

Early Childhood Learning Experiences and Kindergarten Achievement

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## **Abstract**

The purpose of this study is to examine the effects of a prior school experience on the academic achievement of kindergarten students at the beginning of the school year. Using a causal-comparative design, the study examined fifty nine kindergarten students with a variety of prior learning experiences. The students were divided into three separate categories based on their prior schooling and their beginning of the year assessment scores were analyzed. Overall, the findings support the null hypothesis that a formalized prior school experience has no significant impact on kindergarten academic achievement. However, there were some variances in the beginning of the year scores. Because of these score variances, future studies should address specific early childhood learning programs and their impact on kindergarten achievement.

# **CHAPTER I**

## **INTRODUCTION**

Since its founding in 1854, kindergarten has become a vital part of the education system in the United States (Berk, 2007). Kindergarten was established for the purpose of teaching young children through a rich, meaningful, and balanced curriculum of skills and knowledge by providing age-appropriate activities and lessons that encourage the children to become life-long learners and problem solvers (Cascio, 2010). In most states, kindergarten is considered the first year of formal schooling for young students. Currently, 46 out of the 50 states require full-day kindergarten for all students. Students typically begin kindergarten between the ages of five and six. Prior to 1985, kindergarten was independent from other elementary classrooms; however, it is now fully integrated into elementary schools throughout the country (Liu, 2008).

As kindergarten has become more important in a student's education, the demands of the curriculum have drastically changed since its founding. Kindergarten curricula is now managed through federal, state, and local guidelines and often has mandatory curriculum requirements. Typically, kindergarten curriculum encompasses intellectual, social, creative, and physical learning through providing knowledge that is meaningful to the young students. The curriculum contains language arts activities including oral language, listening, writing, and reading, social sciences, mathematics, art, music, and physical education as well as supporting social and emotional growth through positive interactions with peers and adults (Cascio, 2010).

Kindergarten curricula meet the needs of the students through the leadership of a classroom teacher and a classroom assistant. Since kindergarten has become a mandatory part of a student's education, kindergarten teachers are required to be certified in early childhood education as well as endure a tenure-ship period, just as any other elementary classroom teacher

(Cascio, 2010). Kindergarten teachers work with their given curricula to plan age and developmentally- appropriate lessons and activities that provide meaningful learning for the students. A large portion of any kindergarten lesson is devoted to hands-on learning experiences and social interaction. As Piaget firmly believes, students are motivated to learn through interactive experiences and develop their understanding through concrete examples. As a result, many kindergarten classrooms will use math manipulatives to introduce and teach concepts as well as pictures, puppets, and movement for reading comprehension (Berk, 2007). These concrete objects give students a developmentally appropriate way to interact with new knowledge and experiences. Additionally, students in kindergarten learn through their discussions with their peers, as Vygotsky firmly believed. Finally, the teacher in the classroom takes great care to change activities frequently to maintain the focus and attention of the students.

Because the kindergarten curriculum has become mandated and requires a vast amount of knowledge and experiences, there are many skills that students require upon entering school for the first time at the age of five. Some of the skills include background knowledge of basic information such as colors, shapes, letters, and the ability to count. Students also need an understanding of vocabulary and the ability to orally express themselves. Many of the kindergarten curricula have students beginning to read by December of the school year. As a result, it is often necessary for students to have a sight word base as well as the ability to understand basic phonics skills (Early, Iruka, Ritchie, Barbarin, Winn, Crawford, & Pianta, 2010). Additionally, students interact with their classmates and teachers throughout the day for discussions, learning activities, and even lunch and recess time. Therefore, students entering kindergarten need an understanding of social interaction with others, especially peers at their same age.

Since the demands of the kindergarten curriculum have increased, it has been noted that many students are entering kindergarten at the age of five but are not truly prepared to learn. These students often lack the basic skills and background knowledge that are needed to be successful in the classroom. There are many students who enter kindergarten with little to no knowledge of letters and sounds. This presents a significant barrier to being able to read, write, and understand information within the classroom. While being able to read is not a requirement for kindergarteners, having some sound-symbol relationships is necessary in order to follow directions on written tasks, read signs and information throughout the building, and be able to follow the daily classroom routines. Additionally, students with little to no prior experience with mathematics often have difficulty understanding number patterns, counting, following times on the daily routine and locating information on the calendar or schedule. Finally, students that have not been in a formal school setting or daycare prior to kindergarten often have a difficult time interacting with peers and understanding the basics of following rules within the school. Because of these deficiencies in prior knowledge and skills, many kindergarten teachers spend the first few months of school supplementing the curriculum with the necessary prior knowledge and skills students need in order to be successful in kindergarten.

One of the major factors that help students become ready for kindergarten is having a prior school experience before entering kindergarten. There are a variety of prior schooling opportunities available to students prior to turning five. Many states have pre-kindergarten programs available through the local school district. In these programs, students are exposed to similar curriculum, expectations, and standards that will be required when they reach kindergarten (Early, et al., 2010). However, many public school pre-kindergarten classes have income eligibility constraints or require the student to have documented specialized needs. Early



childhood learning centers, such as churches, daycare centers, and recreation offices, also offer an opportunity for students to socialize and learn basic foundational skills necessary for kindergarten. Since these programs are separate from the state and local school districts, parents typically have to pay a fee to enroll their students and the curriculum is not necessarily the same as the state requirements (O'Donnell, 2008). Finally, HeadStart is a government subsidized early learning experience that provides learning and social-emotional growth opportunities to students coming from low income families (Hindman, Skibbe, Miller, & Zimmerman, 2010).

Therefore, due to the high expectations and demands of kindergarten, it is beneficial for students to have a prior school experience before entering kindergarten. Having a prior school experience will help provide both the foundational and social skills needed for students to meet the curriculum with success.

### **Statement of Problem**

The purpose of this study was to determine whether prior school experiences have an impact on kindergarten academic achievement.

### **Null Hypothesis**

A formal, prior school experience will have no significant impact on a student's kindergarten academic achievement.

### **Operational Definitions**

In this study, kindergarten academic achievement is defined as a student's success on three given assessments: reading, math, and general knowledge, which are given five times throughout the kindergarten year.

A prior school experience is defined through several categories depending on the type of care a student received before entering kindergarten at the age of five. Pre-Kindergarten is

defined as enrollment in Baltimore County Public School's pre-kindergarten program for at least seven months. Non-public nursery school is defined as an early childhood learning program where a student was enrolled with a class of peers of the same age for at least two half days per week for at least seven months. Daycare centers with class groupings and a curriculum are considered non-public nursery school programs. At-home care is defined as a child who has been cared for by family members or a private in-home daycare setting with no formalized school experience.

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

Each year, over two million new students enter kindergarten classrooms for the first time across the United States. These young students begin their educational journey with eager, open minds and an unlimited outlook on their futures (Burkam, Michaels, & Lee, 2007). With each new student that enters the classroom comes a different set of experience, background knowledge and foundational skills. With the increased demands and rigor of kindergarten curriculum, it is vital for students to have a solid foundation of skills prior to entering school for the first time. As a result, pre-kindergarten and prior school experiences are becoming more and more important in a child's academic journey. Therefore, it is vital to develop an understanding of early childhood learning experiences, their significance and impact on education, weaknesses in their programs, and strategies to help improve their positive impacts.

#### **Early Childhood Learning Experiences**

Early childhood learning experiences are defined as the formal teaching of skills and knowledge to children prior to the age of five, when most states require students to begin formal schooling (Wong, Cook, Barnett, & Jung, 2008). Early childhood education typically focuses on the academic, physical, social, and emotional growth of students through direct instruction, peer interactions, and hands-on learning experiences. From these experiences, students gain a wide array of knowledge about themselves, the world around them and a solid base and understanding of foundational skills necessary for success in primary elementary school.

Many of the early childhood and pre-kindergarten programs are based around the concept of students working together towards a common goal. In these learning experiences, play tends to be one of the largest parts of the day. Students interact with their peers by participating in

centers or stations. Through the use of these centers, students are incidentally learning about social cues, problem solving, positive peer interactions, and developing their language skills. In his Sociocultural Learning Theory, Vygotsky suggests that young children learn through their language experience and interaction with others. He firmly believes that a solid linguistic foundation helps build the path for cognitive development which later leads to academic achievement. As a result, in many pre-school experiences throughout the world, play and interaction with peers is one of the most important parts of the day (Berk, 2007).

Another significant portion of the early childhood learning experience is based on learning through experience. According to research, children are more apt to remember and understand a skill, if they have had the opportunity to manipulate it and experience it firsthand (Early, et al.2010). Many early childhood learning experiences stem from the hands-on learning approach, a large portion of Piaget's Cognitive Development Theory (Berk, 2007). In his theory, Piaget explains that children of early childhood age need to manipulate situations in order to make sense of them and to move from concrete thinking to abstract problem solving (Good, 2008). As a result, many early curricula include hands on learning experiences dedicated to hands-on learning experiences through science instruction, manipulation of math activities, first-hand language approaches, and integrated field trips and learning opportunities.

Finally, many early childhood learning experiences focus on the development of the whole child. Typically, in these experiences children are not only learning foundational skills, like reading, mathematics, and language, but they are also working towards physical and emotional development as well (Good, 2008). Throughout early childhood, children progress through a series of psychological development stages where their self-worth, morals, and inhibitions are developed and tested, according to Erikson's theory of Psychosocial

Development. In his theory, it is believed that children of early childhood age are progressing through a stage where their initiatives and reasoning for completing tasks is tested (Berk, 2007). As a result, many early childhood curriculums extend to not only academic and social areas, but also to developing the character, morals, and self esteem of the students through language, situational, and role playing experiences.

Taking into consideration all the theories of development, varying needs of young students and ways children learn and process information, early childhood education was designed to meet the individual and unique needs of young children. Therefore, several types of early childhood education centers have been formed. However, the majority of their curriculum is still based around the same ideas. One of the most commonly known early childhood programs is HeadStart. HeadStart was formed as a result of a Congressional Act in 1981 that declared the importance of providing early intervention to students with both educational and financial needs (Hindman, et. al., 2010). The main goal of the HeadStart program is to provide school readiness through social and cognitive development and a focus on health, nutrition and social sciences. The HeadStart curriculum is based upon the aforementioned theories and takes into account the unique needs of students living within the financial restraints of poverty.

Additional public pre-kindergarten programs are available through most school systems in the United States. The curriculum of these early childhood centers is based upon the developmental levels of the students and also the state-wide curriculum. The majority of public pre-kindergarten programs are developed based upon certain financial and educational needs of the students. As a result, the majority of the students enrolled in public pre-kindergarten has developmental needs and meet the limits of low socioeconomic standing (Wong, et. al, 2008). Finally, many religious organizations, childcare centers, and non-public school have developed

their own early childhood curriculum (Early, et al., 2010). Unlike HeadStart or public pre-kindergarten, these programs come with a cost to enroll and send students. However, according to research, these programs often still follow the similar curriculum from the state level and still provide foundational academic and social skills for the students in order to prepare them for formalized schooling (Good, 2008).

### **Significance and Impact of Early Childhood Education**

Early childhood education provides foundational academic skills as well as social, emotional, and physical development in order to provide school readiness for students as they enter kindergarten. Research suggests that students enrolled in early childhood education demonstrate higher academic achievement in kindergarten and primary grades than their peer counterparts without a prior school experience (Burkam, et al., 2007). With the unique development of the early childhood curriculum, student engage in a variety of developmentally appropriate tasks that allow them a general understanding of skills in mathematics, reading acquisition, and social sciences. Having solid foundational skills from an early childhood program provides a great advantage to the students as they enter kindergarten. According to a study conducted by Liu (2008), students involved in an early childhood learning experience prior to the start of their first formalized schooling were more successful in linguistics and mathematical problem solving than their peers. This study also suggests that students with a prior school experience were able to acquire and understand new learning more effectively than those without a prior school experience. As a result, it is understood that providing a high-quality, curriculum-based prior school experience has a positive impact on academic achievement of students in kindergarten.

Additionally, early childhood learning experiences prior to kindergarten provide high-quality experiences that may not be available to students within their homes. One of the main focuses of early childhood education is to provide foundational skills that help provide an equal opportunity for success in school readiness. Often times, students from low socioeconomic communities do not have the opportunities for education enriching experiences (Good, 2008). Therefore, having pre-kindergarten programs that offer these opportunities enables the students to gain the necessary foundational skills even though they may be at an economic disadvantage compared to their peers (Hindman, et al., 2010). Because the demands of the kindergarten curriculum have increased over the years, it is vital for students to possess these foundational skills in order to be successful in the primary grades. Research suggests that students attending HeadStart programs as well as public pre-kindergarten enter kindergarten on a level playing field with their peers because they have been exposed to many learning opportunities that other students were able to experience within their homes (O’Leary, Cockburn, Powell, & Diamond, 2010). As a result, students having attended HeadStart and other public pre-kindergarten classes often demonstrate higher academic achievement and knowledge of skills in the beginning of the kindergarten year than their peers without a prior school experience.

Attending an early childhood program often not only gives students an academic advantage over their peers, but also provides them with the demands of the behaviors and expectations of the school day (Rhoades, Warren, Domitrovich, & Greenberg, 2011). Students entering kindergarten as their initial school experience, encounter difficulty with the demands of sitting and listening, waiting your turn, understanding how to work cooperatively with peers, and interacting in a positive manner with adults. Students having attended a school setting prior to kindergarten have already experienced the behavioral demands of school and can adjust to

learning more efficiently than students without these prior schooling experiences (Beasley, 2008). As a result, students without prior school experiences spend the first few months adjusting to the behavioral demands of school, rather than focusing on learning the curriculum. Therefore, having a prior school experience also provides foundational behaviors for students that their peer counterparts do not receive when being cared for solely at home.

Finally, the kindergarten programs also place high demands on a child's motor development. Students in kindergarten are expected to write, cut, draw, and paste as part of their everyday learning experiences. Students having previously attended a pre-school program have been exposed to these tasks prior to kindergarten when often their peers have not. Research suggests that students entering kindergarten with a prior school experience can complete daily tasks with less frustration due to their increased motor development (Pagani, Fitzpatrick, Archambault, & Janosz, 2010). Also, students without prior school experiences often become frustrated when trying to complete motor tasks and therefore often lose the concept or skill being taught because of their lack of motor skills. Additionally, a study done by O'Donnell (2008) suggests that parents felt their students were more adaptable to the curriculum with well developed motor skills and could participate in activities more often than their peers. As a result, research proves that having a prior school experience often gives a student an academic, behavioral, and motor development advantage over a student without the experiences.

### **Weaknesses in Early Childhood Education**

While early childhood education provides an advantage to students, there are several areas of early childhood programs that can be improved upon. First, in order to provide the foundational skills to students, early childhood programs must begin with a high-quality curriculum. While most state and federal government sponsored programs do provide a stable



curriculum, there are many disadvantages to pre-school programs, especially in rural areas. As Rao, Sun, Zhou & Zhang (2012) suggests in their study, it is difficult to prove the effectiveness of early childhood education when all of the programs are not equivalent. In his experience, Rao explained that rural areas tend to have weaker early childhood programs because of lack of funding and attendance from students. Also, many programs that are not publically funded experience difficulty in providing a high quality program due to the high cost of the resources and curriculum materials. Finally, the quality of an early childhood program is greatly affected by the teacher (Lazarus & Ortega, 2008). In publically funded programs, highly qualified teachers are required to be the core instructor of the program. However, as Beasley (2008) stated, in many privately funded programs the teachers do not have current state certifications which often provides a great disservice to the students.

One of the other shortfalls of early childhood programs is the lack of parental involvement within the school. Research states that parental involvement is often the biggest factor in determining a student's success in school (Beasley, 2008). Many pre-school programs follow a highly structured curriculum that does not provide opportunities for families to be involved in the daily routines of the school day. Additionally, because pre-kindergarten programs are not considered a mandatory part of child's education, parents often do not understand their value and prefer not to be involved (Margetts, 2008). As a result of lack of parental involvement, students often do not reach their full potential or gain the amount of foundational skills that could be achieved because families do not understand the significant impact early childhood education has on a student's educational track (Stylianides, & Stylianides 2011).

Finally, another major weakness in early childhood education is the lack of equal access to programs among students of various socioeconomic groups. Because the basis of early childhood education is to provide students foundational skills and experiences not learned within the home prior to the beginning of kindergarten, early childhood programs often focus on students from lower socioeconomic status. It is believed that students from these homes will not have the same opportunities of students living outside of poverty (De Feyter & Winsler, 2009). Consequently, pre-kindergarten programs tend to be limited to students with income challenges or developmental difficulties. Therefore students coming from the average American household are often excluded from attending a public pre-kindergarten program. This provides a severe disadvantage to middle class students where they are often forced to enroll in non-public programs or not attend and early childhood learning experience at all due to lack of availability of programs within their area (Rao, Sun, Zhou, & Zhang, 2012). As a result, the challenges of early childhood education often pose a disadvantage to the students being able to reap the benefits of a prior schooling experience.

### **Strategies to Improve Early Childhood Education**

Considering the weaknesses in early childhood education, there are several strategies that have been studied in order promote early childhood learning. One of the strategies is the implementation of social-emotional learning. In a study, Denham, Bassett, Mincic, Kalb, Way, Wyatt, & Segal, (2012) found that often students struggle with the curriculum in pre-kindergarten because they have not reached a social maturity level where they are able to respond to new learning in the classroom context. In order to aid in a student's social-emotional growth, Denham, et. al. studied a curriculum where students learn foundational skills through social-problem solving and self-regulation. As a result of this study, students attending this

program demonstrated a high level of school readiness in both academic and social-emotional development. Therefore this curriculum that uses student's everyday social interactions to provide instruction appears to be effective in reaching students that may have not yet developed the social strategies required for success in a regular early childhood learning curriculum (Beasley, 2008).

Another strategy to help improve early childhood education is to promote an at-home learning connection with the daily school routines and curriculum (Herbers, Cutuli, Lafflor, Vrieze, Leibel, Obradovic, & Masten, 2011). Because parental involvement is lacking in many early childhood learning centers, it is important for schools to begin to develop learning opportunities for the students to carry into the homes. According to a study conducted by Hindman et al. (2010), students that were given a home component to their early childhood curriculum demonstrated increased school readiness scores and participation within their early childhood classrooms. As aforementioned, parental involvement is one of the biggest challenges school encounter. By providing an at-home learning component, parents are involved in their student's education, student's motivation is increased and benefits are apparent in the student's academic achievement and school participation (Beasley, 2008).

Finally, an additional strategy to help improve early childhood education is to make pre-kindergarten programs universal. Because the demands of the kindergarten curriculum require students to have background knowledge and experiences to build upon, it is only logical to make pre-kindergarten programs more readily available to all populations. There are apparent positive benefits for students attending an early childhood education program, including increased academic scores in kindergarten and increased physical, cognitive, and social-emotional development (Lazarus & Ortega, 2008). In his study, Liu (2008) concluded that prior school

experiences in an early childhood classroom setting had the most significant impact on students making a successful transition into formalized school and increased academic achievement in kindergarten. Thus, making pre-kindergarten universal for all students would greatly increase the effectiveness of the kindergarten curriculum and the student's ability to meet the demands of the program (Cascio, 2011).

### **Conclusion**

Providing high-quality early childhood programs to all students will help in their school readiness ability and increase their academic achievement in kindergarten (Burkam, et al., 2007). Early childhood programs also help further the development of a student's social-emotional and physical growth through their various learning opportunities (Rhoades, et al., 2011). Successful early childhood programs better meet the needs of the students through parent involvement and developmentally appropriate learning through language-based activities and hands-on learning. As a result, early childhood learning experiences prior to kindergarten provide an array of foundational skills that allow the student to grow and continue to be successful throughout primary elementary school.

## **CHAPTER III**

### **METHODS**

This study consists of a causal-comparative design where students were grouped according to their prior school experience and their academic assessment results at the beginning of the kindergarten year are compared. The independent-like variable was the student's specific type of prior school experience or lack thereof. Students were given three assessments: reading, math, and general knowledge. The assessments were given at the beginning of the school year measuring their academic success, the dependent variable. Once the students were assessed, each classroom teacher would identify areas of need within the student's skills and provide differentiated, small-group instruction based on the needs of the students.

#### **Participants**

The participants in this study were 59 kindergarten students enrolled in a suburban elementary school in Baltimore County for the duration of the 2011-2012 school year. The grouping of students included three kindergarten classes. There were 22 boys and 37 girls participating in the study. Of these students, 26 students were Caucasian, 24 students were African American, five students were Hispanic, three students were Asian, and one student was American Indian. Ten of the students had Individualized Education Plans for speech and language. Two students had Individualized Education Plans for academic needs. Eight students received weekly English for Speakers of Other Language (ESOL) classes. For the purposes of this study, 26 of the students were enrolled in Baltimore County Public School's pre-kindergarten program, 24 of the students received only in-home care with no prior school experience, and nine students attended non-public nursery school or daycare center programs.

## **Instrument**

The instrument used in this study was a series of three informal assessments created by the kindergarten grade level team at a suburban elementary school. The assessments were created based upon the Baltimore County Public School's kindergarten progress report, stated curriculum objectives for the year, the Baltimore County Public School's Phonological Awareness Screening, and adapted aspects of the Dynamic Indicators of Basic Early Literacy Skills (DIBLES). This was the third year the assessment was used in kindergarten. The assessment was given in three parts: reading, math, and general knowledge. The reading portion of the assessment not only combined elements of the current curriculum, a screening tool provided by the school district, but it also contained elements of DIBELS (Dynamic Indicators of Basic Early Literacy Skills). The reading assessment contained letter identification and discrimination, rhyming, sentence and phoneme segmentation, blending, letter-sound correspondence, phoneme identification and sight word identification. The math assessment contained number identification, rote counting, patterns, addition, subtraction, skip counting and geometry concepts. The general knowledge assessment contained handwriting samples, social skill ratings, cutting ability, birthday and age identification, phone number and address recall, and color identification.

## **Procedure**

At the beginning of the school year, parents were sent home a form to complete about their students' prior school experience. This data is collected and used each year as part of the Maryland Model for School Readiness, but also provided the same information needed to identify students in this study.

In September, each child was pulled individually during independent work or center time to a quiet area in the classroom and given the three assessments over a period of two to three weeks by their classroom teacher. The assessments were then scored and analyzed for areas of strength and weakness in the student's academic skills. Scores were reported to the parents with suggestions on how to improve areas of weakness by working together at home. Throughout small group reading instruction and centers, activities were differentiated for each student to help work on areas of weakness as identified in the assessments. Also, instruction was tailored to meet the needs of the students based on their assessments.

From the given September assessment results for each student, the scores were analyzed, compared, and ranked according to the student's prior school experience or lack thereof to determine if the prior schooling had any impact on their kindergarten academic achievement.

## CHAPTER IV

### RESULTS

The results from the study indicate that there was no significant difference in the mean scores of students who were cared for solely at-home, who attended pre-kindergarten, or who attended a non-public nursery school program. As a result, the null hypothesis was supported through this study.

Table 1 shows students' September performance in general knowledge, mathematics and reading. As indicated in the table, there is no significant difference for the mean performance in the three grouping areas. Students that attended pre-kindergarten and received only in-home care had the same mean score in the general knowledge category. In math, the mean of the students in all three subgroups was within three points. In the reading assessment, the mean score of students in all three subgroups had the largest span of scores; however the scores were still within six points of each other. Given the mean scores and standard deviations, there is no significant difference in the academic achievement of students based on their prior school experience.

*Table 1. Means and Standard Deviations of General Knowledge, Math, and Reading Performance By Group*

Group	General Knowledge M (SD)	Math M (SD)	Reading M (SD)
At-Home Care	37.21 (9.12)	21.58 (11.01)	35.46 (20.62)
Pre-Kindergarten	37.73 (6.97)	24.31 (7.77)	41.04 (16.01)
Non-Public Nursery School	42.00 (6.44)	22.33 (4.63)	38.56 (10.86)



A one way Analysis of Variance (ANOVA) was run to examine the differences in student performance on the general knowledge, mathematics and reading measures. Results showed no significant differences between groups on any of the measures. The null hypothesis was supported (See Table 2). These results and their implications will be discussed in the next chapter.

*Table 2. ANOVA of General Knowledge, Math, and Reading Performance for the Groups*

Source		df	Mean Square	F
General Knowledge	Between Groups	2	79.616	1.287*
	Within Groups	56	61.841	
	Total	58		
Math	Between Groups	2	48.009	0.602*
	Within Groups	56	79.810	
	Total	58		
Reading	Between Groups	2	194.446	0.635*
	Within Groups	56	306.056	
	Total	58		

\* $p > .05$

## **CHAPTER V**

### **DISCUSSION**

Based on the data, the null hypothesis in this study was supported. It was concluded that there was no significant difference in the beginning of the year academic achievement of kindergarten students based on their prior school experiences. The students' prior school experiences included being cared for solely at home, attending a public pre-kindergarten program, and attending a non-public nursery school program. Among the three tested areas, the mean scores were all within six points of one another for three tested areas. Because the means of the scores were so close, there is no significant data that shows that one group of students had significantly higher or lower achievement in kindergarten based on their prior school experiences.

#### **Implications**

From the study conducted and data presented, it can be implied that a particular prior school experience does not have a significant impact on kindergarten academic achievement in the beginning of the school year. However, it is also understood that there are foundational skills that students must have in order to be successful in kindergarten. These foundational skills should be introduced to a student prior to entering kindergarten, whether it is from a public or private funded school program or modeling and instruction from a family member or daycare provider. As a result, the study implies that regardless of prior school experiences, students are coming to kindergarten with a readiness to learn and acquire new knowledge.

#### **Theoretical Consequences**

As the null hypothesis was supported in this study, its implications can be linked to many educational theories. First, it is believed that young children learn and develop their ways of

thinking and behaving through interaction with their peers, as stated in the Sociocultural Theory by Vygotsy (Berk, 2007). In this theory, it is believed that a student's cognitive ability is greatly influenced their peers, culture, and social norms, rather than relying on the direct instruction of a teacher. Therefore, according to Vygotsky's theory, students that have had prior interaction with peers, through sports, church groups, playing on the playground and friendship will come to kindergarten with previous background knowledge due to their social interactions with one another, regardless if they have had a formalized prior school experience.

A students' prior school experience may not have an impact on their kindergarten academic achievement because it is believed that all students progress through a series of stages of development based on their age. Piaget suggests that all children between the ages of three and seven are in a developmental stage where they make meaning from the world around them through their experiences (Berk, 2007). As a result, students begin kindergarten with a variety of previous experiences, regardless of their prior schooling, which leads to their readiness skill level. Additionally, this theory also suggests that most students are on the same reasoning level in their thinking where they are unable to logically think and problem solve. Therefore, students entering kindergarten are often on the same cognitive thinking level so their understanding of basic skills and concepts will be similar, regardless of the their previous school experiences (Good, 2008).

### **Threats to Validity**

There are three major threats to validity that pertain to this study. First, the assessment tool used in this study was a teacher created assessment. While the assessment was compiled from a variety of other research based assessments and curriculum outcomes, there was no research or validity and reliability testing conducted on this particular assessment. Therefore, it

is possible that some of the questions may be worded poorly or may not be assessing exactly what the examiner intended to assess.

Familiarity and maturation may have also played an important role in this study. It is well known that students work best when they are in a comfortable and familiar environment with an adult they trust. Since the assessments were given at the beginning of the kindergarten year, it is possible that some of the students may not have felt completely comfortable with either their teacher giving the assessment or in the classroom environment. As a result, the students may not have performed as well on the assessment as expected. Additionally, students at this age come from varying maturity levels. It may have been more difficult for some students to sit in the back of the classroom and answer questions to the best of their ability with many other distractions occurring in the room at the same time. Also, because the assessments were lengthy the varying attention spans of the students could have had an impact on their test scores.

Finally, attendance and prior care could potentially threaten the validity of this study. There were many students who were enrolled in pre-kindergarten or non-public nursery programs. If the students had poor attendance in these prior school experiences and missed skills and instruction, this could have had a negative impact on their achievement scores. Additionally, there are some students who came from at home care where parents, family members or daycare providers may have worked with them and provided direct instruction of important foundational skills necessary for kindergarten, having a positive impact on their assessment scores.

### **Connections to Previous Studies**

Similar studies indicate that prior school experiences do not always have a positive impact on academic achievement. In a study conducted in rural China, it was discovered that prior school experiences had very little impact on academic achievement in the first year of

formalized school (Rao, 2012). In this study, Rao concluded that many pre-kindergarten programs are not balanced and equivalent with regard to the type of instruction they deliver. As a result, some programs made a positive impact on student academic achievement, where other programs seemed to make little or no significant impact. Rao concludes that the varying levels of impact are heavily influenced by teacher qualification, materials and resources, and parental involvement in the programs. Because the study conducted in this paper only looked at three categories of prior school experiences, it is unknown what type of curricula was used. However, Rao's study yielded the same results and conclusions as the study that was conducted in this paper.

Additionally, Rhoades, et al. (2011) concluded that social and emotional education in pre-kindergarten experiences did not influence academic achievement in first grade. While this study examines first grade achievement the conclusions are still relative to the study conducted in this paper. A large portion of pre-kindergarten curricula, whether private or public, are based on a child's social and emotional growth and development through interactions, role playing, and direct instruction. Even with the increase in social and emotional education in pre-kindergarten children, the student's academic performance had no significant impacts. Therefore, this study also yields the same results as the study conducted in this paper.

### **Implications for Future Research**

From this study, there are several avenues of future research that can be addressed. One of these situations is research based on which types of prior school experiences provide the most useful school-readiness skills. It is known that there are a variety of skills necessary for students to enter kindergarten with success. Therefore, this research would study various types of prior school experiences such as public pre-kindergarten programs, HeadStart, private nursery school

programs, students receiving in-home special education services, and other early childhood learning experiences and the correlation between each program and student's school readiness skills. This type of study could provide potential useful information to parents and school districts about the types of programs that would have the greatest positive impact on school readiness.

Another area of study that can be considered from the current study is which students will benefit the most from a formalized pre-kindergarten experience. A study like this may consider gender, race, ethnicity, first language spoken, socioeconomic status, and special education identification and compare where the prior school experience seems to have the greatest impact. A study of this type could provide useful information to school districts about what areas pre-kindergarten would be most useful and effective for students.

### **Conclusion**

From the data gathered in the study, educational theory, and prior studies, it can be concluded that prior school experiences do not have a significant impact on achievement in kindergarten. However, the quality and type of formalized school experience may alter the impact, either positive or negative, on a child's educational career. Future studies looking specifically at the various types of programs and curricula and specific groups of students may give a greater understanding of the impacts that formalized schooling before kindergarten can have on academics, social-emotional growth and school readiness.

## References

- Beasley, S. (2008). All grown up. *American Scholar*, 77(3), 16-16.
- Burkam, D. T., Michaels, D. L., & Lee, V. E. (2007). School grade span and kindergarten learning. *Elementary School Journal*, 107(3), 287-305.
- Berk, L. E. (2007). *Development through the lifespan*. 4th edition. Allyn and Bacon: New York.
- Cascio, E. U. (2010). What happened when kindergarten went universal? *Education Next*, 10(2), 62-69.
- De Feyter, J. J., & Winsler, A. (2009). The early developmental competencies and school readiness of low-income, immigrant children: Influences of generation, race/ethnicity, and national origins. *Early Childhood Research Quarterly*, 24(4), 411-431.
- Denham, S. A., Bassett, H., Mincic, M., Kalb, S., Way, E., Wyatt, T., & Segal, Y. (2012). Social-emotional learning profiles of preschoolers' early school success: A person-centered approach. *Learning and Individual Differences*, 22(2), 178-189.
- Early, D. M., Iruka, I. U., Ritchie, S., Barbarin, O. A., Winn, D. C., Crawford, G. M., Pianta, R. C. (2010). How do pre-kindergarteners spend their time? Gender, ethnicity, and income as predictors of experiences in pre-kindergarten classrooms. *Early Childhood Research Quarterly*, 25(2), 177-193.
- Good, T. L. (Ed.). (2008). *21st century education: A reference handbook*. Thousand Oaks, CA: SAGE Publications, Inc.

Herbers, J. E., Cutuli, J. J., Lafavor, T. L., Vrieze, D., Leibel, C., Obradovic, J., & Masten, A. S.

(2011). Direct and indirect effects of parenting on the academic functioning of young homeless children. *Early Education and Development*, 22(1), 77-104.

Hindman, A. H., Skibbe, L. E., Miller, A., & Zimmerman, M. (2010). Ecological contexts and early learning: Contributions of child, family, and classroom factors during Head Start, to literacy and mathematics growth through first grade. *Early Childhood Research Quarterly*, 25(2), 235-250.

Lazarus, P. J., & Ortega, P. (2007). Universal pre-kindergarten in conjunction with universal screenings: An antidote to grade retention. *Journal of Educational Research & Policy Studies*, 7(1), 54-75.

Liu, K. (2008). Bridging a successful school transition. *Childhood Education*, 84(3), 158-A.

Margetts, K. (2007). Preparing children for school--benefits and privileges. *Australian Journal of Early Childhood*, 32(2), 43-50.

O'Donnell, K. (2008). *Parents' reports of the school readiness of young children from the national household education surveys program of 2007. first look. NCES 2008-051.* National Center for Education Statistics.

O'Leary, P. M., Cockburn, M. K., Powell, D. R., & Diamond, K. E. (2010). Head Start teachers' views of phonological awareness and vocabulary knowledge instruction. *Early Childhood Education Journal*, 38(3), 187-195.



- Pagani, L. S., Fitzpatrick, C., Archambault, I., & Janosz, M. (2010). School readiness and later achievement: A French Canadian replication and extension. *Developmental Psychology*, 46(5), 984-994.
- Rao, N., Sun, J., Zhou, J., & Zhang, L. (2012). Early achievement in rural China: The role of preschool experience. *Early Childhood Research Quarterly*, 27(1), 66-76.
- Rhoades, B. L., Warren, H. K., Domitrovich, C. E., & Greenberg, M. T. (2011). Examining the link between preschool social-emotional competence and first grade academic achievement: The role of attention skills. *Early Childhood Research Quarterly*, 26(2), 182-191.
- Stylianides, A. J., & Stylianides, G. J. (2011). A type of parental involvement with an isomorphic effect on urban children's mathematics, reading, science, and social studies achievement at kindergarten entry. *Urban Education*, 46(3), 408-425.
- Wong, V. C., Cook, T. D., Barnett, W. S., & Jung, K. (2008). An effectiveness-based evaluation of five state pre-kindergarten programs. *Journal of Policy Analysis and Management*, 27(1), 122-154.