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A Study Of The Effects Of Voluntary Prekindergarten Providers On Kindergarten Readiness

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A STUDY OF THE EFFECTS OF VOLUNTARY PREKINDERGARTEN PROVIDERS ON KINDERGARTEN READINESS

by

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ABSTRACT

American parents have a myriad of choices when it comes to educating their children, and these choices begin in the very beginning stages of children's educational journey. Where parents decide to have their child spend their early formative years can have far-reaching implications for that child's future. The focus of this research was to examine if a difference exists in kindergarten readiness preparation offered by Voluntary Prekindergarten (VPK) providers in the state of Florida. The VPK Provider Kindergarten Readiness Rates of public schools were compared to the VPK Provider Kindergarten Readiness Rates of private learning centers and, more specifically, of Seventh-day Adventist private learning centers. Furthermore, this study was conducted to examine whether a difference exists in the kindergarten readiness between VPK providers in urban and rural counties.

This quantitative, non-experimental, causal comparative study explored the Kindergarten Readiness Rates of each of the 5,636 public and private VPK providers in the state of Florida. The Florida Kindergarten Readiness Screener was used to assess the kindergarten readiness level of each student. Individual student scores were tracked to the VPK provider that the students attended in order to assign a Readiness Rate for each provider. This screener consisted of the *Early Childhood Observation System*^{TM} (ECHOS^{TM}) and the *Florida Assessments for Instruction in Reading* (FAIR).

A one-way analysis of variance (ANOVA) was utilized to examine significant differences between public school, private, and Seventh-day Adventist providers. The ANOVA was followed by a Scheffe post-hoc test to determine where differences

occurred. The findings revealed that there existed a statistically significant difference in the means of public school and private VPK providers. Public school providers were found to have achieved higher Provider Kindergarten Readiness Rates than private providers. It was also found that though Seventh-day Adventist providers had a slightly lower average Provider Kindergarten Readiness Rate than public school providers and a slightly higher average than other private providers, this difference was not statistically significant.

A two-way factorial ANOVA was performed to examine if significant differences existed in the average Provider Kindergarten Readiness Rate when considering both the type of community (urban or rural) where the provider was located and the type of provider (public or private). The findings indicated that there was no statistically significant difference in Provider Readiness Rate when examining the interaction between the provider type and community type.

This work is dedicated to my “Sonshine”- Braydon Anthony Gregory Drummond-

Mommy loves you always and forever, Big Boy!

“*You are my Bray Bray,*

My only Bray Bray,

You make me happy

When skies are gray.

You’ll ALWAYS know dear,

How much I love you,

Please don’t take my Bray Bray away!”

This work is also dedicated in loving memory of one of my life’s greatest cheerleaders,

My Daddy, Anthony Julius Albury, Sr.

I love and miss you tremendously, Lil’ Man, and can’t wait until we are reunited so I can tell you that your baby girl is now “Dr. Toni Roni.”

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Finally, I owe all that I am and all that I have been able to accomplish to my Heavenly Father without whom, none of this would have been possible. To Him goes all of the glory and praise.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1
THE PROBLEM AND ITS CLARIFYING COMPONENTS

Background of the Study

Kindergarten sits at the intersection of preschool and elementary school and America's kindergarten classrooms are overflowing with children from varying walks of life. Children enter formal schooling with many differences in their cognitive, social, physical and motor skills. Research suggests that there are significant differences in varying aspects of development by the time children reach the schoolhouse door (Bowman, Donovan, & Burns, 2000, p. 6). Besides development, there are also sometimes apparent differences in their identifying characteristics such as gender, age, race, socioeconomic status, culture, and family support structure (Carbonaro, 2006; U.S. Department of Education, 2001). One more obscure difference is in the schooling, or lack thereof, prior to the student's arrival into formal schooling. There are students who enter kindergarten classrooms having never set foot in a structured Prekindergarten program. For them, this may be the first time they have ever been in an environment where they must interact with a teacher and other students. In contrast, there are other students, for whom being in a classroom setting is second-nature. They may have spent two, three or even four years in a structured learning environment. This second group of students has received a "head start" on their educational venture. Not only have they had exposure to developmentally appropriate academic material, they have also had opportunities to gain social skills through their interactions at school (Barnett, 2008).

Where they have spent these formative years, whether in a public school or at a private learning center, can have far-reaching implications for their future.

Florida's Voluntary Prekindergarten

In the state of Florida, prior to August 2005, the costs of attending prekindergarten prevented many young children from low and middle class families from attending any prekindergarten program. In 2005, Governor Jeb Bush signed the Voluntary Prekindergarten (VPK) legislation, Florida Statutes, Title 48, Chapter 1002, into law (Florida Department of Education, 2004). This program provided for free prekindergarten education to Florida's four- year-old children regardless of their socioeconomic status.

Widespread Access to Prekindergarten

Prior to 2005, elementary schools received students who, for the most part, had not been previously enrolled in a prekindergarten program. With the inception of the state funded VPK program, this situation changed, and many students were afforded the same opportunity previously reserved for those able to pay for it. According to the National Institute for Early Education Research [NIEER] (2012), during the 2011-2012 school year, Florida had the highest level of access to Pre-Kindergarten for four-year-olds of all the states in the nation. This was attained by the 175,122 children who participated in Florida's VPK programs. This number accounted for 79.4% of the children in the state who were eligible to attend the program.

Providers of VPK

VPK has become a very popular option for Florida's parents and is now available in a variety of settings, including public schools, accredited private schools, licensed child care centers, family child care homes and accredited faith-based centers. Although all of Florida's public school districts have been required to offer a VPK program, the most popular option for parents has been private providers. During the 2011-2012 school year, more than 80% of the total number of children in VPK programs were served in private settings such as child care and faith-based programs (NIEER, 2012).

Kindergarten Readiness &Provider Kindergarten Readiness Rates

Since the inception of Kindergarten in America's schools, there has been much discussion about the attributes, attitudes, and skills that children need as they enter kindergarten classrooms (West, Hausken, & Collins, 1993). Florida Statute 1002.69 (Florida Statutes, 2012) stated that there should be the adoption of a statewide screening that assesses the readiness of each student for kindergarten. The Statute required that this screening be administered by public school districts to each kindergarten student in the state's districts within the first 30 school days of each school year. Although private schools have not been required to administer the screening, they may opt to do so. The screening should supply objective data concerning each student's readiness for kindergarten and their progress in attaining the performance standards adopted by the department (Florida Statutes, 2012). The screening adopted is known as the Florida Kindergarten Readiness Screener (FLKRS) and consists of the Early Childhood

Observation System™ (ECHOS™) and the Florida Assessments for Instruction in Reading (FAIR).

This same legislation also requires that the State Board of Education periodically calculate and set a minimum kindergarten readiness rate to assess satisfactory delivery of the VPK Education Program by providers and schools. A Provider Kindergarten Readiness Rate is assigned to every provider that enrolls at least four children who complete the VPK program and have results on both portions of the FLKRS. The rate "measures how well a VPK provider prepares four-year-olds to be ready for kindergarten based upon the Florida Early Learning and Developmental Standards for Four-Year Olds" (Florida Department of Education, n.d.b, para. 1). The VPK Provider Kindergarten Readiness Rate is calculated by dividing the number of children deemed ready on both the ECHOS™ and FAIR by the actual number of children screened and is expressed as a percentage on a scale of 0-100 (Florida Department of Education, n.d.). In order for a provider to be considered to have achieved success in delivering the VPK program, a minimum of 70% of the children in attendance at that provider must be considered ready for kindergarten. Providers who fail to meet this minimum standard have been placed on probation (Florida House of Representatives, 2012).

Statement of the Problem

Over the last several decades, participation in prekindergarten programs has become much more common, and public support for these programs has grown dramatically. In the 2011-2012 school year, the amount spent by the state per child

enrolled in Florida VPK program was $2,281 (NIEER, 2012). Because of the cost to Florida's taxpayers, it became necessary for policymakers to justify the expense by demonstrating that students who attended VPK were better prepared to succeed academically than those students who did not attend VPK. In light of the great debate of the separation of church and state as it relates to providing funding to religious educational entities, the need for justification of this expense became even more necessary when consideration was given to the fact that the majority of this money was being provided to such religious centers (NIEER, 2012).

At the time of this study, there were insufficient data concerning the differences in Kindergarten readiness performance of the private VPK providers as compared to public school providers. Furthermore, there was a need for research regarding the differences in effectiveness of Seventh-day Adventist VPK programs as compared to VPK programs provided by public schools and other private providers. Additionally, there has been limited research conducted on the differences between urban and rural VPK providers.

Purpose of the Study

The purpose for this study was two-fold. First, this study sought to examine if there was a difference in the Kindergarten Readiness Rates between public school VPK providers, private learning center providers, and Seventh-day Adventist providers. Secondly, the researcher sought to examine if there was a difference in the Kindergarten Readiness Rates of urban and rural schools.

Significance of the Study

The significance of this study was vital as it offered valuable insight into the effectiveness of prekindergarten programs in preparing students to be ready for Kindergarten. Ascertaining this was especially important in light of the resources devoted to the Florida state-funded Voluntary Prekindergarten program, because the majority of students attend private and religious facilities to access this program. Policymakers typically have more alternatives than they can fund, and they must answer key questions about the value of preschool education, whom it should serve or subsidize, and which program designs are best (Barnett, 2008).

A review of current literature addressing the effectiveness of prekindergarten programs revealed that very little research had been conducted on Florida's VPK program in private learning centers and almost none in Seventh-day Adventist schools. This study aimed to close the gap in the available research. The results of this study can be utilized by governing agencies of public, private, and Seventh-day Adventist learning centers in the state of Florida. Policy makers can also use these findings to determine whether the allocation of limited resources to the state-funded VPK program is a prudent investment.

Definitions

The following definitions are provided to add clarity to the terminology used in the study.

Kindergarten--refers to an educational institution for children who have attained the age of five years on or before September 1 of the school year (Florida Department of Education, 2005).

Kindergarten Readiness Screener--refers to the Florida Kindergarten Readiness Screener (FLKRS) which is used to gather information on a child's overall development and to specifically address the readiness of each student for kindergarten based on the Florida Early Learning and Developmental Standards-for-Four-Year-Olds. The FLKRS also is used to calculate the VPK Provider Kindergarten Readiness Rate which measures how well a VPK provider prepares four-year-olds to be ready for kindergarten based upon Florida Early Learning and Developmental Standards-for-Four-Year-Olds. The FLKRS includes a subset of the Early Childhood Observation System™ (ECHOS™) and the first two measures of the Florida Assessments for Instruction in Reading-K (FAIR-K) (Florida Department of Education, 2005).

Parochial school-- refers to education offered institutionally by a religious group. In the United States, parochial education refers to the schooling obtained in elementary and secondary schools that are maintained by Roman Catholic parishes, Protestant churches, or Jewish organizations; that are separate from the public school systems; and that provide instruction based on sectarian principles. . . . While the course of study for each grade. . . is substantially the same as that offered in the public schools, Christianity is made a unifying and integrating factor in the educational program (*Encyclopedia Britannica*, 2012).

Participation--refers to student attendance at a VPK program for a minimum of 70% of the 3-hour, 5-day weekly time in which it is offered (NIEER, 2012). It may also be referred to as "attendance."

Prekindergarten--refers to the first classroom-based learning environment that a child customarily attends. It begins between the ages of 3-5. Attendance is not required by law but was created to prepare students for a more academically intensive kindergarten (Bowe, 2012).

Private school--refers to, what has been defined by Section 1002.01(2), Florida Statutes as, a nonpublic school that designates itself as an educational center that provides instructional services and includes kindergarten but is below college level. A private school may be parochial, denominational, for-profit, or nonprofit (Florida Statutes, 2012).

Rural provider--refers to VPK programs that are located in counties deemed rural by the latest US census (Florida Department of Health, 2005).

State-funded prekindergarten program--refers to a program that is funded, controlled, and directed by the state and serves children who are four years of age (NIEER, 2012).

Urban provider--refers to VPK programs located in counties deemed urban by the latest US census (Florida Department of Health, 2005).

Voluntary Prekindergarten (VPK)--term and acronym for a state-funded education program for children who are four years of age by September 1 in which parents may voluntarily enroll children (Early Learning Coalition of Miami-Dade/Monroe, n.d.).

Theoretical Framework

The field of early childhood development is replete with theories put forth by theorists such as Kohlberg who discussed moral development and Erikson whose focus was primarily on personal and social development (Vogler, Crivello, & Woodhead, 2008). Because this study focused on mental development, a central precept was the theory of cognitive development developed by the Swiss psychologist and philosopher, Piaget.

Piaget's Theory of Cognitive Development

In his theory, Piaget reasoned that children shape their thought processes by the knowledge of the world that they acquire and then apply (Piaget & Inhelder, 1973). Central to Piaget's theory of cognitive development were three inter-related principles that seek to explain how a child adapts knowledge and experience to understanding. Those principles are (a) organization, (b) adaptation, and (c) equilibration (Piaget, 1970).

Organization explains how children use their knowledge of the world to make sense of the world. Adaptation predicts how the experiences children have, coupled with their knowledge of the world, incorporate to determine their behavior. Equilibration involves children balancing their experiences from the outside world with the knowledge in their inner world.

According to the 2012 *Encyclopedia Britannica*, Piaget asserted that all children's thought processes follow a series of cognitive stages: sensorimotor, preoperational, concrete operational, and formal operational. The sensorimotor stage occurs during the

first two years of a child's life. During this stage, children first become aware of themselves as individuals and realize that there are objects and other people around them. Children's chief concern is with mastering their own innate physical reflexes and extending them into interesting or pleasing actions. They also learn the concept of object permanence during the later part of this stage (Ojose, 2008; Powell & Kalina, 2009).

The second stage, preoperational, takes place between the ages of two through seven (Powell & Kalina, 2009). During this stage, children learn to manipulate their environment symbolically using their thoughts about the outside world (*Encyclopedia Britannica*, 2012). Children in this stage also develop what is coined "intuitive thought" (p. 242) in which they begin to ask all sorts of questions about everything in their immediate environment (Powell & Kalina, 2009). Children are also considered to be egocentric, and they focus on satisfying their own needs and desires (Piaget, 1970).

Between the ages of seven and 11, children go through the concrete operational stage. During this stage, they replace intuitive thought with their own logical reasoning to manipulate the world around them (Powell & Kalina, 2009). They also begin to grasp the concepts of time, number, conservation and reversibility (*Encyclopedia Britannica*, 2012; Piaget, 1970).

The fourth and final stage of Piaget's cognitive development theory is the formal operations stage. This stage, which begins at age 12 and continues into adulthood, is characterized by a time when higher level thinking and abstract ideas are used to solve problems (Powell & Kalina, 2009). The formal operational stage is also marked by the

ability to consider problems that are focused on matters other than oneself (*Encyclopedia Britannica*, 2012).

Vygotsky, a psychologist, supported Piaget's work, but viewed children as active agents in their own environment. He asserted that children are continuously engaging with the world around them, and in some senses, create for themselves the circumstances of their own development. The two theorists differed in that Vygotsky placed much emphasis on the role of cultural and social processes in learning and development (Vogler, Crivello, & Woodhead, 2008).

Piaget's theory of cognitive development has been used in many educational and child development realms, because it outlines distinct stages through which the child matriculates. Children transitioning from prekindergarten to kindergarten would fall within the preoperational stage of Piaget's theory.

Research Questions

The following research questions and hypotheses were used to guide the study.

1. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private providers?

   $H_{01.}$ There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school

providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private providers.

2. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers?

   $H_{02.}$ There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers.

3. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers?

   $H_{03.}$ There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers.

4. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in urban counties as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in rural counties?

   $H_{04.}$ There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in urban counties as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in rural counties.

Limitations

1. In conducting this study, the researcher relied on data provided by the Florida Department of Education's VPK Provider Kindergarten Readiness Rate website and the Seventh-day Adventist Offices of Education.
2. This study was based on quantitative data and did not consider extraneous variables which may have influenced the results.
3. In this study, Seventh-day Adventist providers were extrapolated from the total private provider population; however, because they were actually private providers, the students represented in the two groups may have been similar.
4. That the population groups were not of equal size may have contributed to the results of the study.

5. The statistical assumption of normality was not fully met in this study; however, ANOVA was still used due to some evidence of normality as well as ANOVA's robustness.
6. The statistical assumption of the homogeneity of variances was not met in this study. This was due to the fact that there was a considerable disparity in the number of VPK providers in each category; however, ANOVA is robust to violations of this assumption and was deemed appropriate for use.

Delimitation

1. This study was delimited to Florida Voluntary Prekindergarten providers who received Provider Kindergarten Readiness Rates during the 2012-2013 school year.

Overview of Methodology

Research Design

This non-experimental, quantitative, causal-comparative research study was designed to test whether a significant difference in means existed in VPK Provider Kindergarten Readiness Rates for public, private and Seventh-day Adventist providers. It was also designed to examine whether a significant difference in means existed in VPK Provider Kindergarten Readiness Rates between public schools and private providers. Statistical tests were conducted using pre-existing data acquired from the Florida

Department of Education's VPK Provider Kindergarten Readiness Rate website and the Seventh-day Adventist Offices of Education.

Population

The target population for this study consisted of all VPK providers in the state of Florida during the 2012-2013 school year. According to the Florida Department of Education's VPK Provider Readiness Rate website, there were a total of 6,247 VPK providers. Of these, 611 providers did not receive Provider Kindergarten Readiness Rates and were disqualified for this study. Of the 5,636 providers that were used in this study, 28 were Seventh-day Adventist providers, 4,703 were other private providers, and 905 were public schools providers. There were 5,258 providers in urban areas and 350 providers in rural areas.

Methods of Data Collection and Analysis

This study utilized pre-existing data acquired from the Florida Department of Education's VPK Provider Kindergarten Readiness Rates website and personnel in the Florida Seventh-day Adventist Offices of Education. The methodology used to analyze the data was an ANOVA. This test was conducted to examine if there was a statistically significant difference between the three types of providers and, if there was, the extent to which that difference existed.

Organization of the Study

This report of the research has been organized in five chapters. Chapter 1 provided an introduction to the study and included the background of the study, statement of the problem, purpose of the study, significance of the study, definitions, theoretical framework, research questions, hypotheses, limitations, delimitations, and an overview of the methodology. Chapter 2 contains a review of the relevant literature and research. Chapter 3 details the methodology used in conducting the study. Chapter 4 presents a detailed analysis of the data as a result of statistical testing. Chapter 5 provides a summary and discussion of the findings, conclusions, implications for practice, and recommendations for further research.

CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

Public Law PL 107-110, known as the No Child Left Behind Act of 2001, has forced educators and politicians to investigate ways to meet the federal legislation's goal of assuring that all students are academically proficient by the year 2014 (No Child Left Behind Act, 2002). As a result, a multitude of strategies, programs, and resources that are available to assist with this daunting challenge have been explored by educators and politicians alike. One such strategy that has been investigated is that of increasing the education of children prior to their entrance into formal schooling.

The benefits of prekindergarten have been explored, researched, and debated by educators, parents, children's advocates, and policymakers for decades. These stakeholders are aware of the fact that by the time some students enter kindergarten, they are already performing significantly behind their peers academically. Without the proper intervention and support, these students continue to achieve less than their peers as they matriculate through the K-12 educational system. This achievement gap often gets progressively wider and more difficult to address. As a result of this phenomenon, more states have begun to allocate funds and resources for early intervention by offering prekindergarten programs to the students who need it most, with the goal being to better prepare young children for school and for life.

Leading Theories on Child Development

There have been many divergent theories on how children develop over time. Over a century of research and experience has led to the current conceptions of early childhood development and the methods used to educate children during their early years (Bowman et al., 2000). An examination of some of the more prominent theories which undergird such concepts can assist in formulating a clearer understanding of the ideals, beliefs, and practices in early childhood education that were in place at the time of the present study.

John Dewey's Progressive Education Theory

Dewey's view of development is just one of many competing views that emerged in the field of developmental psychology (Schecter, 2011). His view of progressive education held that the "guiding principles of education are derived from a system of theoretical and value commitments about the growth of children" (Schecter, 2011, p. 251). Dewey argued that progress is a human responsibility and that human development depends on one's own social values which are not governed by the laws of adaptation or survival of the fittest. He held that the trajectory of individual growth was defined in terms of participation in the forward movement of social change (Schecter, 2011).

According to Schecter (2011), Dewey also postulated that children have the potential for many different ends and that the course of development is determined by the quality of experiences to which children are exposed. He held that since development is

not inevitable, it is imperative that close attention be paid to the kinds of experiences that are allowed to foster children's development.

Dewey's theory of progressive education led to the inception of his "laboratory school" which served as a site for teachers to function as researchers who "could bridge theory and practice in an ongoing process of exploration and revision" (p. 259). He believed that schools were meant to be a place where the values of the current society were to be expressed and that schools must acknowledge the changing needs of society and be responsive to those needs (Schecter, 2011).

Dewey's theory was in contrast to the prevailing views of other theorists in the early 20th century. According to Schecter (2011), Darwin, Spencer, and Hall theorized that children developed in "an inevitable, biologically motivated course toward higher and better forms. . . hence natural progress" (p. 256).

The progressive education theory of John Dewey had numerous implications for the early learning development of children. His teachings lend credence to the importance of early childhood experiences often found in prekindergarten programs, education that is child-centered and includes active and interactive involvement within the social world of the child and the community (Mooney, 2000).

Albert Bandura's Social Learning Theory

Bandura's theory of social development was widely presented in the 1960s and 1970s and has come to be referred to as social cognitive theory. His theory was "mainly concerned with how children and adults operate cognitively on their social experiences

and with how these cognitive operations then come to influence their behavior and development" (Grusec, 1992, p. 781). Grusec asserted that Bandura's theory includes four components, all of which are involved in the process of modeling. Each component, according to Grusec, acts to either acquire information about events or in the decision to put this information to use in an individual's behavior. The first component, paying attention, posits that individuals must pay attention to live or symbolic events that are modeled. The second component, retention, requires that the material that has been attended to must be retained in memory either through imagination or a verbal representational system. The third component is conversion. In this component, the memorized symbolic representation is converted into appropriate actions that are similar to the modeled behavior that was originally observed. In the final component, motivation, motivational variables are involved, and there must be "sufficient incentive to motivate the actual performance of modeled actions" (p. 782).

Self-efficacy was a central focus of Bandura's (1977) research. The concept of self-efficacy includes the belief that:

> people develop domain-specific beliefs about their own abilities and characteristics that guide their behavior by determining what they try to achieve and how much effort they put into their performance in that particular situation or domain. Thus, self-precepts provide a framework or structure against which information is judged: They determine how or whether individuals put into action the knowledge they have. (Grusec, 1992, p. 782)

Bandura (1977) explained the power of perceived self-efficacy on individuals as follows: "Not only can perceived self-efficacy have directive influence on choice of activities and settings, but, through expectations of eventual success, it can affect coping efforts once they are initiated" (p. 194).

Central to the social cognitive approach are the themes of "maturation, exploratory experiences, and. . . the imparting of information by social agents in the form of guided instruction and modeling" (Grusec, 1992, p. 783). Early childhood teachers, according to Grusec, should teach young children ways to improve their attention and memory skills. They should find ways to aid in their comprehension and retention. When developing their moral standards, teachers may use physical sanctions when the children are very young and not yet cognizant of spoken language; however, as the children grow and their language acquisition improves, teachers should switch to more cognitively sophisticated techniques. Finally, Bandura's self-efficacy concept can be used to explain how, as children's self concepts change, their social and cognitive behaviors undergo commensurate changes.

Jean Piaget's Cognitive Development Theory

A primary influence on preschool practice comes from Piaget's theory that emphasized systematically defined stages of development. In his theory, Piaget reasoned that children shape their thought processes by the knowledge of the world that they acquire and then apply (Piaget & Inhelder, 1973). Central to Piaget's theory of cognitive development were three inter-related principles that seek to explain how a child adapts

knowledge and experience to understanding. Those principles are (a) organization, (b) adaptation, and (c) equilibration (Piaget, 1970). Organization explains how children use their knowledge of the world to make sense of the world. Adaptation predicts how the experiences children have had, coupled with their knowledge of the world, incorporate to determine their behavior. Equilibration involves children's balancing their experiences from the outside world with the knowledge in their inner world.

Piaget also asserted that all children's thought processes follow a series of cognitive stages: (a) sensorimotor, (b) preoperational, (c) concrete operational, and (d) formal operational.

The sensorimotor stage occurs during the first two years of a child's life. During this stage, children first become aware of themselves as individuals and realize that there are objects and other people around them. Their chief concern is with mastering their own innate physical reflexes and extending them into interesting or pleasing actions. Children also learn the concept of object permanence during the later part of this stage (Ojose, 2008; Powell & Kalina, 2009).

The second stage, preoperational, takes place between the ages of two and seven. (Powell & Kalina, 2009). During this stage, children learn to manipulate their environment symbolically, using their thoughts about the outside world (*Encyclopedia Britannica, 2012).* Children in this stage also develop "intuitive thought" (p. 242) in which they begin to ask all sorts of questions about everything in their immediate environment (Powell & Kalina, 2009). Children are considered to be egocentric, and they focus on satisfying their own needs and desires (Piaget, 1970).

Between the ages of seven and 11, children go through the concrete operational stage. During this stage, they replace intuitive thought with their own logical reasoning to manipulate the world around them (Powell & Kalina, 2009). They also begin to grasp the concepts of time, number, conservation, and reversibility (Piaget, 1970).

The fourth and final stage of Piaget's cognitive development theory is the formal operations stage. This stage, which begins at age 12 and continues into adulthood, is characterized by a time when higher level thinking and abstract ideas are used to solve problems (Powell & Kalina, 2009). The formal operational stage is also marked by the ability to consider problems that are focused on matters other than oneself.

As children develop, they progress through successive stages characterized by unique ways of understanding the world (Ojose, 2008). Although the experiences that aid children in constructing their knowledge differ, the "concepts and cognitive sophistication they acquire through manipulating their environment and thoughts are universal" (Onchwari, Onchwari, & Keengwe, 2008, p. 270). Piaget's theory of cognitive development has been used in many educational and child development realms because it outlines these stages through which the child matriculates.

History and Development of Early Childhood Education

The education of society's children can be traced through many past centuries. As early as the mid 1600s, colonists established schools to educate their young. The colonists believed that the Bible was an important part of their existence and wanted their children to be taught to read the Bible at an early age (Pulliam & Van Patten, 2007).

According to Brickman (1964) a law enacted in the state of Virginia in 1631 required ministers to teach children, youth and "ignorant persons" to read the Ten Commandments and the Catechism. A little over a decade later, the state of Massachusetts passed legislation that ordered the town authorities to ensure that children were taught to read and understand religious principles and the country's laws (Brickman, 1964).

Old Deluder Satan Act

Despite earlier attempts at starting school systems, it was not until the General Court of Massachusetts's passing of the Old Deluder Satan Act of 1647 that the tone for American education seemed to be established. This act was devised as a means to defeat the attempts of the devil to keep people from studying the Scriptures. It ordered that grammar schools to prepare youth for higher education be opened in townships with 100 families or more. This law included three basic principles of the American public education system that persisted at the time of this study: local finance, local administration, and the separation of elementary and secondary schools (Brickman, 1964).

Dame Schools

The principles of the Old Deluder Satan Act permeated all of the New England colonies except for Rhode Island where private education continued to be prevalent (Brickman, 1964). Because there were no free or public schools, some colonial parents chose to pay fees to send their youngest children to a common form of private education

known as “dame schools” These schools were often attended by children from upper-class families and were geared to educating boys rather than girls (Mondale & Patton, 2001; Pulliam & Van Patten, 2007). Pulliam & Van Patten asserted that the dame schools were not really schools but mostly consisted of children gathering in a room in a house, often with a barely literate woman providing rudimentary instruction while carrying on household duties. The standard instructional instrument in the dame school was the hornbook, which was usually inscribed with the alphabet, basic numerals, and the Lord’s prayer. These were mounted on a wooden paddle and covered with transparent cow horns (Mondale & Patton, 2001; Pulliam & Van Patten, 2007).

Common Schools & Early Childhood Education

As the population in the New England colonies began to grow, new types of schools began to appear, and there began a transition from private, religious schools to secular institutions. The founders of these public schools called them the “common” schools. Common schools were tuition free and funded by the collection of local property taxes. They were open to all white children, governed by local school committees and were regulated by the state. The primary goal of these schools was to teach children to read the Bible (Saracho & Spodek, 2006), and the most common schoolbook in these schools was *The New England Primer*, which was used to teach reading and the Protestant catechism (Mondale & Patton, 2001). Though the common schools were not primarily focused on early childhood education, young children were often among their students. Saracho & Spodek (2006) credit the establishment of New

England's common schools as providing the impetus for early childhood education in America.

Public Infant Schools

Another system that had a strong influence on the education of young children was that of Owen's Infant School which was founded in England in the early 1800s (Saracho & Spodek, 2006) and later modified by Wilderspin (Pulliam & Van Patten, 2007). Owen's purpose for starting his infant school was to educate the children of his cotton mill workers in an attempt to keep them out of the factories. The curriculum of this school, based on the philosophy that much can be learned from experiences with nature and with concrete materials, was much richer than that normally provided to young children. Besides the basic subjects of reading, writing, and arithmetic, children were also taught sewing, geography, history, dance and music (Saracho & Spodek, 2006).

Infant Schools took root in America and were established in several major American cities. The Boston Infant School, started in 1818, has been considered to be America's first public daycare center. This institution was nicknamed the "primary school" and catered to children who were at least four years old. Within a decade, cities such as New York, Philadelphia, and Providence saw the inception of similar schools (Pulliam & Van Patten, 2007), but despite its initial popularity, American infant schools began to vanish by the mid 1830s. The shift of popular public opinion regarding the education of young children away from formal public schooling to children being

educated in their homes by their parents led to the demise of infant schools in America (Saracho & Spodek, 2006).

Nursery Schools

Shortly after the conclusion of World War I, nursery schools were introduced in the United States. These nursery schools served the needs of very young children beginning at the age of 18 months and continuing on until four years of age. Nursery schools sought to supplement the early training provided in the home and promoted the physical, social, emotional, and mental development of young children. They were often supervised by state departments of education that required nursery school teachers to be certified. Many public school systems opted not to offer nursery schools because of the popular belief that children would be better raised at home during their early years (Brickman, 1964).

Day Care Centers

An urgent need for female participation in the work force was created by the onset of World War II (Browning, 1997). The Lanham Act of 1940 signed by President Franklin D. Roosevelt provided federal funds for establishing child day care centers (Black, 2011; Browning, 1997; Tuttle, 1995). These centers were located primarily in public schools and were open to children from all social classes. The day care centers operated the entire year. In addition to child care and education for young children, they offered health and nutritional care, parent education, and training for staff members

(Browning, 1997). With the end of the war, the funding for the day care centers also ended (Black, 2011).

Kindergarten

The mid-19th century witnessed the introduction of Kindergarten in the United States. The term, Kindergarten, was coined from the belief that the "garden of children" could nurture the growth of youngsters and provide educational experiences to children during their early years (Brickman, 1964; Pulliam & Van Patten, 2007).

This new educational system had its roots in that of Froebel's kindergarten in Germany. One of Froebel's students was a German immigrant, Margarethe Meyer Schurz, who began the first American kindergarten in Wisconsin in 1856. Schurz's school is considered by Pulliam & Van Patten (2007) to have been "a German kindergarten on American soil, with German language as the means of communication" (p. 148). The first English-speaking kindergarten was actually established by Elizabeth Peabody in Boston in 1860 and is thought to have been responsible for the fostering of American kindergartens. The kindergarten system in America has grown tremendously since its inception and at the beginning of the 21st century was educating more than 90% of America's five-year-olds (Pulliam & Van Patten, 2007).

National Early Childhood Interventions

Despite the assertion by Pulliam & Van Pattan (2007) that most communities in America offered some type of formal preschool educational experience, there was no

universal preschool system in the United States at the time of the present study. America's formal public school system has been a decentralized one, not organized by the federal government, but rather, by state and school district. Despite this lack of uniform governance, state school systems have developed in a similar manner with respect to overall structure, the types of services offered, and level of tax support. American preschools, however, have varied widely in organization, sponsorship, sources of funding, relationship to the public schools, government regulation, content, and quality (Bowman et al., 2000, p. 23).

Federally-Funded Early Childhood Education--Head Start

According to Barnett & Hustedt (2005), "Head Start is our nation's foremost federally funded provider of educational services to young children in poverty" (p. 1). Historically, Head Start was the primary public provider of early childhood education and care in the United States. Bassok (2012) asserted that when the program was first introduced, there were less than 10% of children aged 3-5, enrolled in any type of preprimary programs, and fewer than half of the states even offered kindergarten.

Head Start is a federal program that began in the summer of 1965 as a part of then President Lyndon B. Johnson's war on poverty. The comprehensive program was designed to promote the school readiness of children, ages birth to five from low-income families, by not only enhancing their cognitive development but also by meeting their social, emotional, health, nutritional, and psychological needs. (Barnett & Hustedt, 2005; Hammer, Farkas & Maczuga, 2010; U.S. Department of Health and Human Services,

2012). At its inception, Head Start was an eight-week summer demonstration project administered by the Office of Economic Opportunity. In 1969, during President Richard Nixon's term in office, Head Start transferred from the Office of Economic Opportunity to the Office of Child Development, which was a part of the U.S. Department of Health, Education, and Welfare.

Head Start has since grown to provide full-day and full-year services and has served nearly 30 million children since 1965. The program serves over one million children and their families each year in urban and rural areas in all 50 states, the District of Columbia, Puerto Rico and the U.S. territories, including American Indian, Alaskan Native, and Migrant/Seasonal communities. As of 2012, Head Start was administered by the Administration for Children and Families (ACF) in the Department of Health and Human Services which describes the services of the program as follows:

> Head Start programs offer a variety of service models, depending on the needs of the local community. Programs may be based in: centers or schools that children attend for part-day or full-day services; family child care homes; and/or children's own homes, where a staff person visits once a week to provide services to the child and family. Children and families who receive home-based services gather periodically with other enrolled families for a group learning experience facilitated by Head Start staff (U.S. Department of Health and Human Services, 2012, para. 6).

As a direct result of its being reauthorized under President George W. Bush's administration in 2007, Head Start's program incorporated several new provisions intended to strengthen its quality. Some of these provisions included:

- an alignment of the Head Start school readiness goals with the early learning standards of the states;
- more stringent qualifications for the Head Start teaching workforce;
- the implementation of State Advisory Councils on Early Care and Education in every state; and
- increased program monitoring, including a formal review of child outcomes and annual financial audits. (U.S. Department of Health and Human Services, 2012)

According to the U.S. Department of Health and Human Services (2012), there was also a provision that mandated that regulations be put in place to move programs from an indefinite project period to a five-year grant cycle. During this cycle, programs would be required to demonstrate they were of high quality or a competitive grant opportunity would be made available within the community. A public or private agency desiring to operate a Head Start program for a specific community must compete for a grant from the Office of Head Start. Head Start grantees are then required to provide the services as described in the Head Start Performance Standards. The Office of Head Start oversees these grantees and they are responsible for ensuring that the specified performance standards are met and that the best quality of care is provided to the children who are participating in the program.

Although Head Start has primarily served preschool-age children and their families, many Head Start providers have also offered an Early Head Start program which serves infants, toddlers, pregnant women, and their families who have incomes below the federal poverty level. The first Early Head Start grants were given in September 1995 during President Bill Clinton's administration (U.S. Department of Health and Human Services, 2012).

Head Start was intended to be a community initiative and a key tenet of the program was that it be culturally responsive to the communities served. Likewise, the communities where Head Start programs were located were expected to have an investment in their success through the contribution of volunteer hours and other donations (U.S. Department of Health and Human Services, 2012).

As one of the most widely recognized educational and social programs in the United States, not only has Head Start attracted proponents, but it has also had its detractors. Questions have arisen as to the program's effectiveness as an early education program for disadvantaged children and the long-term benefits associated with participation in the Head Start program (Barnett & Hustedt, 2005). Detractors such as McGill-Frazen, Lanford & Adams (2002) found in their study that students in publicly-funded programs including Head Start had less access to books and to knowledge about print, and "were offered a less challenging and culturally relevant pedagogy" (p. 460) than their counterparts in private, not-for-profit programs. They also concluded that students displayed a significant decline in letter recognition and book knowledge after spending a year in Head Start classes (McGill-Frazen et al., 2002).

In an effort to combat some of the concerns with the Head Start program, Olsen and DeBoise (2007) asserted that the Early Head Start Model was developed as an extension of the Head Start program with the belief that earlier intervention with low-income children and their families would improve child outcomes, including school readiness.

High Profile Preschool Initiatives

Over the years, there have been many initiatives instituted with the purpose of providing quality early childhood education to preschoolers. The following initiatives and studies are among those that are most highly recognized.

Montessori Schools

Montessori Schools are the result of Maria Montessori, an Italian physician who based her work on that of two French physicians from the 18th and 19th centuries: Jean Itard and Edouard Seguin. Based on her observations and frequent experimentation and the work of these two predecessors, she adopted the idea of a scientific approach to education (Sedlin, 2010).

Montessori first began her educational work at an asylum for mentally handicapped children. While serving as the director of the school, she recognized that the patients had a need for stimulation, purposeful activity and self-esteem. Her work at the asylum was very successful and led to the development of the first school entirely based on her research method, Children's House (Seldin, 2010).

Montessori developed her education method "through trial and error, making educated guesses about the under-lying meaning of the children's actions. She was quick to pick up on their cues, and constantly experimented with the class" (Seldin, 2010, para. 23). Most of the key components of the Montessori program were novel at the time of Montesorri's introduction of them but have come to be widely utilized in the modern field of early childhood education. "She is credited with the development of the open classroom, individualized education, manipulative learning materials, teaching toys, and programmed instruction" (Seldin, 2010, para. 2). She was also recognized as a pioneer in the use of child-sized furniture in classrooms and materials. In Montessori classrooms, furnishings, supplies, and materials were all designed according to the physical characteristics of children (Kayili & Ari, 2011).

Another novel concept that Montessori adhered to was the belief that it is the job of the educator to serve the child. This is accomplished by determining what each child needs to be the most successful.

> To her, a child who fails in school should not be blamed, any more than a doctor should blame a patient who does not get well fast enough. After all, it is the job of the physician to help us find the way to cure ourselves, and the educator's job to facilitate the natural process of learning. (Seldin, 2010, para. 18)

According to Seldin (2010), during Montessori's lifetime, she "continued her study of children and developed a vastly expanded curriculum and methodology" (para. 32). Supporters of Montessori's methods heralded her as one of the world's leading educators and advocates for early childhood education, while detractors dismissed her as

outdated and irrelevant. Regardless of which end of the spectrum one supports, there is evidence that her research and the studies that she inspired have helped to change the course of education. "As the movement gains support and begins to spread into the American public school sector, and gains official recognition internationally, one can readily say that Montessori, begun a century ago, is a remarkably modern approach" (Seldin, 2010, para. 35).

High/Scope Perry Preschool Experiment

The High/Scope Perry Preschool Project has been, perhaps, the most widely quoted study of the long-term effects of a high-quality prekindergarten education. This project is heralded as being ". . . one of the pioneering studies of the preschool program research tradition" (Schweinhart, 2003, p. 2). This study looked at the curriculum developed by Weikert and his colleagues in a school district in Michigan. The High/Scope Educational Research Foundation tracked a group of 123 African-American students from three and four years of age through 27 years. At the start of the study, the students all lived in poverty and were at a risk of failing school. A comprehensive evaluation of the lasting impact of prekindergarten on the lives of those students revealed that the students who attended preschool were more likely to graduate from high school, earn as much as $2,000 more per month, own homes, have marriages that lasted longer, and were less frequently arrested (HighScope Educational Research Foundation, 2012). Ultimately, the results of this study showed that ". . . a high-quality program for young children living in poverty, over their lifetimes, improves their educational performance,

contributes to their economic development, helps prevent them from committing crimes, and provides a high return on taxpayer investment" (Schweinhart, 2003, p. 4).

The Carolina Abecedarian Study

Campbell & Ramey (1994) report that the Abecedarian Study was based on General Systems Theory. In this theory, "developmental outcomes as in which developmental outcomes are viewed as the result of transactions between systems at many levels, rang[ed] from that of the child, the parents, the school, the community, to society as a whole" (p. 685). In the Carolina Abecedarian Study, prekindergarten programs in North Carolina were reviewed. The outcomes of 57 randomly assigned infants who received early interventions were compared with a control group of 57 infants who did not receive these interventions. Assessments were conducted at the ages of 12 and 15; and it was shown that the children from the intervention group scored significantly higher in reading and mathematics than their counterparts. Another assessment at age 21 revealed that the students who received the early interventions were more likely to either be enrolled in or had recently graduated from college (Campbell & Ramey, 1994). Overall, the study's results showed that students who attended "high-quality early education programs experienced greater academic success and educational attainment" (The Carolina Abdecarian Study, 1999).

Parents as Teachers

In the 1970s, Missouri educators noted that the children they served were beginning kindergarten with varying levels of school readiness. Prevailing research during that time showed that parent involvement was critical to the development of a child's learning skills. In 1981, with the acquisition of funding from the Missouri Department of Elementary and Secondary Education and the Danforth Foundation, the Parents as Teachers program was instituted. At its inception, Parents as Teachers was a pilot program for first-time parents of newborns. Due to the documented benefits and cost effectiveness, state funding was provided in 1985 to implement Parents as Teachers programs in all of the school districts in Missouri. Since that time, Parents as Teachers has expanded to all 50 states (Parents as Teachers National Center, 2010). There are thousands of Parents as Teachers affiliates across the United States (Parents as Teachers National Center, n.d.), as well as affiliates in seven other countries (Parents as Teachers National Center, 2010).

Parents as Teachers is known for its evidence-based model. This means that it has been found to be effective based on outcomes and the results of rigorous evaluations. A key component of the program is personal visits made with families by professional parent educators. According to the organization's website, the purpose of these visits is to "make sure children are healthy, safe and ready to learn in kindergarten" (Parents as Teachers National Center, n.d.). They aim to "help parents understand the important role they play in their children's development and offer practical, hands-on applications for real-world situations they face" (Parents as Teachers National Center, n.d.).

In their research study of the Parents as Teachers program, Pfannenstiel & Zigler (as cited by Parents as Teachers National Center, 2007) concluded that participation in the Parents as Teachers program predicts children's school readiness and third grade achievement regardless of family income levels. The following are some key findings of their study:

- Parents in the Parents as Teachers program read more frequently to their young children and were more likely to enroll their children in preschool, both of which were positively linked to school readiness and later school achievement.
- A large percentage (82%) of poor children who participated with high intensity in both Parents as Teachers and preschool entered kindergarten ready to learn, as compared to only 64% of poor children who had no involvement in either service. A similar pattern emerged for more affluent children (93% vs. 81%).
- At third grade, 88% of poor children who participated with high intensity in both Parents as Teachers and preschool reached a benchmark level of performance on the Missouri Assessment Program (MAP) Communication Arts test, as compared to 77% of poor children who had no involvement in either service. Here again, the pattern of results was similar for more affluent children (97% vs. 93%).
- For poor children, high intensity Parents as Teachers and preschool participation appeared to narrow the achievement gap at kindergarten entry

> and third grade. Of these poor children, 82% were ready for kindergarten, as compared to 81% of their more affluent peers with no preschool experience or Parents as Teachers participation. At third grade, a similar pattern emerged (88% vs. 93%) (p. 2).

Variability in Early Childhood Development Programs

A key finding evident in all of the previously explored early childhood development programs was the fact that children enter formal schooling with variability in their knowledge, skills, and behaviors. Even though these differences are to be expected and are considered normal, it is imperative that children's levels of school readiness are determined in order for schools to successfully address their differences.

Kindergarten Readiness

Researchers, policy makers, educators, and parents of young children have grappled for years to reach a consensus on what being "kindergarten-ready" really means. According to the position statement of the National Association for the Education of Young Children (1995), the issue of kindergarten readiness "first gained national prominence with the adoption of the National Education Goals including as Goal 1, 'by the year 2000, all children will start school ready to learn.'" (para. 1). This was considered an admirable goal, but the specific means whereby which one could gauge whether a child is ready for entrance into kindergarten remained to be determined.

Defining Kindergarten Readiness

The transition period from preschool to kindergarten often causes young children to be confronted with new and diverse developmental challenges. Most often, these developmental challenges include

> learning how to engage successfully with other children and adults outside of one's family and close networks, learning how to negotiate the physical and psychological space of the early childhood classroom, and learning to manage performance expectations in a school setting (McWayne, Cheung, Wright, & Hahs-Vaughn, 2012. p. 862).

Children's success during this transition is often referred to as school readiness (McWayne et al., 2012).

There has been an intense, growing concern about children's lack of readiness for entrance into formal schooling (Bowman et al., 2000; Shore, 1998), but the question remains as to what really determines whether a child is ready to begin school. Though no consensus has been reached on what determines a child's readiness for kindergarten (Allen, 2009), the following five areas (physical development; social and emotional development; approaches toward learning; cognition and general knowledge; and language development and communication) have been identified as major indicators of kindergarten readiness (Shore, 1998).

Physical Development

A major function in early childhood is that of physical development (Delaney & Smith, 2012; Sharma, Chuang, & Hedberg, 2011). The preschool years are a critical time period for the development of fundamental motor skills which often lead to a physically active lifestyle in later life (Sharma et al., 2011). Children's physical development is primarily referred to, by researchers and practitioners alike, in terms of gross motor development and fine motor development (Goldstein & McCoach, 2011). Gross motor skills are measured as a child's ability to do activities such as running, jumping, hopping, kicking, throwing, and catching. Fine motor skills refer to activities such as holding a pencil or using scissors appropriately (Goldstein & McCoach, 2011; Iivonen, Saakslahti, & Nissinen, 2011; Kagan, Moore & Bredekamp, 1995). According to a study conducted by Grissmer, Grimm, Aiyer, Murrah, & Steele (2010), children's motor skills have been found to be major indicators of their readiness for school and later success. Lags in such motor skills, primarily gross motor skills, have been shown to impact young children's social, emotional and physical well-being (Kagan et al., 1995).

Two areas of physical development that are important indicators of school readiness, but not discussed as frequently, are sensorimotor and oral skills. A key component of sensorimotor development is that of the development of eye-hand coordination which is required for writing and drawing. Oral motor skills involve such skills as the coordination of breathing with movements of the body's organs which are necessary for verbal communication (Kagan et al., 1995).

Social and Emotional Development

The term social development refers to a child's ability to interact with others. Emotional development includes children's self-perceptions, their abilities to understand the feelings of others and to interpret and express their own feelings. Combined, social and emotional development involve a sense of personal well being that comes from stable interaction in children's early lives and interactions that enable children to participate in classroom activities that are positive for themselves, their classmates, and their teachers (Kagan et al., 1995). Children's social and emotional competencies at kindergarten entry are important predictors of their success throughout school (Jeon et al., 2011). Although children who are considered school "ready" are not expected to behave as miniature adults, there are certain key social skills that they are expected to possess and display (Eberts & Gisler, 1991). Eberts & Gisler further asserted that children are not automatically born with social skills and that parents are primarily responsible for teaching their children the social skills that they need to successfully interact with those outside of the home.

Approaches Toward Learning

The phrase ''approaches to learning'' was first introduced to the field of early childhood education by Kagan et al. (1995) in their multidimensional definition of school readiness for the National Education Goals Panel. Approaches to learning were defined by Fantuzzo, Perry, and McDermott (2004) as "distinct sets of behaviors that indicate ways that children become engaged in classroom learning activities" (p. 213).

Approaches to learning focus on how children learn across various curricular tasks instead of describing what children learn with regard to specific content areas (Chen & McNamee, 2011). Kagan et al. (1995) purported that approaches toward learning were usually the least understood and researched but perhaps the most important component of school readiness, because they are at the core of social, emotional, and cognitive interactions. Learning styles influence the way children think about and act upon the learning opportunities afforded to them. Because American education has historically valued certain learning styles over others, future work on this topic, according to Kagan et al., will need to identify a continuum of learning styles where all children are given equal opportunity to learn and develop in the method that can help them to be most successful.

Language Development and Communication

Language development and communication, along with the dimensions of cognition and general knowledge, have been more often associated with the conventional indicators of school readiness than the other three areas. Language development includes the two sub-areas of verbal language (listening, speaking, and vocabulary) and emergent literacy (print awareness, story sense, and the writing process) (Kagan et al., 1995).

According to Kagan et al. (1995), language ability is a highly valued dimension of early development and learning. Teachers have identified language as the one area where children classified as "unready" struggled the most. Kagan et al. (1995) further asserted that,

> The ability to communicate competently with other people is essential to function effectively within and across the broad range of activities that characterize everyday life. Children need to be able to use language as a tool for communication to express their own thoughts and feelings to others and to receive and interpret communications from other people (para. 104).

Cognition and General Knowledge

Perhaps the most widely researched and understood aspect of school readiness is that of cognition and general knowledge. As suggested by Kagan et al. (1995), parents of young children often assume that there is one specific body of information that children need to know in order to be ready for early schooling. This assumption is faulty in that it only addresses one aspect of the multifaceted dimension of early learning and development. The National Education Goals Panel (Kagan et al., 1995) reported that this dimension of early development and learning included at least three different kinds of knowledge: (a) physical knowledge, (b) logico-mathematical knowledge, and (c) social-conventional knowledge.

Physical knowledge is the knowledge of objects in external reality which is learned by observing and having experience with the objects (Kagan et al., 1995). A child acknowledging that a tree is green and tall is an example of a child displaying physical knowledge.

Logico-mathematical knowledge is considered the most complex kind of knowledge as well as the most difficult to describe and assess; however, it is an essential

component that allows children to be able to perform mathematical operations and solve problems of all kinds. This type of knowledge consists of the relationships between objects, events, or people that an individual mentally creates (Kagan et al., 1995). More than simply noting an item's physical attributes, it acknowledges similarities, differences, and associations. A child noting a black pencil and a blue pencil and judging the two to be different is an example of logico-mathematical knowledge.

Social-conventional knowledge refers to the established conventions of society and the school-learned knowledge that is repeated by every successive generation of learners. Two examples set forth by Kagan et al (1995) is the establishment in the English language that there are 26 letters, including five vowels and 21 consonants, and that December 25 is Christmas. This knowledge is accepted as factual and is not reinvented or altered over time.

Assessing Effectiveness of Pre-Kindergarten Programs

Riley-Ayers, Frede, Barnett & Brenneman (2011) expressed their belief that "As publicly funded preschool education grows, states are moving toward establishing accountability systems that better measure program effectiveness and therefore how effectively the public's money is spent" (p. 3).

According to Pearson Education (2012), it is paramount that when implementing a screening system for young children, that caution is taken to ensure that those ". . . screening procedures are consistent with sound early childhood practice" (p. 3). In a 2003 joint position statement with the National Association of Early Childhood

Specialists in State Departments of Education (NAECS/SDE), the National Association for the Education of Young Children (2003) emphasizes the following:

> Make ethical, appropriate, valid, and reliable assessment a central part of all early childhood programs. To assess young children's strengths, progress, and needs, use assessment methods that are developmentally appropriate, culturally and linguistically responsive, tied to children's daily activities, supported by professional development, inclusive of families, and connected to specific, beneficial purposes. . . . (p. 10)

Comparisons of Public and Private Prekindergarten Programs

In reviewing the literature, research comparing public school prekindergarten to private prekindergarten programs in any state was found to be fairly limited and relatively recent. This was particularly true in Florida, as very few public schools were offering prekindergarten prior to the implementation of VPK in 2005 (Andrews & Slate, 2002).

Recent research conducted on the comparison of public and private prekindergarten programs include one by Andrews and Slate in 2002. In their study, they investigated the relationship of prekindergarten program type (public and private), as well as geographic location (urban and rural), gender and ethnicity of 695 kindergarten students. Their findings led them to conclude that there was no significant difference when comparing public school programs to private programs. They also found no

difference in geographic location and gender. The only area where there was a significant difference was related ethnicity.

Florida's Early Childhood Interventions

Voluntary Prekindergarten

In 2004, Governor Jeb Bush signed the Voluntary Prekindergarten Education Program (VPK) Act into law. This program provided free prekindergarten education for Florida's four-year-old children regardless of their socioeconomic status. The corresponding legislation delegated the responsibility to manage the program's components to various departments within the Florida Department of Education. It has been the responsibility of these agencies to ensure the successful implementation of effective prekindergarten education programs in school districts and public and private providers through collaboration in leadership and support (Florida Department of Education, n.d.a).

Florida's Kindergarten Readiness Assessment

Section 1002.69(1), Florida Statutes (F.S.), mandated that the Florida Department of Education establish a kindergarten readiness screening based upon the performance standards that were adopted by the Department of Education. These standards, entitled The Florida Early Learning and Developmental Standards for Four-Year-Olds, delineated what children should know and be able to do at the end of the prekindergarten year. They address the areas of (a) physical development, (b) approaches to learning, (c) social and

emotional development, (d) language communication and emergent literacy, and (e) cognitive development and general knowledge (FLDOE, 2012, p. 1).

Section 1002.69(1), Florida Statutes, also specified that each public school in the state of Florida must administer such kindergarten readiness screening to all kindergarten students in the school district within the first 30 school days of each school year. This same statute allowed non-public schools to administer the screening to students who were enrolled in Florida's Voluntary Prekindergarten during the preceding school year (FLDOE, 2012, p. 1).

Florida Kindergarten Readiness Screener (FLKRS)

The Florida Kindergarten Readiness Screener (FLKRS) is the tool used by the Florida Department of Education to accomplish the task of assessing students' readiness for kindergarten. The FLKRS contains a subset of the *Early Childhood Observation System*™ (ECHOS™) and the Broad Screen/Progress Monitoring Tool of the *Florida Assessments for Instruction in Reading- Kindergarten* (FAIR-K). The FLKRS has been administered every school year since 2006. In the 2012-2013 school year, it was in its seventh year of administration (FLDOE, 2012, p. 1). In order for a child to be considered "ready" by the standards observed in the FLKRS, the child must receive a rating of "Demonstrating or Emerging/Progressing" on the ECHOS™ and must achieve a probability of reading success score at or above 67% on the Broad Screen/Progress Monitoring assessment portion of the FAIR-K (FLDOE, n.d.). The following sections will address these measures in greater detail.

Early Childhood Observation System™

The Early Childhood Observation System™ (ECHOS™) is a "quick and easy-to-administer instrument that is designed to guide effective instruction and appropriate intervention to prepare a child to succeed in school" (Pearson Education, 2012, p. 3). It provides a simple and uniform method for observing and monitoring the progress of children from Kindergarten through second grade. It was formulated to allow the teacher the ability to observe, assess, and instruct a single child or the entire class as part of the natural classroom environment. Additionally, ECHOS™ allows teachers to plan and implement effective instruction based on the benchmarks, prescriptive reporting, and targeted instructional activities (Harcourt Assessment, 2006).

ECHOS™ is oriented to the whole child and measures students based on national and state standards in seven domains:

- Language and Literacy
- Mathematics
- Social and Personal Skills
- Science
- Social Studies
- Physical Development and Fitness
- Creative Arts (Pearson Education, 2012, p. 3)

According to Harcourt Assessment (2012), within each of the seven ECHOS™ domains are sub-domains that "represent the learning standards--broad categories of skills a child should know and be able to do by the end of the school year" (p. 4). Within

each sub-domain are one or more benchmarks that are "points along the path toward learning the essential skills of that sub-domain" (p. 4). Each benchmark is clearly defined with "progress indicators--examples of classroom actions or behaviors demonstrating a child's performance toward meeting that benchmark" (p. 4). Pearson Education (2012) notes that, by using ECHOS™, the teacher can assess each child's skills, knowledge, and behavior related to grade-level expectations, assigning one of three performance levels: (a) Not yet demonstrating; (b) Emerging/progressing; and (c) Demonstrating.

Florida Assessment for Instruction in Reading

In order to provide a thorough understanding of the Broad Screen/Progress Monitoring tool, an overview of the over-arching assessment of which it is a component of, is necessary. The Florida Assessment for Instruction in Reading is an assessment tool designed to "measure each child's progress, diagnose learning needs, set instructional goals, and monitor instructional progress" (Pearson Education, 2012, p. 4) in kindergarten through Grade 2. Inclusion of the FAIR as a component of FLKRS was "accomplished through close collaboration with the Florida Center for Reading Research (FCRR) at Florida State University and the *Just Read, Florida!* Office" (Pearson Education, 2012, p. 3).

In addition to construct validity based on decades of research (Florida Department of Education, 2009; Pearson Education, 2012), content validity in the FAIR was also derived from the Florida Sunshine State Standards. The FAIR is composed of two parts:

(a) the Broad Screen/Progress Monitoring Tool (BS/PMT) and (b) the Broad Diagnostic Inventory (BDI). For the purposes of the FLKRS, only the Broad Screen/Progress Monitoring Tool of the FAIR-K should be administered to Florida kindergarten students.

The Broad Screen/Progress Monitoring Tool was "constructed based on *predictive validity* to grade-level expectations on a norm-referenced test" (Pearson Education, 2012, p. 4). It was designed to be administered in kindergarten during the first 30 instructional days. The Broad Screen/Progress Monitoring Tool consists of two parts (also referred to as "tasks"): (a) letter naming and (b) phonemic awareness. The letter naming task consists of 10 items. Test administrators show the student a task card which contains uppercase and lowercase letters. Each letter pair is uncovered one at a time, and the student is asked to say the name of the letter displayed (Pearson Education, 2012).

The phonemic awareness task also has 10 items. "Children are asked to listen to a word that is segmented into word parts or phonemes and blend the parts together to make a real word" (Pearson Education, 2012, p. 5). An example would be the teacher saying /**ch**/ /**ip**/ and the student saying the word *chip*.

Both parts of the Broad Screen/Progress Monitoring Tool are to be administered to all public and non-public kindergarten children who attended a Voluntary Prekindergarten program in the state of Florida. Administration of these two portions combined is estimated to take approximately 3-5 minutes. The scores on the two measures are used to determine the probability of reading success of the student. The probability of reading success is expressed as a percentage and is assigned to a

corresponding green, yellow, or red success zone based on the level of achievement (Pearson Education, 2012).

The Broad Diagnostic Inventory portion of the FAIR is only required to be administered to students in schools that use FAIR broadly for progress monitoring purposes. While it is not required, non-public school kindergarten students may also be administered the Broad Diagnostic Inventory (Pearson Education, 2012). The Broad Diagnostic Inventory consists of two parts: (a) listening comprehension and (b) vocabulary.

To measure listening comprehension, children are required to listen as one passage is read aloud by the test administrator and to answer five comprehension questions about the passage. Of the five questions, three require explicit responses and two require implicit responses.

In the vocabulary part of the assessment, children are shown picture cards, and they must identify the name, action, or attribute captured in the picture. For example, children may be shown the picture of a pail and asked, "What is this?" They are then expected to respond by saying, "It is a pail." (Pearson Education, 2012). The expressive vocabulary test is based on concurrent validity. In order to address reliability issues, item response theory is used by examining item discrimination as well as item difficulty. Vocabulary items have also been examined for problems of bias due to student gender, ethnicity, and language status (Pearson Education, 2012).

Florida's Private School Options

Florida has offered a number of private school options throughout the state to parents who have sought alternatives to the public school system. These schools have been serving students for years, and the Florida Legislature (2012) asserted that "the state recognizes the contributions of private schools . . . in providing alternatives to public school education. These nongovernmental educational systems serve the public, but are not considered to be a part of the public system of education" (sec 1001.21). According to the Florida's Private School Annual Report published by the Florida Department of Education's Office of Independent Education and Parental Choice (2012a), there were 2,252 private schools in the state of Florida during the 2011-12 school year. Of these private schools, over 1,300 were parochial schools operated by religious organizations (Florida Department of Education Office of Independent Education and Parental Choice, 2012b). One particular religious denomination, Seventh-day Adventists, operated 44 of these private, parochial schools in Florida.

Seventh-day Adventist Education

History and Development

Education has been a top priority of the Seventh-day Adventist religious denomination, and the schools have been a major ministry and witnessing tool of the Church. The North American Division of Seventh-day Adventist (2012) stated that the church

> grew in the mid 1840s during the Second Great Awakening, a time of religious revival in the United States. Its first members came from the Methodist, Presbyterian, Baptist, and Christian Connection congregations, but over the following decades the denomination has grown into a worldwide church with millions of members. The church is well known for its excellence in healthcare, education, and human service activities (para. 1).

The Seventh-day Adventist Church began to develop its denominationally-based school system in the early 1870s.

> The Adventist interests in propagating education was founded upon the philosophy that students at all levels of schooling possess individuality and should be educated be educated to use their God-given capacities to become individuals of principle, qualified for any position of life (General Conference, 2012, para. 1).

Essential to the Adventist education philosophy have been the values of mental, physical, social and spiritual health, intellectual growth and service to humanity (General Conference, 2012).

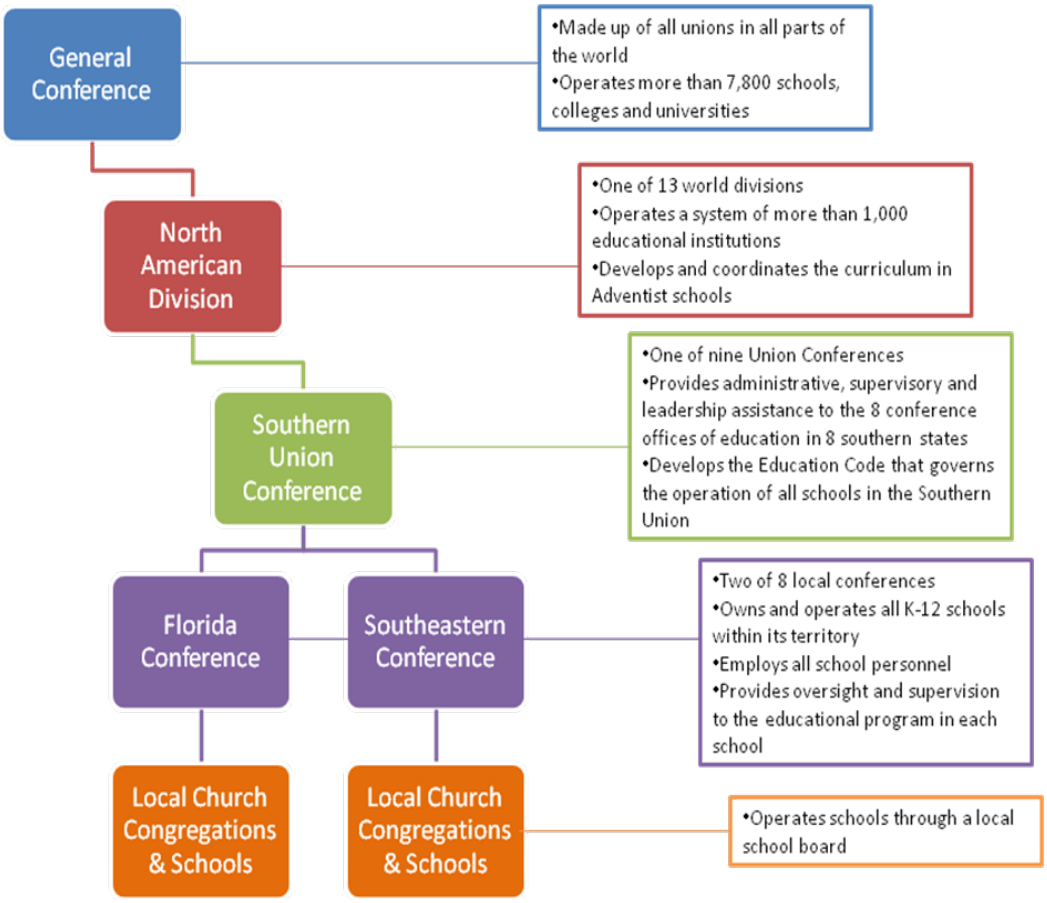
As of 2010, there were nearly 1.7 million students in more than 7,800 Adventist schools, colleges and universities in nearly 145 countries around the world (General Conference, 2012). "In fact, Adventists run the next-largest denominational education system in the world, second only to Catholic schools (North American Division of Seventh-day Adventists, 2012). According to information put forth by the North American Division of Seventh-day Adventists (2012), all Adventist schools have been accredited as required by state and national accrediting agencies, and the office of

education operates a comprehensive accrediting process in order to ensure a high standard of excellence in all Adventist schools.

Organizational Structure and Governance

To ensure that the appropriate and professional approach to education is adhered to, Education Departments have been established on all levels of the Adventist Church's administrative system. At the time of the present study, the highest level, the General Conference of Seventh-day Adventists Education Department, was responsible for coordinating, promoting, training, and ensuring the quality of the global Seventh-day Adventist educational program (General Conference of Seventh-day Adventists, 2012). "Approved Seventh-day Adventist schools are operated according to the basic policies adopted by the General Conference office of education, which is the central coordinating office for all Seventh-day Adventist church-operated schools throughout the world" (Southern Union Education Code, 2011, section 1112). The General Conference works in close cooperation with the Education Department directors in the 13 world divisions. These divisions are composed of churches grouped by a collection of missions, fields, or states into unions of churches (North American Division of Seventh-day Adventist, 2012). "In the North American Division, the coordination, supervision, and promotion of education are divided among nine union conferences, each with its own office of education and directors of education" (Southern Union Education Code, 2011, section 1112). The Unions are subdivided into local Conferences. Each Conference's Board of Education, under the direction of the superintendent of education, handles the policy and

administration of the local schools. Each local school is operated by a Seventh-day Adventist Church or group of Churches known as a Constituency. At the local school level, there is a School Board whose members are elected by the church which operates the school. "The School Board is responsible for the operation of the school within the guidelines and policies adopted by the conference board of education and school constitution" (Southern Union Education Code, 2011, section 1135). Figure 1 contains an organizational chart of the Seventh-day Adventist Church.



Note. From the perspective of schools in the state of Florida

Figure 1. Organizational Chart of the Seventh-day Adventist Church

Florida Seventh-day Adventist Educational System

At the time of the present study, there were two Seventh-day Adventist conferences in the state of Florida, the Florida Conference of Seventh-day Adventists and the Southeastern Conference of Seventh-day Adventists. Both of these conferences were headquartered in the Greater Orlando area and hade offices of education that operated schools (North American Division of Seventh-day Adventists, 2012). The offices of education were headed by Superintendents (also referred to as Directors of Education). The schools spanned the entire state of Florida and ranged in student body size from schools with enrollments as large as nearly 650 students to those with enrollments as small as seven students. At the time of this study, there were 29 K-12 schools and 27 early childhood programs/daycare centers operated by the Florida Conference. In the Southeastern Conference, there were 15 K-12 schools and 15 early childhood programs/daycare centers.

The CognitiveGenesis Project

The most extensive research conducted on Seventh-day Adventist schools at the time of this study was the CognitiveGenesis Project which was conducted by the Center for Research on K-12 Adventist Education at La Sierra University. CognitiveGenesis is a comprehensive study which included 51,706 Seventh-day Adventist school elementary and secondary school students. The study was conducted with data collected during the

2006-2010 school years, and the results were published in 2011 (Center for Research on K-12 Adventist Education, 2013).

In the study, various factors associated with academic performance of students in Seventh-day Adventist schools in North America were assessed. The achievement levels of the students in the Seventh-day Adventist schools were compared to national norms on the Iowa Test of Basic Skills (ITBS), a standardized, norm-referenced test. In the CognitiveGenesis study, it was found that students in Seventh-day Adventist schools achieved a higher median composite score than the national norms on the ITBS. It was also found that the longer students attend Seventh-day Adventist schools, the greater was their achievement (Center for Research on K-12 Adventist Education, 2013).

Summary

This chapter contains a compilation of research related to prekindergarten. The leading theories on early childhood development, the history of early childhood interventions, and the tenets used to determine kindergarten readiness were discussed. Also discussed was Seventh-day Adventist education as a whole and, specifically, in the state of Florida. Because a search for literature in this area failed to provide much conclusive information, this particular research study was considered to be potentially significant for school systems, policy experts, and educators. In Chapter 3, the methodology for this study on kindergarten readiness specifically related to providers of Voluntary Prekindergarten in Florida is presented. The chapter includes a discussion of

the research questions and hypotheses, research design and setting, population, instrumentation, data collection procedures, and data analysis procedures.

CHAPTER 3
METHODOLOGY

Introduction

The primary purpose of this study was to examine whether a difference existed in the Provider Kindergarten Readiness Rates between public, private, and Seventh-day Adventist VPK providers. Furthermore, this study sought to examine if there was a difference in Provider Kindergarten Readiness Rates between those providers located in urban counties as compared to those located in rural counties. This chapter delineates the research methods and statistical procedures that were utilized in this study. The chapter has been organized into the following seven sections: (a) research questions and hypotheses (b) research design, (c) research setting, (d) study population (e) instrumentation, (f) data collection procedures, and (g) data analysis procedures; and concludes with a summary.

Research Questions and Hypotheses

The following research questions and accompanying hypotheses were used to guide this research:

1. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private providers?

$H_{01.}$ There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private providers.

2. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers?

   H_{02}. There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers.

3. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers?

   H_{03}. There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private school providers as compared to the Provider Kindergarten Readiness Rates of

Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers.

4. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in urban counties as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in rural counties?

   H_{04}. There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in urban counties as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in rural counties.

Research Design

This non-experimental, quantitative, causal-comparative research study was designed to test whether a significant difference in means existed in the Provider Kindergarten Readiness Rates between public school, private, and Seventh-day Adventist providers. Statistical tests were performed using pre-existing data obtained from the Florida Department of Education's VPK Provider Kindergarten Readiness Rate website and from data provided by the Florida Seventh-day Adventist Departments of Education.

Population

The target population for this study consisted of all VPK providers in the state of Florida during the 2012-2013 school year. According to the Florida Department of

Education's VPK Provider Readiness Rate website (2012), there were a total of 6,247 providers. Of this total, 612 providers did not receive Provider Kindergarten Readiness Rates because of one of the following reasons: (a) fewer than four children met substantial completion (70% of program) and not enough children were screened; (b) fewer than four children were screened on one or more measure(s); or (c) fewer than four children were enrolled. These providers were automatically disqualified for this study.

Research Setting

This study was conducted on the 5,636 registered VPK providers in the state of Florida that were assigned Provider Readiness Rates during the 2012-2013 school year. The providers included 905 public schools, 4,703 private learning facilities, and 28 Seventh-day Adventist learning facilities. The providers were present in all 67 of Florida's counties and 5,258 were located in urban areas and 350 were in rural areas (Florida Department of Education, n.d.a).

Study Participants

In Florida during the 2012-2013 school year, there were 905 public schools that offer VPK programs and were assigned Provider Kindergarten Readiness Rates. These schools were located throughout the 67 counties in the state. Though it was required that all public school districts offer VPK during the summer session, it was the decision of each school district as to the schools that provided VPK services (NIEER, 2012).

Private VPK providers accounted for 4,703 of the total VPK sites that were assigned Provider Kindergarten Readiness Rates during the 2012-2013 school year. For the purpose of this study, although Seventh-day Adventist providers are private providers, they were classified in a separate category. According to section 1002.55(3)(b)., F.S., in order to offer VPK, a private provider must register with the Early Learning Coalition in their area and must be a: (a) licensed child care facility; (b) licensed family day care home; (c) licensed large family child care home; (d) nonpublic school exempt from licensure; or (e) faith-based child care provider exempt from licensure

In addition, the private provider is required to be accredited by an acceptable accreditation association, hold a current Gold Seal Quality Care designation, or be licensed and demonstrate to the Early Learning Coalition that they satisfy the VPK program's requirements (Florida House of Representatives, 2012).

For the purposes of this study, the final providers were Seventh-day Adventist providers. Seventh-day Adventists providers are private, parochial facilities that are directly operated by local churches, overseen by local conferences, and are part of a greater worldwide organization. There were 28 Seventh-day Adventist VPK providers during the 2012-13 school year that were assigned VPK Provider Kindergarten Readiness Rates. Of these, 19 programs were located in school settings, and nine were self-contained learning centers.

Instrumentation

The VPK Provider Kindergarten Readiness Rates were derived from student kindergarten readiness scores on the Florida Kindergarten Readiness Screener (FLKRS). The screener consists of a subset of the *Early Childhood Observation System*™ (ECHOS™) and the Broad Screen/Progress Monitoring Tool of the *Florida Assessments for Instruction in Reading-Kindergarten* (FAIR-K).

Early Childhood Observation System™ (ECHOS™)

The ECHOS™ consists of a checklist which Kindergarten teachers use to document observed student behaviors and performance indicators. Based on their skills, knowledge and behaviors, students are assigned in a level of (a) not yet demonstrating, (b) emerging/progressing, or (c) demonstrating.

Broad Screen/Progress Monitoring Tool

The Broad Screen/Progress Monitoring tool, a portion of the Florida Assessment for Instruction in Reading-Kindergarten (FAIR-K), is a norm-referenced test that measures students' knowledge in the areas of letter naming and phonemic awareness. Based on their performance on the assessment, students are assigned a "Probability of Reading Success" rating. This score is computed by combining the letter naming and phonemic awareness scores on a matrix which converts the combined scores into a percentage. This rating predicts how well students will probably read in school. In addition to construct validity based on decades of research (Florida Department of

Education, 2009; Pearson Education, 2012), content validity in the FAIR-K was also derived from the Florida Sunshine State Standards.

Provider Kindergarten Readiness Rates

The legislation for the VPK Provider Kindergarten Readiness Rate is located in Section 1002.69(5) of the Florida Statutes. That statute stipulates that it is the responsibility of the State Board of Education to determine procedures for the annual calculation of each VPK provider's kindergarten readiness rate and that the rate is to be "expressed as the percentage of the provider's or school's students who are assessed as ready for kindergarten" (The Florida Legislature, 2012, sec. 1002.69(5), F.S.).

The Provider Kindergarten Readiness Rate is determined by the student results from the FLKRS which is administered during the first 30 days of kindergarten to all public school kindergartners and to private school kindergartners who attend schools that elect to administer the assessment. The FLKRS is aligned with the Florida Early Learning and Developmental Standards for Four-Year Olds and consists of a subset of the ECHOS™ and the Broad Screen/Progress Monitoring portion of the FAIR. In order for students to be considered kindergarten "ready," they must score in the Demonstrating or Emerging/Progressing levels on the ECHOS™ and achieve a minimum score of 67on the FAIR. The Provider Kindergarten Readiness Rate is expressed as the percentage of children deemed ready on both measures and is set on a scale of 0-100 (Florida Department of Education, n.d.b).

Data Collection Procedures

The data collection process of this study began with garnering approval to conduct the study. First, to ensure that no risk or harm would be assumed by the participants in this study, an application to conduct the research was submitted to the University of Central Florida Institutional Review Board. This application included a statement of the purpose of the study, the instruments to be used, and the methodology to be followed in conducting the study. It was determined by this board that this study involved human participant research that was exempt from regulation (Appendix A).

The next step was to gain permission from the Offices of Education of the two Florida Seventh-day Adventist conferences to collect, analyze and publish pre-existing data from within their school systems. These data, gathered directly from the Offices of Education, consisted of a listing of all of the Seventh-day Adventist VPK providers in their conferences. Although both this information, as well as the Provider Kindergarten Readiness Rates, are public knowledge, during the time of this study, the researcher was employed by one of these conferences and deemed it proper protocol to receive permission to study, analyze, publish, and publicly discuss the information found.

Although both conferences granted permission for the study to be conducted, the methods of information dissemination and data collection followed two divergent paths. Conference A granted permission for the study with the following four explicitly written stipulations:

1. Any contacts to schools must be made by the Superintendent of Education.
2. All research should include no student names or school names in the Dissertation Project.
3. The privacy act should be carefully regarded at all times.
4. Information received from schools were to bear no student names, teacher names, or school names.

In contrast, permission was granted to utilize Conference B's data with no explicit stipulations. It was implied, however, that the researcher would not publish any information bearing the names of individual schools, teachers, or students.

The final step in the data collection process was to acquire the VPK Provider Kindergarten Readiness Rates from the Florida Department of Education's VPK Provider Kindergarten Readiness Rate website.

Data Analysis Procedures

The first three hypotheses in this study were tested by conducting a one-way ANOVA to determine if any differences existed in the average Provider Kindergarten Readiness Rate between public, private and SDA providers. The ANOVA is designed so that an overall difference can be detected (Lomax, 2007; Lunenburg & Irby, 2008), i.e., that the difference between at least one pair of the three groups is significant. Post-hoc tests were conducted to determine which difference(s) was significant. The test was conducted at the $\alpha = .05$ level of significance.

The fourth hypothesis was tested by conducting a two-way factorial ANOVA to determine if any differences existed in the average Provider Kindergarten Readiness Rate when considering both the community type (urban or rural) and the provider type, public or private. It should be noted again that although Seventh-day Adventist schools are private schools, they are not included in the private school category in this study. According to Lomax (2007), when utilizing a two-way ANOVA, results are provided for the differences in each main effect (differences in readiness rate by community type only and by provider type only), but the main focal point of the results lies in the interaction effect between community type and provider type. For this test, the dependent variable was Provider Kindergarten Readiness Rate, and the independent variables were community type and the provider type. This test was conducted at the $\alpha = .05$ level of significance.

Table 1 displays the research questions, variables, and methods of analysis utilized in the study. Descriptive statistics were also used to generate descriptive findings. These included measures of central tendency (mean, median, and mode) and a measure of variability (standard deviation).

Table 1

Research Questions, Variables, and Methods of Analysis

Research Question	Variables	Analysis
1. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private providers?	Dependent Provider Kindergarten Readiness Rates Independent Type of VPK provider	One-way ANOVA & Scheffe post-hoc test
2. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers?	Dependent Provider Kindergarten Readiness Rates Independent Type of VPK provider	One-way ANOVA & Scheffe post-hoc test
3. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers?	Dependent Provider Kindergarten Readiness Rates Independent Type of VPK provider	One-way ANOVA & Scheffe post-hoc test
4. What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in urban counties as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in rural counties?	Dependent Provider Kindergarten Readiness Rates Independent Type of community and type of VPK provider	Two-way factorial ANOVA

Summary

In this chapter, the researcher restated the research questions and explained the research design and setting. A description of the population and study participants and the specific instrumentation used in this study were provided along with a thorough discussion of the procedures used to collect the data. Finally, the statistical methods used to analyze the data were stated and described. Results of the analyses of the data are presented in Chapter 4.

CHAPTER 4
PRESENTATION AND ANALYIS OF DATA

Introduction

The primary purpose of this study was to examine whether a difference existed in the Kindergarten Readiness Rates between public school VPK providers, private learning center providers, and Seventh-day Adventist providers. Moreover, the researcher sought to examine if there was a difference in the Kindergarten Readiness Rates of urban and rural schools.

Statistical Assumptions

Assumptions of Normality and Homogeneity of Variance were checked prior to running the statistical ANOVA tests:

Normality

Normality is the assumption that each of the populations used in the study follows the normal distribution (Lomax, 2007). ANOVA is an inferential statistical test based on the normal distribution. Therefore, an assumption to utilize ANOVA is to indicate that the sample came from a normal distribution. Normality can be indicated by a variety of methods, including skewness and kurtosis being in the ranges of -2 and 2, and by conducting certain formal statistical tests In the case of large sample sizes such as that which is found in this study, ANOVA is pretty robust.

In regard to the results of this test for Research Questions 1-3, skewness and kurtosis were in check, suggesting normality; however, Shapiro-Wilk tests were all

significant, suggesting non-normality. Therefore, this assumption was not fully met, but ANOVA was still used due to some evidence of normality as well as its robustness. For Research Question 4, normality was tested for the entire sample, not for the individual categories of urban, rural, public or private. Skewness and kurtosis were in check, suggesting normality; however, Kolmorogov-Smirnov test was significant, suggesting non-normality. Therefore, this assumption was not fully met, but ANOVA was still used due to some evidence of normality as well as its robustness.

Homogeneity of Variance

Homogeneity of Variance is the assumption "that the variances of each population are equal" (Lomax, 2007, p. 212). It is important that the variability of scores within each subgroup is somewhat homogeneous for ANOVA to work properly. When tested with Levene's Test for Homogeneity of Variance, non-significant ($p > .05$) results indicate that variances are all homogeneous. In regard to the results of the test for this assumption for Research Questions 1-4, the assumption was not met; however, ANOVA is robust to violations of this assumption, so it was still used in the analysis.

Testing the Research Questions

Research Questions 1-3

1. *What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten program s offered by Florida public school providers as compared to Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private providers?*
2. *What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers?*
3. *What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers?*

The first three research questions compared the VPK Provider Kindergarten Readiness Rates of public, private, and Seventh-day Adventist providers. A one-way ANOVA was run to determine if there was any differences in the average Provider Kindergarten Readiness Rates between the three groups. In this analysis, the dependent variable was Provider Kindergarten Readiness Rates and the independent variable was

the provider type, which had three levels: public, private (exclusive of Seventh-day Adventists), and Seventh-day Adventist schools. Statistical significance was determined at the $\alpha = .05$ level of significance. Table 2 presents a summary of the ANOVA results. Scheffe post-hoc tests were also run to determine which pairs of providers had significantly different performance from one another. Scheffe was used because, according to Lomax (2007), it is a conservative post-hoc test ideal for unbalanced group sizes. Table 3 presents a summary of the means.

Table 2

Descriptive Statistics for Readiness Rate by Provider Type (N = 5,636)

			95% CI	
Provider Type	*M*	*SD*	*LL*	*UL*
Public (*n* = 905)	82.08	14.93	81.11	83.06
Private (*n* = 4,703)	76.46	18.43	75.93	76.98
Seventh-day Adventist (*n* = 28)	77.71	19.25	70.25	85.18

Note. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Table 3

Analysis of Variance Results, Provider Type Effect on Readiness Rate (N = 5,636)

Source	*SS*	*df*	*MS*	*F*	*p*
Provider Type	24,031	2	12,015.30	37.42**	< .001
Error	1,808,307	5,633	321.02		
Total	1,832,338	5,365			

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

As illustrated in Tables 2 and 3, the results of the ANOVA, $F(2, 5633) = 37.43$, $p < .001$, indicated that there was a statistically significant difference in Provider Kindergarten Readiness Rates between the provider types. There was a small amount of practical significance, $\eta^2 = .013$ explained by this relationship. Approximately 1.3% of the variability in Provider Kindergarten Readiness Rates could be explained by provider type. The Scheffe post-hoc tests revealed that the Provider Kindergarten Readiness Rate of public school providers ($M = 82.08$, $SD = 14.93$) was significantly higher than that of private providers ($M = 76.46$, $SD = 18.43$). It also revealed that the Provider Kindergarten Readiness Rate of Seventh-day Adventist providers ($M = 77.71$, $SD = 19.25$) was not significantly higher than that of private providers, nor was it significantly lower than that of public school providers.

Null Hypothesis 1: The hypothesis for Research Question 1 stated that "There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider

Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private providers." Because there was a significant difference found in the Provider Kindergarten Readiness Rate of public school and private providers, the researcher rejected the null hypothesis.

Null Hypothesis 2: The hypothesis for Research Question 2 stated that "There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers." Because there was no significant difference found in the Provider Kindergarten Readiness Rate between public and Seventh-day Adventist providers, the researcher failed to reject the null hypothesis.

Null Hypothesis 3: The hypothesis for Research Question 3 stated that "There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers." Because there was no significant difference found in the Provider Kindergarten Readiness Rate between public and Seventh-day Adventist providers, the researcher failed to reject the null hypothesis.

Research Question 4

What is the difference, if any, in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in urban counties as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in rural counties?

The fourth research question compared the Provider Kindergarten Readiness Rates of public and private providers in urban counties to that of public and private providers in rural counties. A two-way factorial ANOVA was performed to determine if any differences existed in the average Provider Kindergarten Readiness Rate when considering both the community type (urban or rural) and the type of provider (public or private). For this analysis, the dependent variable was Provider Kindergarten Readiness Rates, and the independent variables were community type (urban or rural) and provider type (public or private). Statistical significance was determined at the $\alpha = .05$ level of significance. Table 4 presents a summary of the ANOVA results. Table 5 presents a summary of the means.

Table 4

Descriptive Statistics for Readiness Rate by Provider and Community Types (N = 5,608)

					95% CI	
Provider Type	Community Type	*N*	*M*	*SD*	*LL*	*UL*
Public	Urban	826	82.00	15.07	80.97	83.02
	Rural	79	83.00	13.39	80.00	86.00
Private	Urban	4,432	76.62	18.31	76.09	77.16
	Rural	271	73.70	20.04	71.31	76.10

Note. CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

Table 5

Analysis of Variance Results, Provider Type and Community Type Effect on Readiness Rate (N = 5,608)

Source	*SS*	*df*	*MS*	*F*	*p*
Provider Type	12,094	1	12,093.98	37.73**	< .001
Community Type	206	1	206.18	0.64	.42
Provider x Community	866	1	866.06	2.70	.10
Error	1,796,048	5,604	320.49		
Total	1,822,325	5,607			

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

As shown in Tables 4 and 5, the ANOVA results ($F(1, 5604) = 2.70$, $p = .10$) indicated that there was not a statistically significant difference in the Provider Kindergarten Readiness Rate when examining the interaction between the type of provider and the type of community. There was no practical significance, $\eta^2 < .001$ explained by this relationship; therefore, no variability in readiness rate could be explained by the type of provider.

Public school providers displayed consistently higher Provider Kindergarten Readiness Rates than did private providers. In the case of public school providers, those in rural counties ($M = 83.00$, $SD = 13.39$) had slightly higher rates than did those in urban counties ($M = 82.00$, $SD = 15.07$). The reverse held true for private providers. Those in urban counties ($M = 76.62$, $SD = 18.31$) had slightly higher rates than did those in rural counties ($M = 73.30$, $SD = 20.04$).

The hypothesis of this research question stated that "There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in urban counties as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in rural counties." Because there was no statistically significant difference found in the Provider Kindergarten Readiness Rates of providers in urban counties as compared to providers in rural counties, the researcher failed to reject the null hypothesis.

Summary

In this chapter, a comparison was made between the Provider Kindergarten Readiness Rates of public school providers, private providers and Seventh-day Adventist providers. In addition, a comparison was made of the Provider Kindergarten Readiness Rates of public and private schools located in urban and rural counties. This was achieved by conducting a one-way ANOVA, Scheffe post-hoc tests, and a two-way factorial ANOVA.

Results from the first research question revealed that there was a significant difference in the Provider Kindergarten Readiness Rates of public schools as compared to private schools. Conversely, results from the second research question revealed that there was no significant difference in the Provider Kindergarten Readiness Rates of public schools as compared to Seventh-day Adventist schools. Likewise, results from the third research question also revealed no significant differences between the Provider Kindergarten Readiness Rates among the private schools and Seventh-day Adventist schools. Finally, results from the fourth research question revealed that there was no statistically significant difference in the Provider Kindergarten Readiness Rates when comparing the interaction between public and private providers and between urban and rural providers.

Chapter 5 contains a summary of the study, discussion of the findings, implications for practice, recommendations for further research, and conclusions.

CHAPTER 5
SUMMARY, DISCUSSION, AND IMPLICATIONS

Introduction

In the preceding chapter, the analyses of data were reported. Chapter 5 consists of a summary of the study, a summary and discussion of the findings, implications for practice, and recommendations for further research. The purpose of this chapter is to expand upon the concepts that were studied in an effort to provide a further understanding of their possible influence on kindergarten readiness, and to present suggestions for further research targeting the understanding of the effect that Florida's Voluntary Prekindergarten providers have on preparing students to be ready for entrance into kindergarten. Finally, a concluding statement is offered to capture the substance and scope of what has been presented in this research.

Summary of the Study

Extensive research has been conducted on the effect that attending prekindergarten has on a child's future academic success. Very little research, however, has been conducted to investigate the different effects that the type of provider have on students' readiness for kindergarten. Furthermore, almost no research has been conducted specifically on Seventh-day Adventist prekindergarten providers which are part of the second largest schooling system in the world (North American Division of Seventh-day Adventists, 2012) to examine the effects they have on kindergarten readiness. This study sought to determine whether the VPK provider in a public school

or a private facility, in an urban or rural setting, would produce different performance results on a formal kindergarten readiness assessment. This study also sought to examine if the Kindergarten readiness performance of Florida Seventh-day Adventist providers, in particular, was comparable to that of providers at public and other private schools statewide. The VPK Provider Kindergarten Readiness Rates were used to measure the providers' performance. This rate was determined by calculating a percentage of students from each provider who were deemed kindergarten ready by their performance on the Florida Kindergarten Readiness Screener (FLKRS).

The FLKRS consists of two different assessments. The first measure is the Early Childhood Observation System in which students are assessed by their teachers' observations of their ability to perform certain specified tasks related to grade-level expectations. From these collective observations, students are assigned a designation of one of three performance levels: (a) Demonstrating; (b) Emerging/progressing; or (c) Not Demonstrating. The second measure used on the FLKRS is the Broad Screen/Progress Monitoring assessment. This assessment tests students' knowledge of letter recognition and phonemic awareness and converts the results of these two measures into a Probability of Reading Success Score which is displayed as percentages.

This study included 5,636 VPK providers: 905 public schools, 4,703 private providers (exclusive of Seventh-day Adventists), and 28 Seventh-day Adventist providers. Of the public and private providers, there were a total of 5,258 in urban counties (826 public and 4,432 private) and 350 in rural counties (79 public and 271 private). This study included four research questions, all of which were answered

primarily from the data provided by the Florida Department of Education's VPK Provider Kindergarten Readiness Rate website. Minimal data, which consisted of the identification of the Seventh-day Adventist VPK providers, were acquired from the Seventh-day Adventist Departments of Education. A one-way ANOVA, followed by a Scheffee post-hoc test, was employed to analyze data to respond to Research Questions 1, 2 and 3. A two-way factorial ANOVA was used to analyze data in answering Research Question 4.

Summary and Discussion of the Findings

The following summary and discussion of the findings have been organized around the four research questions that were used to guide the study. Incorporated into the discussion are references to the literature review conducted as part of the study and the relevant findings of prior researchers which were reviewed.

The first research question examined the difference in VPK Provider Kindergarten Readiness Rates between public and private schools. The research null hypothesis of this research question stated that, "There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida private providers."

After having tested the hypothesis using a one-way ANOVA, the findings for this first research question indicated that there was a statistically significant difference in Provider Kindergarten Readiness Rates between public school VPK providers and private

VPK providers. The mean Provider Kindergarten Readiness Rate of public school providers was approximately 82%. The mean Provider Kindergarten Readiness Rate of private providers was approximately 76%. This difference in means indicated that the average of the public school providers' rates was significantly higher than that of the private providers. The implication of this finding was that, as a whole, students who attend VPK programs offered by public schools were better prepared to be ready for kindergarten than those who attend VPK programs offered by private providers.

This finding did not support the researcher's null hypothesis and was in contradiction with the findings of Andrews and Slate (2002) who found no significant difference between public school and private providers. In Andrews and Slate's research study of 695 Georgia prekindergarten students, it was found that there was no difference in readiness of students attending public or private prekindergarten programs. Their finding was determined using the results of the Iowa Test of Basic Skills and examined reading, language and mathematics scores of the students at the onset of their kindergarten year. This difference of measures could account for the contradiction in findings of this study and that of Andrews and Slate. In the current study, the FLKRS, which evaluates only language arts performance (letter recognition and phonemic awareness) and grade-level expected performance measures, was used to determine kindergarten readiness. When using different measures to compare similar outcomes, there is an inherent possibility of having contradictory results. This postulation holds true when using different measures to determine school readiness (Lewit & Baker, 1995).

The second research question compared the differences in VPK Provider Kindergarten Readiness Rates between public school providers and Seventh-day Adventist providers. The research null hypothesis of this question stated, "There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers." This null hypothesis was also tested using the one-way ANOVA.

The findings of this second research question indicated that there were no significant differences in Provider Kindergarten Readiness Rates between public VPK school providers and Seventh-day Adventist VPK providers. The mean Provider Kindergarten Readiness Rate of public school providers was approximately 82%. The mean Provider Kindergarten Readiness Rate of Seventh-day Adventist providers was approximately 78%. Although the percentage of Seventh-day Adventist providers was in fact less than that of public school providers, the difference was not statistically significant. The implication of this finding was that, as a whole, students who attend VPK programs at Seventh-day Adventist providers are neither lesser nor more prepared to be ready for kindergarten than students who attend VPK at public schools. This finding supported the researcher's null hypothesis.

Professional, published research examining Seventh-day Adventist prekindergarten was essentially non-existent at the time of this study. Therefore, it is impractical to relate this finding directly to any other available research. In addressing

different levels of education, however, some relational comparisons are possible between the present research and the CognitiveGenesis Project conducted by the Center for Research on K-12 Adventist Education (2013). In the CognitiveGenesis Project, it was determined that the academic performance of students in Seventh-day Adventist elementary, middle, and high schools exceeded that of students in public schools. Merely looking at it on the surface, it would appear that the CognitiveGenensis study contradicted the findings of this study; however, again it must be noted that in the CognitiveGenesis study, students were examined beginning at the elementary level and not in prekindergarten.

The third research question set out to examine the difference in the VPK Provider Kindergarten Readiness Rates of private school providers and Seventh-day Adventist providers. The research null hypothesis stated, "There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida public school providers as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by Florida Seventh-day Adventist providers." This null hypothesis was also analyzed using the one-way ANOVA.

The findings for this research question indicated that there were no significant differences in Provider Kindergarten Readiness Rates between private school VPK providers and Seventh-day Adventist VPK providers. The mean Provider Kindergarten Readiness Rate of private providers was approximately 76%. The mean Provider Kindergarten Readiness Rate of Seventh-day Adventist providers was approximately 78%. Although the percentage of private providers was in fact lower than that of

Seventh-day Adventist providers, the difference was not statistically significant. The implication of this finding was that, as a whole, students who attend VPK programs at Seventh-day Adventist VPK providers are better prepared to be ready for kindergarten than students who attend other private VPK programs. This finding supported the researcher's null hypothesis.

Again, at the time of this research study, there were virtually no studies previously conducted that compared Seventh-day Adventist prekindergarten performance to that of other private schools. As discussed in Research Question 1, the most relevant study was the Cognitive Genesis Project conducted by the Center for Research on K-12 Adventist Education. According to the findings reported by the Center for Research on K-12 Adventist Education (2013), Seventh-day Adventist students outperformed students in other private schools by exceeding the national norms. As previously discussed, the CognitiveGenesis study examined student performance beginning at the Kindergarten level and did not specifically address prekindergarten performance.

The fourth research question sought to determine if there was a difference in VPK Provider Kindergarten Readiness Rate between public and private schools in urban areas as compared to those in rural areas. The research null hypothesis stated, "There is no difference in the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in urban counties as compared to the Provider Kindergarten Readiness Rates of Voluntary Prekindergarten programs offered by providers in rural counties." This hypothesis was tested by conducting a two-way factorial ANOVA.

The findings for this research question indicated that there was no significant difference found when examining the interaction between public and private providers and those located in urban and rural counties. Within the public school providers, those found in rural counties had slightly higher rates than those in urban counties (83% and 82% respectively). The reverse held true for private providers, in which those located in urban counties had slightly higher rates than those in rural counties (77% and 73% respectively). Despite this slight difference, the interaction was not significant and corroborated the results of the Research Question 1, which found a significant difference in performance between public school and private providers. The implication of this finding was that public and private VPK programs in urban and rural settings were neither better nor worse at preparing students to be ready for kindergarten.

This finding supported the researcher's null hypothesis and was in agreement with Andrews and Slate (2002) who found no difference between urban and rural areas when examining students' readiness level. This study by Andrews and Slate was one of the very few conducted on prekindergarten urban and rural schools. Though there has been limited research comparing urban and rural prekindergarten programs, the study of the differences between urban and rural K-12 education have been widely researched. The researchers; however, have been unable to provide definitive evidence that rural schools are inferior or superior to urban schools (Reeves & Bylund, 2005). The most popular postulation in the literature is that rural students are academically disadvantaged when compared to their urban counterparts (Fan & Chen, 1999; Reeves & Bylund, 2005; Roscigno & Crowley, 2001; Sheppard, 2009).

Implications for Practice

Scholarly research studies serve to provide critical information for those tasked with making decisions (Barlow, 2012). VPK administrators and policy makers are charged with the arduous tasks of devising and implementing policies that will have the greatest impact on student achievement. The research provided in this study and the accompanying literature review have far-reaching implications and usefulness for practitioners as they make decisions related to prekindergarten programs at public, private and Seventh-day Adventist VPK providers. The findings and related literature review provide a solid case for a thorough investigation into current practices and possible revisions as found necessary.

VPK administrators and policy makers might consider evaluating what could be the cause for the differences in performance between public and private schools. Some of these areas that might merit consideration include assessment requirements, curricular requirements, instructor credentials, and professional development.

Assessment requirements. Current VPK requirements only mandate public school providers to assess all Kindergarten students using the FLKRS; therefore, only students who attend public school for their kindergarten year are administered FLKRS. This is problematic in that private VPK providers whose students do not go on to attend public school are penalized by not having all of their students screened. It would be advantageous to require that all students who have attended VPK programs be administered the screener.

One way to accomplish this goal could be through the establishment of accessible facilities where parents who elect to send their children to private school for kindergarten may take their children to have them evaluated. Another method to ensure that private school kindergarten students are screened would be to create legislation that requires all private schools that accept VPK students to administer the FLKRS. This would be a less viable method because of the government's restrictions on private school policies, but it could be investigated for possible merits.

Curricular Requirements. A second requirement that varies from provider to provider is that of curriculum. Current legislation (Section 1002.67(2)(b), F.S.) allows each provider to select or design its own curriculum. In order for a curriculum to be approved, it must meet certain specifications which include being developmentally appropriate, being designed to promote early literacy, enhancing the progress of students, and preparing students to be ready for kindergarten. Although there is oversight given to the curriculum used in VPK classrooms, there is no standardized curriculum. Because of the difference in effectiveness found between public schools and private providers, VPK administrators and policy makers may consider adopting a research-based and success-proven, universal curriculum to be used in all VPK classrooms. This would be especially helpful in ensuring that what students are being evaluated on through the FLKRS, matches what they are being taught in the classroom.

Instructor Credentials. One requirement that is different between public and private VPK providers is that of the credentials that the instructors are required to maintain. Section 1002.55(4), F.S., provides flexibility to private providers in meeting

minimum credential requirements for instructors. In public schools, legislation mandates that at least one of the classroom instructors holds a Child Development Associate (CDA) and has five clock hours of training in emergent literacy or an approved credential that exceeds the CDA as well as the five clock hours of emergent literacy training. In lieu of these requirements, an instructor in a private program may have an educational credential approved as being equivalent to or greater than a CDA; an associate's or higher degree in child development or an unrelated field with at least six credit hours in childhood education or child development and at least 480 hours of experience in child care for any ages from birth to eight years of age; a minimum of a bachelor's degree in certain early childhood fields or family and consumer science; or a minimum of a bachelor's degree in elementary education. This flexibility only extends to private providers (Florida House of Representatives, 2012). Administrators and policy makers may find it prudent to elect to set the highest requirement and hold all providers, public and private alike, to the same minimum standard.

Professional Development. Section 1002.65, F.S. delineates the expectations for professional growth and development of VPK instructors. This legislation states that a strong relationship exists between the abilities and development of VPK instructors and student outcomes. According to the statute, all VPK instructors are expected to continually improve their skills and performance through education and professional training. It is intended that by the 2013-2014 school year, each VPK class will have at least one instructor with a bachelor's degree or a higher degree in early childhood education or child development (The Florida Legislature, 2012).

The true education of prekindergarten students starts with the instructors in the classroom. These individuals are deeply entrenched in the education of students and make decisions every day that directly affect students' acquisition of knowledge. The findings in this study can serve to motivate teachers to continually participate in professional development activities to improve their craft.

Recommendations for Further Research

The research questions and research addressed in this study in no way exhausted the plethora of data points that could be accessed in regard to Kindergarten readiness preparation at public, private, and Seventh-day Adventist providers. Based on a review of the current literature and the research findings of this study, several areas for potential future research emerged.

This study addressed the differences in providers' preparation of students to enter kindergarten. One finding was revealed that showed a difference between public school and private providers. This finding showed that public school providers produce higher rates of students who are ready for kindergarten. Through a review of the legislation, it was also found that there is no universally accepted curriculum for VPK programs. Future researchers could conduct a study to examine if there is a significant difference between the Provider Kindergarten Readiness Rates of public and private providers based on the curriculum being used at various sites. Along these same lines, an experimental study could also be conducted utilizing a prescribed curriculum and analyzing student

results to determine if there is a difference between a treatment group taught using the selected curriculum and a control group not taught with that curriculum.

Years of research have unequivocally revealed that students of certain minority groups repeatedly perform lower on many academic measurements than students of other ethnic groups (Aratani et al., 2011; Burchinal et al., 2011; Hurry & Sylva, 2007; Lewis et al., 2010; Rodgers et al., 2004). This phenomenon has often been referred to as the "achievement gap" and is generally described as a discrepancy between children's reading and mathematics scores (Bratsch-Hines, 2012). Future research could be conducted to examine if there is a significant difference between the Provider Kindergarten Readiness Rates based on percentage of minority students served.

This study used Provider Kindergarten Readiness Rates of a single school year. A longitudinal study could also be conducted to examine if the academic achievement of students is sustained throughout the duration of their elementary school experience.

The findings in this study disclosed that public school VPK providers received higher average Provider Kindergarten Readiness Rates than private providers. The scope of this study did not address, however, just how successful each of these provider types was. A further research study might be conducted to analyze how many of each type of provider was considered to have successfully delivered VPK instruction.

The research conducted in this study used only quantitative data in the analyses. Future research might utilize both quantitative and qualitative data. A more in-depth examination of what successful providers are doing to prepare their students to be ready for kindergarten could increase the understanding of what causes some students to be

more successful in gaining the readiness skills that lead to future success in kindergarten and beyond.

Concluding Statement

In this research, it was found that public school VPK providers, overall, were better preparing students to be ready for kindergarten than were private providers. Another finding was that although Seventh-day Adventist VPK providers scored slightly lower on average than public school providers and slightly higher than other private providers, these differences were not statistically significant. Finally, it was found that there was no difference in Provider Kindergarten Readiness Rates of providers based on a county's classification of urban or rural. These findings, coupled with the review of related literature, indicated that learning begins before a student ever enters the formal kindergarten environment and that it is important for parents to evaluate their decision of where to send their children for prekindergarten. This decision can be influential in determining how ready children are for kindergarten and further-reaching educational endeavors.

APPENDIX A
INSTITUTIONAL REVIEW BOARD APPROVAL

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Toni Drummond**

Date: **September 20, 2012**

Dear Researcher:

On 9/20/2012, the IRB approved the following activity as human participant research that is exempt from regulation:

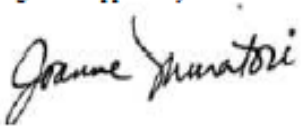
Type of Review:	Exempt Determination
Project Title:	A STUDY OF THE IMPACT OF FLORIDA'S VOLUNTARY PREKINDERGARTEN EXPERIENCE ON KINDERGARTEN READINESS AT SEVENTH-DAY ADVENTIST SCHOOLS
Investigator:	Toni Drummond
IRB Number:	SBE-12-08678
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 09/20/2012 01:20:40 PM EDT



IRB Coordinator

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