-one practice on skills with a foster grandparent volunteer for an additional ten minutes. 3. To address letter and sound recognition and high frequency word identification the primary investigator, in small group work, provided ten to fifteen minutes of intensive work daily. This multi-step
intervention procedure provided additional opportunities throughout the school day to practice necessary skills for kindergarten success. Instruction was guided by the pre reading assessment indicator skills that identified areas of need in the baseline testing. The pre reading assessment indicator skills included letter and sound recognition and high frequency word recognition. 4. To address social immaturity, as indicated during baseline testing, specialized “playgroup” activities were provided. David and Donald were part of a group that worked with the guidance counselor two times weekly for thirty minutes to engage in socially appropriate play and interactions with peers. 5. As follow up to the out of classroom socialization activities, older students or adults in the classroom read stories to David and Donald that focus on appropriate social skills such as participating in group talk activities, asking peers and teachers questions, speaking clearly and audibly, and responding appropriately to peer and teacher questions.

A series of mandatory district progress assessments on pre reading skills were administered at the end of nine weeks and again at the end of the eighteen weeks to measure growth during the time of one-on-one instruction. These assessments included a letter recognition assessment where the teacher worked one-on-one with each individual child to collect data on how many upper and lower case letters the child knew, a sound recognition assessment where the teacher worked one-on-one with each individual child to collect data on how many letter sounds each child knew, and a high frequency word assessment where the teacher worked one-on-one with each individual child to collect data on how many high frequency words the child could read.

Informal anecdotal records and classroom observations were collected daily and were used to record student engagement in social appropriateness and inappropriate behaviors.
The principal investigator also maintained a structured observation protocol called “Interactional Competencies” from the book *Kid Watching* (2002) by Gretchen Owocki and Yetta Goodman to document social skills development. This form included a checklist to monitor children’s social learning and interactions with others in the classroom. Checklist data was collected approximately one time per week for eighteen weeks in an informal setting in which the principal investigator observed from a distance David and Donald interacting with others.

The paraprofessional and foster grandparent each maintained daily logs of progress made by the students each time they worked together on skills. They would note daily results on letter recognition, sound recognition, and high frequency word recognition practice for each student. Data was analyzed for trends in skill proficiency that may be emerging in each skill area. Both the paraprofessional and the foster grandma kept a written log of each child’s successes and areas of need to be worked on each day. This enabled careful tracking of day-to-day progress as to what skills were mastered, and what skills continued to be areas of concern. Paraprofessional and foster grandparent record keeping focused on pre reading skills that baseline testing found to be below district expectations and the mean for their peers in the classroom. The guidance counselor provided verbal updates, every ten to fifteen days, on the levels of social appropriateness demonstrated by the students participating in the playgroups. The counselor also shared direct observations of incidents indicative of social growth on the part of the two participating kindergarten students.

**Data Analysis**

At the completion of the first eighteen weeks of school an analysis of the data collected on David and Donald was conducted. The data included results from the pre
reading assessments administered to both David and Donald and Bonnie and Lonny, as well as data collected through anecdotal record keeping and interactional checklists on David and Donald.

The data on the letter recognition, letter sound production, and high frequency word identification tests involve a more straightforward analysis, as these tests yield quantitative data. Each child’s performance in each area is assigned a score. Once the testing was completed and the scores were assigned, score comparisons between children’s scores and district expectation were conducted. The anecdotal records and checklists involved a more complex analysis. To analyze this narrative data on social interactions, categories were identified from within the data and compared against anecdotal records and checklists for each child.
Results

This section will present findings from analyses of the assessments, observations, and anecdotal records on the students who were the focus of this study. Of the four participants, David and Donald were identified as performing below their peers both socially and academically at the start of the school year. They were identified as being academically behind their peers through baseline testing in the academic areas of letter recognition, letter sound production, and high frequency word identification with scores of one, zero, and zero and three, zero, and zero respectively (see Appendix B). Both children were also identified as being socially behind their peers through anecdotal records, teacher observations, and through use of a checklist titled “Interactional Competencies” taken from the book titled Kidwatching (2002). The other two participants, Bonnie and Lonny, were categorized as performing at an average level both socially and academically at the beginning of the school year on baseline tests with scores of fifteen, one, and zero and forty-eight, thirteen, and zero respectively on the letter recognition, sound production, and sight word identification baseline tests administered the first ten days of kindergarten (see Appendix B). The first semester of school served as an eighteen-week window to provide intensive, multi-tiered instruction to David and Donald to attempt to raise their academic performance and social interactions to a level approximating their non-struggling peers. The multi-tiered instruction involved intense one-on-one instruction three times throughout each school day and small group socialization opportunities to improve appropriate kindergarten social behaviors.

All four of the children participating in this study made progress from the baseline-testing period to the end of the first nine weeks and from the nine week benchmark to the end of the eighteen weeks in all three academic areas. This demonstrated that all of the children
in this study benefited from instruction and the interventions implemented with David and Donald aided them in academic development. The question left to consider was whether or not the progress made by David and Donald was enough to consider them to be average in their performance with respect to their peers. Appendix B shows the growth made on letter recognition, letter sound production, and high frequency word identification by the four children at the completion of baseline testing, the completion of the first nine weeks of school, and at the completion of eighteen weeks of school.

The growth made by David and Donald is encouraging, as they almost moved up in category from not yet meeting district expectations to making progress, or from making progress to meeting district expectations according to district criteria. Both David and Donald are still earning scores that fall in the range of making progress toward the district’s expectations category and the not yet meeting the district’s expectations category.

Structure

At the conclusion of the eighteen weeks I looked at the progress made by both David and Donald and Bonnie and Lonny on the pre reading skills of letter recognition, letter sound production, and high frequency word identification. Both Bonnie and Lonny, initially the average performing children, demonstrated large gains in pre reading skills over the course of eighteen weeks in kindergarten. Bonnie’s scores for the letter recognition test went from fifteen letters out of fifty-two (29%) at the baseline testing period to forty-one letters out of fifty-two (79%) at the end on nine weeks and on to forty-seven letters out of fifty-two (90%) at the end of eighteen weeks. Her scores for the letter sound production test went from one sound out of twenty-six (4%) at the baseline testing to nineteen sounds out of twenty-six (73%) at the end of nine weeks and on to twenty sounds out of twenty-six (77%) at the end of
eighteen weeks. Finally her scores for the high frequency word identification test went from zero high frequency words out of thirty-six (0%) at the end of the baseline testing to five high frequency words out of thirty-six (14%) at the end of nine weeks and on to twenty-two high frequency words out of thirty-six (61%) at the end of eighteen weeks.

Lonny’s scores for the letter recognition test went from forty-eight letters out of fifty-two (92%) at the baseline testing period to fifty-one letters out of fifty-two (98%) at the end on nine weeks and on to fifty-two letters out of fifty-two (100%) at the end of eighteen weeks. His scores for the letter sound production test went from thirteen sounds out of twenty-six (50%) at the baseline testing to twenty-five sounds out of twenty-six (96%) at the end of nine weeks and on to twenty-six sounds out of twenty-six (100%) at the end of eighteen weeks. Finally his scores for the high frequency word identification test went from zero high frequency words out of thirty-six (0%) at the end of the baseline testing to twenty-eight high frequency words out of thirty-six (78%) at the end of eighteen weeks.

David and Donald also demonstrated gains in pre reading skills over the course of one academic semester in kindergarten. David’s scores for the letter recognition test went from one letter out of fifty-two (2%) at the baseline testing period to four letters out of fifty-two (8%) at the end of nine weeks and on to twenty-seven letters out of fifty-two (52%) at the end of eighteen weeks. His scores for the letter sound production test went from zero sounds out of twenty-six (0%) at the baseline testing to zero sounds out of twenty-six (0%) at the end of nine weeks and on to seven sounds out of twenty-six (27%) at the end of eighteen weeks. Finally his scores for the high frequency word identification test went from zero high frequency words out of thirty-six (0%) at the end of the baseline testing to two high frequency words out of thirty-six (0%) at the end of the baseline testing.
frequency words out of thirty-six (6%) at the end of nine weeks and on to ten high frequency words out of thirty-six (28%) at the end of eighteen weeks.

Donald’s scores for the letter recognition test went from three letters out of fifty-two (6%) at the baseline testing period to eight letters out of fifty-two (15%) at the end on nine weeks and on to thirty-eight letters out of fifty-two (73%) at the end of eighteen weeks. His scores for the letter sound production test went from zero sounds out of twenty-six (0%) at the baseline testing to two sounds out of twenty-six (8%) at the end of nine weeks and on to sixteen sounds out of twenty-six (62%) at the end of eighteen weeks. Finally his scores for the high frequency word identification test went from zero high frequency words out of thirty-six (0%) at the end of the baseline testing to one high frequency word out of thirty-six (3%) at the end of nine weeks and on to fifteen high frequency words out of thirty-six (42%) at the end of eighteen weeks.

Upon completion of the letter recognition testing, letter sound production testing, and high frequency word identification testing both Lonny and Bonnie’s scores at the end of eighteen weeks reflect markings on their report cards as either exceeding district expectations or meeting district expectations. Both Donald and David’s scores at the end of eighteen weeks reflect markings on their report cards as either making progress towards district expectations (Donald) or not yet meeting district expectations (David).

As indicated, teacher observations early in the school year indicated both David and Donald to be socially immature. Anecdotal records of these two young learners’ interactions with their peers were kept daily. David and Donald spent approximately one hour per week with the guidance counselor participating in socially appropriate play and practiced interacting with others. They also spent approximately twenty minutes per week with older
elementary students. These older elementary students simply talked and interacted with the kindergarten children, serving as models. Anecdotal records and observations of Bonnie and Lonny suggested average socialization skills in the classroom. These two children were observed interacting with other children, asking questions of peers and teachers, responding to teacher questions, interacting socially with other children during play time and recess time, and following simple directions without redirection. Bonnie and Lonny did not participate in any small group interventions with either the guidance counselor or older elementary students.

At the conclusion of eighteen weeks an analysis of David and Donald’s comparative social skills and the Kidwatching checklist data was conducted. Analysis was also conducted on notes from the guidance counselor on David and Donald’s social progress in playgroup. Appendix C reveals the number of check marks in the six focus areas recorded on the checklists for both David and Donald during the fifteen observation times during the eighteen-week period. To receive a check mark David or Donald must be observed taking part in one of the interactions listed in Appendix C. In essence, a check mark represents the child’s ability or emerging ability to participate in the targeted interactions with peers and adults.

As Appendix C indicates, David was comfortable asking the teacher questions and made progress asking other students questions. The areas that continued to be a challenge for him were responding to questions and speaking clearly. Donald was proficient in responding to questions and made progress participating, asking peers questions, and speaking clearly. He is still working on asking the teacher questions.
Comparing the data gained through anecdotal record keeping several trends emerged. David showed improvements when using his speaking voice and answering questions asked of him. He seldom interacted with other children and spent much of his time sitting back, observing other children interact. David struggled to join groups of children playing. He did not initiate conversations with his peers. He would talk to the other children if they spoke to him first, but he talked so softly that it was difficult for anyone to hear what he was saying. David rarely participated during group activities such as finger plays, rhymes, choral readings, and poems. He was dependent on help from the teacher. He often would not start on a project or assignment until there was a teacher standing beside him encouraging him to get started. The previous examples demonstrate that David is demonstrating behaviors below expectations for age and grade.

The guidance counselor’s periodic updates on David’s progress in small group conclude that he was making slow but steady progress on strategies to interact positively with peers. In a small group setting he was gaining confidence with approaching other children and learning strategies to fit into a group of peers. The large group continued to be overwhelming for David. In large group he still was observed sitting back and watching others interact. During the eighteen week playgroup session David’s small group and the guidance counselor have been working on how to ask a friend to play, how to play appropriately, how to take turns in a conversation, and how to keep a conversation flowing.

Anecdotal notes indicate Donald has made social gains. Over the eighteen weeks Donald was observed playing increasingly frequently with other children. He interacted with peers, but usually only when they invited him to participate. He also engaged in extended observation of others around him but he began to demonstrate the ability to join a group of
children playing during recess time, free choice time, and playtime. He demonstrated genuine interest in becoming a part of the interactions, but is still working on mastering strategies to become involved in peer groups. As the data in Appendix C indicates, Donald is still reluctant to ask a teacher for help. Rather, there were numerous occasions when he sat quietly until a teacher noticed he needed help. Anecdotal records and teacher observations of his reluctance to join in with a group of peers and to ask for help from a teacher when it is needed indicate that Donald remains behind his peers socially.

The guidance counselor’s periodic updates on Donald’s progress in small group have concluded that he is making steady progress on strategies to interact positively with peers. Comments such as, “The small group setting appears to be helping Donald’s self confidence when interacting with peers” and “Donald is improving his skills with speaking up or asking a friend when he needs help” support this conclusion. The counselor reported that a smaller group is an easier environment for Donald to successfully interact with others. It is not so overwhelming and she believes he has a greater sense of security and safety in the smaller group. During the eighteen-week playgroup session Donald’s small group and the guidance counselor have been working on how to interact with peers, join in a group of children, and asking for help when it is needed. The counselor reported that Donald is making some good gains in catching his peers socially. According to Appendix C Donald was observed gaining confidence while asking peers questions, responding appropriately to peer questions, responding appropriately to teacher questions, and speaking clearly and audibly.

Bonnie and Lonny, who demonstrated age and grade social appropriateness, continue to socially grow and mature. Anecdotal records and observations suggest Bonnie and Lonny fit in well with their peers and were able to involve themselves in conversations and
activities, ask and respond to questions, and speak clearly without difficulties. Both children were observed establishing friendships and dealing with conflicts appropriately since the beginning of the school year.
Discussion

Conclusions

The table in Appendix B documents the progress made by all four participants. The scores reflect the academic gains made by each of the students in the areas of letter recognition, letter sound production, and high frequency word identification; however the table also reveals that even with intense multi-tiered intervention strategies David and Donald did not make enough gains to approximate the scores earned by Bonnie and Lonny. The progress evidenced by David and Donald’s pre reading skills assessment was developmentally encouraging; however their test scores indicated that they are still significantly below their peers academically. Neither one met the district expectation for second quarter report cards. Based on initial readiness assessment, children enrolling in kindergarten represent a range of development levels and schools need to be ready to serve them all. The outcome of this study in terms of the intervention plan was somewhat successful but not entirely satisfactory with respect to raising student performance across academic and social dimension.

Since children are coming to this school at different levels of development, those at less developed levels automatically receive intervention. It is, of course, not ethical to deny such support for comparison purposes, so no comparative data is available for this school between those less ready who receive intervention as compared to those less ready who did not receive intervention. Consequently, one can only speculate that students receiving intervention experience greater rate of achievement growth than they would otherwise. Personal experience suggests many children not ready for kindergarten show a slowed rate of
success later on in first grade when they do not receive one-on-one intervention in kindergarten.

At the beginning of the eighteen-week period I began an in-depth analysis of the progress monitoring logs that both the paraprofessional and the foster grandparent were keeping throughout the intervention period. I was pleased to see the gains that David and Donald made in the pre reading skills that all kindergarten students are expected to demonstrate during their year in kindergarten. Both students worked hard over the course of eighteen weeks and both made encouraging progress. Anecdotal records and checklists exhibited real progress made over the eighteen weeks of intense multi-tiered interventions; however, the question that still remained at the back of my thoughts was whether David and Donald could make enough progress to catch them up to their non-struggling peers.

Both Lonny’s and Bonnie’s pre reading skills remained at an appropriate level for kindergarten aged children, and I do not have any academic concerns as they prepare for first grade. Both David and Donald’s pre reading skills showed gains; however, for these two students I do have academic concerns as they prepare for first grade.

At the start of the school year both David and Donald were considered to be below their peers socially. They experienced difficulty fitting in with their peers and their social behaviors were often below expectation for kindergarten-aged children. For example, they were observed demonstrating uncertainties as to how to become part of a conversation or fit into a small group of children already playing. David and Donald were also observed experiencing difficulties asking peers and teachers questions, responding appropriately to peer and teacher questions, and speaking clearly and audibly. As the semester progressed and the small group interventions continued, changes in both David and Donald were
observed. Both boys made social gains, but again the gains made were not sufficient to catch them up to their more socially mature classmates.

There are still eighteen weeks remaining in the kindergarten school year, my hope is that David and Donald will continue to make good progress with continued intense interventions and that by the end of kindergarten they will have caught up to their average performing peers. The fear, however, is that David and Donald will continue to make progress, but will not catch up to their average performing peers who also continue to make progress.

It is important for schools to be prepared for incoming students with less developed academic and social skills by developing specific individual interventions. According to Cassidy, Mims, Rucker, & Boone (2003) it is essential for schools to be ready for these children who are less mature than their average performing peers. This particular intervention model has some promise as real progress was shown. David and Donald made growth in social maturity as well as academic preparedness. But for David and Donald, as is true for all others who begin behind their non-struggling peers, catching up is like trying to catch a moving target. To assist in easing the struggle for less mature students, summer school, or year around schooling maybe a partial answer. Many school districts have, or are planning, a voluntary, universal four-year-old program, which is entirely devoted to kindergarten readiness. This pre kindergarten program would be a good step for many children before they enter kindergarten.

As a result of the research conducted in this kindergarten classroom it is my conclusion that students who start school before they are academically or socially mature can, with intensive intervention, make progress toward catching their non-struggling peers.
However, non-struggling peers are also continuing to grow both socially and academically. The struggling students may show growth, but as this research reveals, it is difficult to catch their peers.

Schools need to be ready for all children because they are coming to kindergarten ready or not. It would be considered unethical to withhold the interventions carried out in this study from students who assess as less ready for kindergarten than their peers. This study reveals that with the intense interventions some struggling children can make growth; but catching up to their non-struggling peers completely would be nearly impossible. The intervention plan assists kindergarten children in reaching the goals for the end of the kindergarten year; however personal experience suggest that once these children go to first grade and the one-on-one support is no longer available, their rate of growth slows and their struggle is renewed. A more successful intervention to consider, as the literature review suggests, would be one more year in preschool. Iowa’s plan for a voluntary, universal four-year-old program, that is entirely devoted to kindergarten readiness, would present opportunities for these children who are not ready to start kindergarten to receive stimulation yet allow them some additional time to mature. This possibility should be seen as much preferred over retention because of the negative impact that retention has on later student achievement.

Limitations

This study focused only on four children, two considered socially and academically immature and two presenting what is considered average social and academic skills. Such a small sampling may or may not generate results that would parallel results completed with a larger group of children in both the target group and the comparison group. Another
limitation is that the study was only 18 weeks in duration. A yearlong study would show more accurately just how much these children would gain from 9 months of intense interventions.

Recommendations

The intensive intervention program used in this study did not achieve its primary goal but did have positive effects. To reach the goal of the program, which would be for socially and academically immature children to catch their peers, this study suggests that more needs to be done and a larger assessment of program impact should be conducted.

It is my recommendation that a larger and more longitudinal study be completed to fully determine impact of a full year intervention process and its lasting effects in subsequent grades.
References


International Reading Association & National Association for the Education of Young Children. (1998). *Learning to read and write: Developmentally appropriate practices for young children* [Online]. Available: [http://www.naeyc.org/resources/position_statements/psredy0.htm](http://www.naeyc.org/resources/position_statements/psredy0.htm)


statement on school readiness [Online]. Available:

www.naeyc.org/resources/position_statements/psredy98.htm


www.nwrel.org/request/dec2002/textonlv.html#incontext


education. Education Leadership, 55, 57-60.


University of California, Davis, Medical Center (2002). UC Davis pediatrics team launches unique clinic targeting kindergarten readiness. Ascribe Higher education News Service.


### Appendix A

**Letter Recognition Criteria in Kindergarten**

<table>
<thead>
<tr>
<th></th>
<th>9 weeks</th>
<th>18 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceeding expectation</td>
<td>42-52 letters</td>
<td>46-52 letters</td>
</tr>
<tr>
<td>Meeting expectation</td>
<td>26-41 letters</td>
<td>40-45 letters</td>
</tr>
<tr>
<td>Making Progress</td>
<td>11-25 letters</td>
<td>21-39 letters</td>
</tr>
<tr>
<td>Not yet meeting expectation</td>
<td>0-10 letters</td>
<td>0-20 letters</td>
</tr>
</tbody>
</table>

**Letter Sound Production Criteria in Kindergarten**

<table>
<thead>
<tr>
<th></th>
<th>9 weeks</th>
<th>18 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceeding expectation</td>
<td>21-26 letter sounds</td>
<td>23-26 letter sounds</td>
</tr>
<tr>
<td>Meeting expectation</td>
<td>13-20 letter sounds</td>
<td>19-22 letter sounds</td>
</tr>
<tr>
<td>Making Progress</td>
<td>6-12 letter sounds</td>
<td>11-18 letter sounds</td>
</tr>
<tr>
<td>Not yet meeting expectation</td>
<td>0-5 letter sounds</td>
<td>0-10 letter sounds</td>
</tr>
</tbody>
</table>

**High Frequency Word Identification Criteria in Kindergarten**

<table>
<thead>
<tr>
<th></th>
<th>9 weeks</th>
<th>18 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceeding expectation</td>
<td>18-36 high frequency words</td>
<td>25-36 high frequency words</td>
</tr>
<tr>
<td>Meeting expectation</td>
<td>4-17 high frequency words</td>
<td>18-24 high frequency words</td>
</tr>
<tr>
<td>Making Progress</td>
<td>2-3 high frequency words</td>
<td>13-17 high frequency words</td>
</tr>
<tr>
<td>Not yet meeting expectation</td>
<td>0-1 high frequency words</td>
<td>0-12 high frequency words</td>
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</table>
Appendix B

Participant Progress on Pre Reading Skills

<table>
<thead>
<tr>
<th></th>
<th>Baseline Letters</th>
<th>Baseline Sounds</th>
<th>Baseline Words</th>
<th>9-wks Letters</th>
<th>9-wks Sounds</th>
<th>9-wks Words</th>
<th>18wks Letters</th>
<th>18wks Sounds</th>
<th>18wks Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>David*</td>
<td>1 (2%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>4 (8%)</td>
<td>0 (0%)</td>
<td>2 (6%)</td>
<td>27 (52%)</td>
<td>7 (27%)</td>
<td>10 (2%)</td>
</tr>
<tr>
<td>Donald*</td>
<td>3 (6%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>8 (15%)</td>
<td>2 (8%)</td>
<td>1 (3%)</td>
<td>38 (73%)</td>
<td>16 (62%)</td>
<td>15 (42%)</td>
</tr>
<tr>
<td>Bonnie#</td>
<td>15 (29%)</td>
<td>1 (4%)</td>
<td>0 (0%)</td>
<td>41 (79%)</td>
<td>19 (73%)</td>
<td>5 (14%)</td>
<td>47 (90%)</td>
<td>20 (77%)</td>
<td>22 (61%)</td>
</tr>
<tr>
<td>Lonny#</td>
<td>48 (92%)</td>
<td>13 (50%)</td>
<td>0 (0%)</td>
<td>51 (98%)</td>
<td>25 (96%)</td>
<td>5 (14%)</td>
<td>52 (100%)</td>
<td>26 (100%)</td>
<td>28 (78%)</td>
</tr>
</tbody>
</table>

* Target students

#Comparison students
## Appendix C

### Progress on Social Interactions of David and Donald

<table>
<thead>
<tr>
<th></th>
<th>David First</th>
<th>David Middle</th>
<th>David Last</th>
<th>Donald First</th>
<th>Donald Middle</th>
<th>Donald Last</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of observations</strong></td>
<td>5 obs</td>
<td>5 obs</td>
<td>5 obs</td>
<td>5 obs</td>
<td>5 obs</td>
<td>5 obs</td>
</tr>
<tr>
<td><strong>Participates in group talk activities</strong></td>
<td>0 checks</td>
<td>0 checks</td>
<td>2 checks</td>
<td>2 checks</td>
<td>4 checks</td>
<td>0 checks</td>
</tr>
<tr>
<td><strong>Asks peers questions</strong></td>
<td>0 checks</td>
<td>2 checks</td>
<td>2 checks</td>
<td>0 checks</td>
<td>2 checks</td>
<td>3 checks</td>
</tr>
<tr>
<td><strong>Asks teachers questions</strong></td>
<td>2 checks</td>
<td>4 checks</td>
<td>3 checks</td>
<td>0 checks</td>
<td>0 checks</td>
<td>1 check</td>
</tr>
<tr>
<td><strong>Responds appropriately to peer questions</strong></td>
<td>0 checks</td>
<td>1 check</td>
<td>0 checks</td>
<td>3 checks</td>
<td>3 checks</td>
<td>4 checks</td>
</tr>
<tr>
<td><strong>Responds appropriately to teacher questions</strong></td>
<td>0 checks</td>
<td>0 checks</td>
<td>0 checks</td>
<td>1 check</td>
<td>4 checks</td>
<td>4 checks</td>
</tr>
<tr>
<td><strong>Speaks clearly and audibly</strong></td>
<td>0 checks</td>
<td>0 checks</td>
<td>0 checks</td>
<td>0 checks</td>
<td>1 check</td>
<td>3 checks</td>
</tr>
</tbody>
</table>