

A CORRELATIONAL STUDY OF TEACHER PRACTICE VERSUS BELIEF

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

Liberty University

2018

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2018

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ABSTRACT

The purpose of this research study was to examine the correlation between what kindergarten teachers identified as developmentally appropriate practices in kindergarten classrooms and what is included in their actual daily classroom practices. This quantitative research used a correlational research design to investigate the strength of the relationship between what teachers identified as their beliefs in developmentally appropriate practices for early childhood education and their self-reported use of developmentally appropriate practices within their own classrooms. The population included kindergarten teachers who currently teach in the northeastern counties of Pennsylvania. The participants completed an online survey developed for teachers of kindergarten children that identified Developmentally Appropriate Practices (DAP) as presented in the revised 1997 National Association for the Educators of Young Children (NAEYC) guidelines. The teacher belief scores and the teacher practices scores identified the strength of the relationship between teacher beliefs in DAP and actual daily uses of DAP in their kindergarten classrooms. Results indicated that there was a significant weak positive relationship between teachers' beliefs in the use of DAP and their actual daily uses of DAP in their kindergarten classrooms. A second analysis compared teachers' years of experience to their reported practices to determine whether or not their years of experience predicted their actual daily uses of DAP in their kindergarten classrooms. Results indicated that there was a significant strong positive relationship between teachers' years of experience in kindergarten and their actual daily classroom use of developmentally appropriate practices.

Keywords: Developmentally appropriate practices, Play-centered curriculum, Assessment curriculum, Cognitive growth, Child-centered activities, Sociodramatic play, Standard-based curriculum, Teacher-initiated activities

Dedication

This project is dedicated to my wife, Gretchen, for her tireless support. Without her continued encouragement, I am not sure I could not have completed it. I also dedicate it to my four sons; Joseph, Ryan, Sean, and Stephen. I thank them for their understanding of the time that I needed to dedicate to the completion of the project. I thank them for their love and support.

Acknowledgments

I would like to first acknowledge my dissertation team for their support and assistance. Without their guidance and help, I would not have been able to complete this dissertation. I also want to acknowledge the faculty at Liberty University for providing an outstanding academic environment. They have been helpful and kind.

Table of Contents

ABSTRACT3

Dedication4

Acknowledgments.....5

List of Tables9

List of Figures10

List of Abbreviations11

CHAPTER ONE: INTRODUCTION.....12

 Overview.....12

 Background12

 Problem Statement16

 Purpose Statement.....17

 Significance of the Study18

 Research Questions.....19

 Definitions.....20

CHAPTER TWO: LITERATURE REVIEW22

 Overview.....22

 Theoretical Framework.....25

 Related Literature.....28

 Historical Significance.....28

 Early Play.....31

 Brain Development32

 Social Competence.....34

 Discovery Learning.....36

Motor Skill Development	37
Limitations to Traditional Play Centered Curriculum	39
Structural: Lack of Training.....	40
Functional: Lack of Support	41
Teacher Experience.....	41
Pedagogy.....	42
Positive Aspects of NCLB	43
Negative Aspects of NCLB	44
ESSA.....	46
Summary	46
CHAPTER THREE: METHODS	48
Overview.....	48
Design	48
Research Questions.....	49
Hypotheses	49
Participants and Setting.....	50
Instrumentation	51
Procedures.....	53
Data Analysis	54
CHAPTER FOUR: FINDINGS	56
Overview.....	56
Research Questions.....	57
Null Hypotheses.....	57
Descriptive Statistics.....	57

Results.....	63
Null Hypotheses.....	66
Null Hypothesis One.....	67
Null Hypothesis Two	68
CHAPTER FIVE: CONCLUSIONS	69
Overview.....	69
Discussion.....	69
Null Hypothesis One.....	69
Null Hypothesis Two.....	71
Research Problem	74
Implications.....	77
Limitations	78
Recommendations for Future Research	79
REFERENCES	81
APPENDIX A Survey.....	88
APPENDIX B IRB Approval	99
APPENDIX C Recruitment Letter.....	100
APPENDIX D Consent Form.....	101

List of Tables

Table 1: Descriptive Statistics for Data Utilized in Calculation of Beliefs, Activity, and Years ..	58
Table 2: Respondents' Teaching Area of Specialization	59
Table 3: Descriptive Statistics for Number of Years Participants Taught Overall.....	59
Table 4: Teacher Beliefs Survey Items	61
Table 5: Teacher Practices Survey Items	62
Table 6: Spearman's Correlations of Teachers' DAP Activity Scores	67
Table 7: Spearman's Correlation Statistics for Null Hypothesis One	70
Table 8: Spearman's Correlation Statistics for Null Hypothesis Two.....	72

List of Figures

Figure 1: Histogram of Number of Respondents and Beliefs Score.....65

Figure 2: Histogram of Number of Respondents and Years Teaching Overall.....65

List of Abbreviations

Developmentally Appropriate Practices (DAP)

Developmentally Inappropriate Practices (DIP)

Elementary and Secondary Education Act (ESEA)

Every Student Succeeds Act (ESSA)

National Association for the Education of Young Children (NAEYC)

No Child Left Behind (NCLB)

CHAPTER ONE: INTRODUCTION

Play is often talked about as if it were a relief from serious learning. But for children play is serious learning. Play is really the work of childhood.

—Fred Rogers, 1928-2003

Overview

This chapter examines the evolution of early childhood education and provides a conceptual framework based on the findings of child psychologists and theorists. The chapter identifies the most common practices and beliefs as they relate to early childhood education and the theories that have formed the foundation for early childhood education.

Background

The conceptual framework for this study was based on a theory by Charlesworth, Hart, Burts, and Hernandez (1991) known as the Developmentally Appropriate Practice Theory. These researchers found evidence that suggested that there is a positive effect on students' development when their education was based on activities that were deemed appropriate for their cognitive development. According to Charlesworth et al. (1991), developmentally appropriate activities and practices in early childhood classrooms are excellent ways for children to acquire skills that will be building blocks for their educational success. In the past, other theorists and psychologists such as Piaget, Vygotsky, Erickson, Dewey, Bronfenbrenner, Gardner, and Bowlby all proposed that developmentally appropriate activities and practices are appropriate for young children (Brown & Lan, 2015). Bodrova and Leong (2005) identified a link between play and the development of social, cognitive and physical skills. These skills are thought to be prerequisites for learning more complex concepts as children get older (Bodrova & Leong, 2005). In 2000, the No Child Left Behind (NCLB) Act caused a shift in early childhood education from child-centered education to achievement-based

education, which resulted in a more teacher-directed, didactic form of instruction based on standards and high-stakes testing (Gullo & Hughes, 2011; Miller & Almon, 2009).

This shift in early childhood education from child-centered education to achievement-based education was scrutinized by experts in the field (Astuto & Cahalan, 2015). The National Association for the Education of Young Children (NAEYC) was very critical of the changes that had occurred in early childhood education and developed a framework for standards that were geared to the education of young children (Miller & Almon, 2009). As early childhood education faced new policies for educating young children, teachers were challenged to adapt educational practices to accommodate the needs of the children (Pyle & DeLuca, 2013). Research studies pointed out the negative effects of utilizing developmentally inappropriate practices in early childhood classrooms (Miller & Almon, 2009). In December 2015, Every Student Succeeds Act (ESSA) was passed by Congress in place of NCLB. This act deemphasized high-stakes testing to help promote a more successful educational experience. It is unclear if kindergarten teachers will shift back to a more constructivist approach in their classrooms as a result of ESSA and the numerous studies which support developmentally appropriate practices (DAP), or if didactic learning will remain a constant. Kindergarten teachers may use a combination of the two approaches in their classroom: An approach more than the other based on the beliefs in traditional theories or their level of experience of the individual teacher. This study investigated the strength of the relationship between teacher's beliefs in DAP, experience, and actual practices.

Historically, a play-centered curriculum has been a cornerstone in early childhood educational programs (Polakow-Suransky & Nager, 2014). According to Andrews (in Astuto, Cahalan, & Allen, 2015), play is necessary for children in their early development because it creates the cognitive building blocks necessary for future development. Traditionally, the educational programs for early childhood educators have focused on teaching practices that are developmentally appropriate for

young children (Pyle & DeLuca, 2013). Play is necessary for language acquisition, fine motor skill development, gross motor skill development, math, socialization skills, and scientific inquiry (Andrews, 2015). While new approaches are continually being developed in education, the foundation of early childhood instruction has always included some form of play (Pyle & DeLuca, 2013). A teacher who facilitates developmentally appropriate classroom activities will prepare children for future knowledge acquisition (Polakow-Suransky & Nager, 2014). Some of these activities may include free play with the teacher facilitating much of the play (Sylwester, 2007).

Bassok and Rorem (2014) concluded that play is essential for the development of fine and gross motor skills (Andrews, 2015; Astuto, 2006; Bassok & Rorem, 2014; Harlesworth et al., 1991). Fine motor development in a child occurs through playing with blocks, connecting Legos, and manipulating props such as cars, dolls and figurines (Astuto, 2006; Bassok & Rorem, 2014). Gross motor development occurs in activities such as climbing on playground equipment, riding bikes, kicking or throwing a ball, and running around in a game of tag (Bassok & Rorem, 2014). Children begin sensory motor play at the infancy stage; sensory motor play is an important part of development and should be a part of every early childhood program (Mann, 1996).

Since the passage of NCLB, there has been increased pressure on teachers and administrators to have their students score higher on standardized assessments (Di Santo & Kenneally, 2014). As teachers and schools face new policies for educating young children, early childhood teachers are challenged to adapt their practice to accommodate new mandates. Because of the call for a more rigorous, standards-based curriculum, teachers and administrators have been under increased pressure to improve student achievement. As a result, the focus on literacy and numeracy greatly changed the face of early childhood education (Graue, 2010). It could be argued that standardized scores have become the driving force of many educational programs (Di Santo & Kenneally, 2014). NCLB legislation defined accountability as holding schools and districts accountable for their students'

progress on state academic content standards by means of standardized state tests (Taylor, Stecher, O'Day, Naftel, & Le Floch 2010).

Since the passage of NCLB, kindergarten students have been required to meet higher standards through didactic education strategies instead of the utilization of play. These strategies were previously reserved for students in a higher grade (Miller & Almon, 2009). According to Miller and Almon (2009), NCLB changed the landscape of the early childhood classroom by mandating schools to teach children academic concepts that were not cognitively appropriate to their maturation. Research has proven that play is necessary for the growth and development of children and the denial of the benefits of play may affect the cognitive development of the young child (Miller & Almon, 2009). This statement has been especially true for teaching children from low income backgrounds (McCombs & Robyn, 2007).

According to Lenz (2010), creation of a healthy balance of play and learning has been blocked by policies and government-imposed mandates including NCLB and Reading First. According to Miller and Almon (2009), in an effort to caution against the use of unrealistic standardized assessments and higher standards for young children, the NAEYC adopted a position statement in 2002 providing a framework for creating developmentally appropriate early learning standards. The NAEYC guidelines defined that the standards should include significant, developmentally appropriate content and outcomes. The standards must be developed and reviewed through informed, inclusive processes and use implementation and assessment strategies that are ethical and appropriate for young children (NAEYC, 2002). Miller and Almon (2009) found the NAEYC further called for strong support of early childhood programs and insisted that without proper guidance and implementation, inappropriate standards could result in negative consequences for young children. As teachers and schools face new policies for educating young children, early childhood teachers are challenged to adapt their practices to accommodate new mandates and to

include DAP in their classrooms (Graue, 2010). Since the introduction of NCLB, teachers have had sufficient time to adjust to the new landscape. Early childhood teacher practices have evolved over time as a result of both research in human development and political influences in education. As the needs of our society change, the theories that inform teacher practice also change (Miller & Almon, 2009).

One of the main goals of NCLB was to ensure that all children, even in kindergarten, would be proficient in reading and mathematics by the conclusion of 2013-2014 school year. Although well intentioned, NCLB was a fundamentally flawed law that failed to achieve its prescribed goals (Miller & Almon, 2009). The NAEYC developed a framework for standards that were more appropriately geared to the education of young children, and it appears that the pendulum may have begun to shift again (Miller & Almon, 2009). Over the last 15 years, several research studies have presented the negative effects of utilizing developmentally inappropriate practices in early childhood classrooms (Astuto, 2006; Bassok & Rorem, 2014, Goldstein, 2007; Gullo & Hughes; 2011; McCombs, & Robyn, 2007; Miller & Almon, 2009; Rushton, 2011). These studies have been used by experts to reframe early childhood programs. Kindergarten teachers may be able to meet high academic standards while still being able to use DAP in their classrooms. ESSA, passed by Congress in December 2015, addressed some of the concerns that were found in over 15 years of research. Since then, states have begun to analyze their standards and practices, but has there been any shift in pedagogical practices since the ESSA?

Problem Statement

The ideas and philosophies of popular early childhood theorists are taught in early childhood teacher preparation programs. These theorists include ideology that is consistent with using developmentally appropriate practices in early childhood classrooms. The central question addressed in this study is: “Do early childhood teachers who reportedly value the use of DAP in early childhood

classrooms actually use DAP in their own classroom?” The results of this study may help education preparation programs develop curriculum which reflects actual classroom practices. The diminished use of DAP in early childhood classrooms has been documented in research between 2000-2015. Student achievement scores have consistently reported to be low despite the initiatives by Congress and the No Child Left Behind Act, and standardized test scores have not reached their goals (Di Santo & Kenneally 2014; Gullo & Hughes, 2011).

The gap in the research involving the strength of the relation between teacher beliefs and teacher practices is unclear. Studies that examined the relationship between teacher beliefs and practices since the ESSA was passed were not located. With the passing of the ESSA, a new shift in early childhood education has begun. Some teachers may use DAP in their kindergarten classes while other kindergarten teachers may use a more didactic approach even though the research is very clear that using DAP in kindergarten is best for kindergarten students (Di Santo & Kenneally 2014; Gullo & Hughes, 2011). It is unclear if kindergarten teachers are using DAP, didactic learning, or a combination of both. It is unknown if a teacher’s belief in traditional early childhood philosophies has any effect on how a teacher conducts his or her classroom. It is also unclear if a teacher’s experience has any effect on his or her use of DAP in their classroom. This study evaluated teachers’ use of DAP versus more didactic methods of education in the kindergarten classroom and if the beliefs of the teacher is consistent with the implementation of activities in the classroom.

Purpose Statement

The purpose of this study was to investigate the strength of the relationship between what kindergarten teachers identify as their beliefs about using DAP in early childhood classrooms and their actual use of DAP in their classroom. The study examined the strength of the relationship between the number of years a kindergarten teacher has taught kindergarten and the amount of time dedicated to DAP in his or her classroom. The participants were comprised of kindergarten teachers

who currently teach in a kindergarten classroom located in the northeastern counties of one Mid-Atlantic state in the United States. Every kindergarten teacher who taught in a classroom in this region was invited to participate in completing the Teacher Beliefs and Practices Survey. The predictor variables were the teachers' self-reported beliefs in DAP as determined by the teacher beliefs survey, and the teachers' years of experience in teaching kindergarten. The criterion variable was their daily use of DAP as measured by responses to teacher practices survey items in the Teacher Beliefs and Practices Survey.

Significance of the Study

This study is significant in early childhood education because it identified the correlation between teacher beliefs and teacher practices. Even though researchers have supported the use of developmentally appropriate activities in early childhood classrooms, not all kindergarten classrooms include DAP as a central part of the curriculum (Charlesworth et al., 1991; Polakow-Suransky & Nager, 2014). Open-ended activities and play are necessary for children in their early development because these activities help create cognitive building blocks. These building blocks are necessary for future brain development and knowledge acquisition (Astuto & Cahalan, 2015). Play has been identified as being important for language acquisition, fine motor skill development, gross motor skill development, sensory motor development, socialization skills, and scientific inquiry (Andrews, 2015). While new approaches are always being developed in education, the foundation of early childhood instruction has always included some form of play (Pyle & DeLuca, 2013).

The NCLB Act was passed by Congress to narrow the difference in achievement in math and science scores between American students and students from around the world. According to achievement testing from the past 30 years, students from the United States have been achieving at a lower level in math, literacy, and science (Polakow-Suransky & Nager, 2014). Since NCLB was passed, there has been increased pressure on teachers and administrators to have students become

proficient on standardized assessments (Di Santo & Kenneally, 2014). The call for a more rigorous, standards-based curriculum focused on science, literacy, and math changed the way schools approached learning (Graue, 2010). Accountability and high stakes testing replaced the love of learning (Gullo & Hughes, 2011; Taylor; et al., 2010). As a result of NCLB changes, children have been denied the benefits of play, which has been supported as necessary by other researchers (Miller & Almon, 2009).

Researchers have argued that there are problems with using didactic learning as a major part of instruction in kindergarten classrooms (Astuto, 2006; Bassok & Rorem, 2014, Goldstein, 2007; Gullo & Hughes; 2011; McCombs, & Robyn, 2007; Miller & Almon, 2009; Rushton, 2011). This study is intended to add to the body of knowledge about the beliefs and practices of kindergarten teachers by investigating the strength of the relationship between teachers' beliefs in utilizing DAP and their actual use of DAP in his/her kindergarten classrooms. This study investigated the strength of the relationship between teachers' experience in teaching kindergarten and their responses to teacher practices survey items on the Teacher Beliefs and Practices Survey. The results of this study may enable education preparation programs to develop curriculum that aligns with teachers' classroom practices, identify a shift in pedagogy for kindergarten education, reinforce the trends that have been well documented between 2000-2015, or identify a change in the pendulum.

Research Questions

This study was designed to answer the following research questions:

RQ1: What is the relationship between a teacher's beliefs in developmentally appropriate practices (DAP) as identified in the teacher beliefs survey items and the actual daily classroom use of developmentally appropriate practices?

RQ2: What is the relationship between a teacher's number of years' experience in teaching kindergarten and his or her actual daily classroom use of developmentally appropriate practices (DAP)?

Definitions

The following definitions are presented to clarify specific vocabulary referenced throughout the study.

1. *Play-centered curriculum* – An early childhood curriculum which uses play strategies as a structured, intentional methodology for the introduction, and discovery of learning components (Miller & Almon, 2009).
2. *Constructivist approach* – A model of instructional methodology which promotes the discovery of learning through structured learning activities. In this approach, the learner constructs his or her own knowledge through activities that the educator designs (Godwin, 2007).
3. *Socio-dramatic play* – A type of free play in which children use their imagination to develop their creativity, social skills and communication skills (Arribas & Serrano, 2013).
4. *Early Childhood Preparation Programs* – This program refers to any early childhood certification program which trains future educators in the methods and strategies of teaching early childhood students. These programs may include universities or colleges (Miller & Almon, 2009).
5. *Discovery Learning* – Part of a constructivist approach to learning that allows students to discover new ideas and concepts through open-ended learning activities (Polakow-Suransky & Nager, 2014).
6. *High-stakes Assessments* – Assessments that refer to standardized tests which are given to students to assess how well the educational system is performing. The assessments are

used to evaluate the student, the students' teacher, and the educational program in which the student is enrolled (Rushton, 2011).

7. *Developmentally Appropriate Practices* – An approach to teaching which is grounded in the research on how young children develop and learn and in what is known about effective early education. Its framework is designed to promote young children's optimal learning and development colleges (Miller & Almon, 2009).
8. *Developmentally Inappropriate Practices* – An approach to teaching which includes practices that are not grounded in the research on how young children develop and learn. It includes activities that are not appropriate for the age or developmental level of the child (Miller & Almon, 2009).

CHAPTER TWO: LITERATURE REVIEW

Overview

Since the very beginning of early childhood education, teachers have used a constructivist approach to learning in kindergarten classrooms (Astuto & Cahalan, 2015). Piaget (1970) argued that a constructivist approach to learning has been proven to be the most effective in early childhood education. This approach includes using a play-centered curriculum and child-initiated activities that are developmentally appropriate for their cognitive developmental stage (Bassok & Rorem, 2013). If a teacher utilizes practices that are not appropriate for the student's level, the student will not learn the material and will become frustrated (Astuto & Cahalan, 2015). Developing a love for learning has been a cornerstone in early childhood education, but if a student becomes frustrated, that love for learning can be extinguished (Astuto & Cahalan, 2015).

In some states, kindergarten is not a mandatory (Di Loreto, & Carbonero, 2014). Traditionally, kindergarten is the grade that helps young children become familiar with school. Some schools have half-day kindergarten classes, some offer full-day classes, and other schools even offer a combination of both (Di Loreto, & Carbonero, 2014). Today, more children attend preschool programs than in the past. Because less children are brand new to a class environment, some of the social skills that used to be taught in kindergarten are now being taught in preschool classrooms (Astuto & Cahalan, 2015), and more children now come into kindergarten classrooms already possessing such skills as recognizing the alphabet or knowing how to print their name than 20 years ago (Astuto & Cahalan, 2015). Because the children's needs have changed, the structure of kindergarten has changed as well (Darnell, 2008). Some schools will use kindergarten as a way of evaluating a child's readiness for first grade, and may even have a child take an additional year of kindergarten so that the child enters first grade ready to become successful (Darnell, 2008).

Prior to 2001, the American educational system had very loose standards for school districts to follow (Ransom, 2012). Most school districts would adopt a textbook, and then write a curriculum around the standards based on the book (Ransom, 2012). Since there were only a handful of companies offering textbooks, there would be some consistencies from district to district, but the curriculum was not standardized (Brown & Lan, 2015). If a child started in one school, and then moved around from school district to school district, it was probable that the student would develop gaps in their understanding of concepts (Taylor, Stecher, O'Day, Naftel, & Le Floch, 2010). School districts would use some standardized testing to obtain data about how well their students were performing when compared to other schools that used those same tests, but the problem still remained that there was no consistent standard for all schools to use (Taylor, Stecher, O'Day, Naftel, & Le Floch, 2010).

In 2001, Congress passed the No Child Left Behind (NCLB) Act as an attempt to improve the American educational system (Brown & Lan, 2015). According to Brown and Lan (2015), NCLB attached federal funding to student outcomes based on standardized tests. One of the reasons that NCLB was passed was so that students from around the world were compared using tests that measured their knowledge in several different academic areas, such as math and science, and the results indicated that American students scored worse than many of the other countries (Brown & Lan, 2015). NCLB was written with the intention of helping the American student improve their academic achievement. With the adoption of NCLB in 2001, the demands on the current educational system changed (Brown & Lan, 2015). As teachers and schools faced new policies for educating young children, early childhood teachers were challenged to adopt different practices to accommodate these new mandates. These policies called for a more rigorous, standards-based curriculum focused on literacy and numeracy (Graue, 2010). In order for a more rigorous curriculum to take place, a trickle-down effect occurred (Brown & Lan, 2015). The trickle-down effect meant

that concepts that had been previously taught at a higher-grade level, were pushed down into lower grade levels, to make room for a higher level of learning (Brown & Lan, 2015). Many believed that this would be best for American students, while others argued that this would result in teachers using inappropriate practices in early childhood classrooms (Astuto & Cahalan, 2015).

According to Dee and Jacob (2001), the goals for NCLB included higher achievement for all students, higher qualified teachers to instruct the students, safer classrooms more conducive to learning, all limited English students becoming proficient in English, and all students graduating from high school. The student achievement was to be measured by using standardized tests. The NCLB legislation changed the American educational system.

Because of those changes, early childhood programs also underwent many significant changes (Astuto & Cahalan, 2015). Kindergarten teachers began using worksheets and workbooks instead of child-initiated activities (Astuto & Cahalan, 2015). This was in contrast to what Piaget (1970) argued, that kindergarten students must engage in child-centered activities, not worksheets. In many classrooms, play was reduced significantly or even taken away from to allow more developmentally inappropriate practices (DIP) (Miller & Almon, 2009). DIP includes activities that frustrate the learner and impose on their freedom to become self-motivated active learners (Miller & Almon, 2009). Many researchers have argued that the increased academic standards are necessary for American students to remain more competitive academically with their peers from other industrialized nations, however the negative effects on the child were not considered (Polakow-Suransky, and Nager, 2014). Because of this new focus on having children pass standardized tests, the cognitive development of the child was not considered as important as long as the students were passing these high-stakes tests (Miller & Almon, 2009).

In 2015, NCLB was replaced with Every Student Succeeds Act (ESSA), and was signed by President Obama on December 10, 2015 (Department of Education, 2016). The act reauthorized and

builds upon key areas of the Elementary and Secondary Education Act (ESEA) which was signed by President Johnson in 1965 (Department of Education, 2016). According to the Department of Education (2016), ESSA was signed into law because the goals of NCLB were not met. The goals for ESSA included advancement in equity between advantaged and disadvantaged students, continued accountability without the pressures of loss of funding, an increase in innovation by educational leaders, and an increase in achievement for the most at risk students (Department of Education, 2016).

Theoretical Framework

The NCLB Act of 2001 brought about change in state educational systems and raised expectations for all students. According to Gullo and Hughes (2011), standards were formed, and high-stakes testing was introduced to ensure that all schools were meeting the new expectations. In many states, children were not formally tested until the third grade. Some educators found this to be a problem because this was very late in a child's educational career. One advantage to standardizing education was that if a student moves from school to school, in theory, that student will not miss concepts as the result of their transient lifestyle (Gullo & Hughes, 2011). Another advantage was that there were basic anchors placed throughout the curriculum to monitor a child's development (Pyle, & DeLuca, 2013).

The pressure to prepare children for these standardized tests affected early childhood teachers (Astuto & Cahalan, 2015). Kindergarten teachers began to adopt teaching strategies that aligned with state standards, which had come to be known as "accountability shove down" or "the trickle-down effect." In the trickle-down effect, concepts that had been taught in a higher-grade level had been pushed down and that material became part of an earlier grade's curriculum (Astuto & Cahalan, 2015). While some educators did not think that this could present a problem, many early childhood

educators were very concerned about the effects it could have on child development (Gullo & Hughes, 2011)

The changes that came about from the NCLB legislation altered early childhood programs by placing higher expectations on schools, but it also affected early childhood preparation programs. Friedrich Froebel, the “Father of kindergarten,” envisioned a kindergarten program that would include the components of moral education, play, and family involvement, therefore many colleges and universities used those four components as a cornerstone of their curricula (Jeynes, 2006). When that focus of the early childhood classrooms changed to a more academic curriculum, there should have been significant changes to teacher preparation programs (Jeynes, 2006). The three original components could be found in most core curriculum of early childhood educator preparation programs in most colleges and universities. For example, in a university that prepares future kindergarten teachers traditionally, kindergarten was not intended to be a high pressure classroom but rather an environment where children ages four to six could begin to develop their love for learning and begin to understand the importance of love of learning. But with the changes mandated by NCLB, kindergarten teachers found themselves under significant pressure to teach in a different way (Gullo & Hughes, 2011). Consequently, the pressure placed on school districts and administrators to have students score proficiently on high-stakes assessments have become the essence of early childhood programs (Heisner & Lederberg, 2011), and there has been a departure from the original goals of delivering a constructivist approach to a more didactic learning environment in early childhood classrooms (Jeynes, 2006). It is not certain what the long-term effects of the changing pedagogy will be.

In 2014, Bassok and Rorem found that while the United States was changing their early childhood programs to become more rigorous, many other nations were adopting traditional American early childhood pedagogy for their early childhood programs. Bassok and Rorem (2014)

noted that the countries that had adopted kindergarten programs based on a constructivist approach to learning had better test results than the United States. Even though some of these countries did not formally begin to teach reading until second grade, these students consistently scored higher in reading comprehension tests given in seventh grade (Bassok & Rorem, 2014). Miller and Almon (2009) found that forcing a child to read before the child's brain was ready was doing more harm than good. With constant pressure, a child can learn to read earlier, but they found that the child's reading comprehension was not any better than a child who was not taught to read until he or she was cognitively ready. Bassok and Rorem (2014) found that the stress of making a child read before he or she is ready can frustrate the child into hating learning.

The National Association for the Education of Young Children (NAEYC) developed a framework for standards that were better geared to the education of young children (Miller & Almon, 2009). According to Pyle and DeLuca (2013), having a balance between higher standards and developmentally appropriate practices (DAP) in kindergarten classrooms is best for children. As schools create new policies for educating young children, early childhood educators are challenged to adapt their practices to accommodate the needs of the children (Pyle & DeLuca, 2013). Miller and Almon (2009) pointed out that there have been many research studies exposing the negative effects of utilizing DIP in early childhood classrooms. Some of these negative effects include higher levels of child anxiety, a dislike for learning, the possibility of students become less active and intrinsic learners and failing to develop a love for learning (Ransom, 2012). It is unclear if kindergarten teachers are using DAP, didactic learning, or a combination of both in classrooms today. For more than 15 years, studies have identified problems of only using didactic learning in kindergarten classrooms (Astuto, 2006; Bassok & Rorem, 2014, Goldstein, 2007; Gullo & Hughes; 2011; McCombs & Robyn, 2007; Miller & Almon, 2009; Rushton, 2011), but studies have not been identified that evidence whether or not changes have occurred.

Related Literature

Historical Significance

According to Piaget (1964), children require play as part of their maturation process. Piaget (1964) found that a child's mind must be exercised just as muscles need to exercise. He concluded that play activities act as exercise for the child's mind. Piaget (1964) went on to state that if a child has choices and makes decisions based on these choices, he or she will be more motivated to learn. While some educators may find play activities a waste of time, Piaget (1964) argued that play is essential for brain development. Bae (2010) found that current increases in academic accountability in early childhood educational programs may have decreased the amount of time that children must play in early childhood classrooms. Play has historically been a pillar in early childhood curricula. If there is less play and child-centered activities in kindergarten classrooms, it would contradict the original goals for kindergarten. These goals were designed to build confidence in young children and to help foster a love for learning (Jeynes, 2006). Love for learning has been embedded in early childhood educational programs since kindergarten programs began (Pyle & DeLuca, 2013). It is not easy to define a person's love for learning, but it is easy to observe (Jeynes, 2006). When a child loves to learn, they are not frustrated or bored, but rather excited to explore new ideas. According to Bae (2010), play helps foster a "love for learning" (p. 43). According to Pyle and DeLuca (2013), there had been a considerable departure from these goals in recent years. Standardized assessments have become the barometer upon which student success is measured (Di Santo & Kenneally, 2014). Stipek (2006) argued that the increased pressure on young children from standardized assessments may have negative long-term effects on learning.

According to Pyle and DeLuca (2013), it may be too early to really be able to understand the long-term effects that high-stakes testing has had on kindergarten students. In the past, Americans have been known for their innovations and creativity. Will the lack of play and exploratory learning

activities in kindergarten classrooms have any consequences? Pyle and DeLuca (2013) proposed that there will be some price to pay down the road. When you take away the building blocks of a good kindergarten program, which include dramatic play, discovery learning, open-ended activities, and a constructivist approach to learning, you are taking away a part of the child's cognitive foundation (Polakow-Suransky & Nager, 2014).

Another important part of the early childhood experience has to do with the climate of the classroom. Moe, Pazzaglia, and Ronconi (2010) noted that by creating a positive climate in the classroom, the learning environment can become more stimulating. They also discovered that a positive classroom promotes a higher level of achievement and self-efficacy (Moe, Pazzaglia, & Ronconi, 2010). When a child is under pressure to meet goals that are not developmentally appropriate, the classroom is no longer viewed as a safe and positive place for the child to flourish. This is not to say that there should not be standards, but rather these standards may be best placed at a higher-grade level so that the kindergarten classroom can be what it was meant to be, a place for young children to explore and transition into elementary students (Pyle & DeLuca, 2013). Mayall (2013) agreed that kindergarten students should not be placed into environments that are stressful, because that is the time in their development when they begin to form their aptitude for learning.

Knowing what the child has mastered enables a teacher to develop new learning activities. Assessment based-curriculum has proven itself to be beneficial in some schools (Snow, 2012). Having a universal set of standards can help school districts identify their own needs. Standardized tests provide a set of guidelines for everyone to follow (Snow, 2012), but when the testing becomes more important than the individual's needs, it can present problems (Mayall, 2013). The problems develop when the pressure for teachers and administrators to have their students be proficient on standardized assessments become the essence of the educational programs (Di Santo & Kenneally 2014). According to Stipek (2006), morality has remained in the curriculum, but enjoyment of

learning has been replaced with standardized assessments. Kindergartners are expected to meet rigorous academic standards that until recently were reserved for first grade students (Bassok & Rorem, 2013). As such, new academic standards are geared beyond a kindergartener's cognitive abilities (Miller & Almon, 2009). At the same time, the child is being denied the benefits of play, which can be helpful in reducing the child's stress (Miller & Almon, 2009).

Differing opinions among teachers can be found related to the subject of play curriculum. While some educational experts demand more guided activities, others demand more teacher-directed activities (Pyle & DeLuca, 2013). Lara-Cinisomo, Fuligni, Ritchie, Howes, and Karoly (2009) agreed that when a child is involved in play, the mind is developing and evolving. There are several kinds of play that are acceptable in a kindergarten classroom such as discovery learning, dramatic play, social play, inquisitive play and structured play (Jeynes, 2006). A proficient kindergarten teacher can create guided play activities that lead students into discovery learning. When a child discovers something on his or her own, the motivational level for that student increases (Piaget, 1970). Hoisington (2006) discussed using play-based curriculum to support children's learning throughout the domains of learning. Hoisington (2006) went on to argue that a play-based curriculum can have many positive results, which is why kindergarten classrooms have used play-based instruction for decades.

Not all schools have begun high-stakes testing in kindergarten. Each state decides when the testing should begin (Polakow-Suransky & Nager, 2014). Some states, such as California and New York, are requiring students to take standardized tests as early as first grade (Polakow-Suransky & Nager, 2014). Testing has not been found to be necessarily harmful to students. It can be a very efficient way of finding out what a child has not mastered, but it also takes time away from other activities that are more developmentally appropriate for early childhood development that may have other social-emotional outreaching effects beyond intelligence (Pyle & DeLuca, 2013). If testing is conducted in a stress-free environment, it can be very beneficial (Jeynes, 2006). When schools

evaluate teachers based on their students' scores, the stakes start to get high and therefore, the anxiety can be felt by the student.

Theorists such as Froebel, Montessori, Erikson, Piaget, and Vygotsky have been recognized as some of the greatest educators of the 19th century for their research in DAP for early childhood development (Jeynes, 2006). They insisted that children in kindergarten were still quite immature and not ready for the demands of the real world (Jeynes, 2006). The proper development of a child is dependent upon open-ended learning opportunities, which occur best in a play-centered curriculum rather than an assessment-based curriculum (Mann, 1996). DAP in kindergarten classrooms provide children with activities that can help them realize success (Graue, 2010). Piaget (1970) revealed the importance of allowing children the opportunity to become independent learners by guiding them in play activities.

Early Play

Historically, the foundation of kindergarten has been shaped by a commitment to core values rooted in child development that promote learning and development of the whole-child (Goldstein, 2007). Carter (2006) surmised that children need the opportunity to create their own cognitive structures. These structures are formed in open-ended, self-driven activities lead by teachers. Since every person develops independently, cognitive building blocks need open-ended play activities for maximum growth to occur (Hoisington, 2006). Kroft (2003) examined sociodramatic play and its connection to literacy development. Research by Di Santo and Kennedy (2014) led the concept that play-centered activities assist in the development of certain parts of the brain. These portions of the brain have been linked to literacy acquisition. Kroft (2003) identified concrete connections with play and literacy and predicted that without guided play, some children will struggle with literacy-based learning.

According to Jeynes (2006), young children learn best when they have a strong foundation to their educational experience and this is best created by a discovery-based learning environment. Jeynes (2006) went on to argue that while play may not look academic to some, it is a very strong academic tool. Educators that know how to structure their kindergarten classroom activities around play and discovery learning, produce better outcomes than those structured around practices that are developmentally inappropriate.

Brain Development

Rushton's (2011) research in the field of neuroscience (combined with principles gained from constructivism) supports the importance of developing and implementing both a child-centered curriculum and a positive learning environment that is appropriate for young children. Bodrova and Leong (2005) explored the topic of children needing play and concluded that children need play for their emotional development. They insisted that when a child plays, essential sections of the brain develop, which form the building blocks for higher cognitive understanding. Rushton (2011) revealed that the firing of an electro-biochemical synaptic reaction in the brain between neurons releases neurotransmitters, such as dopamine or serotonin, which is directly related to a child's ability to stay focused and learn. Rushton (2011) identified four principles about the brain. These principles were being uniquely organized, continual growth, brain compatibility, and immersion into real life.

According to Rushton (2011), a uniquely organized brain refers to neurotransmitters. The brain has neurotransmitters, which help people organize their thoughts. By providing skill-leveled materials, students can celebrate successes, maximize their development, and venture onto more complex tasks. This is the basis of differentiated instruction (Rushton, 2011). All children develop at different rates. Differentiated instruction considers the fact that every child has a different way and a different pace of learning (Rushton, 2011). The manner in which the learner organizes their thoughts is crucial to learning more complex concepts in the future.

The brain is continually growing, changing and adapting to the environment. According to Rushton (2011), intelligence is not fixed at birth but fluctuates throughout life, depending upon the stimulation of the environment, hormonal levels, and other chemical reactions taking place throughout the body. This is also supported by DeFretas and Palmer's (2015) research which stated that concepts are not timeless transcendent abstractions but an unfolding event and learning assemblage. The foundations of a child's brain processing lead to continual learning and growth. According to Darnell (2008) the brain continues to grow as long as the brain is stimulated. When a child "turns off" school and no longer feels stimulated, the growth slows down.

Brain-compatible classrooms enable a connection of learning to positive emotions through play-centered activities, which connect learning with positive emotions (Rushton, 2011). Rushton (2011) went on to declare that when teachers allow students to make relevant decisions and choices regarding their learning, it creates a more naturalistic positive outcome. Ultimately, it is the students who propel the learning while the teacher guides the path along the way. Given that each child's brain is unique and he or she has varying levels of individuality, it takes a special teacher to facilitate each child into a prescribed curriculum (Rushton, 2011). Reio (2002) discussed the prevalence of anxiety in early childhood classrooms and contested that it is essential for children to experience a classroom with little anxiety and an environment that encourages pro-social behaviors in a child-centered classroom.

According to Sylvester (2007), there are four areas of the brain: Frontal lobe, the parietal lobe, the temporal lobe, and the occipital lobe, and they work collectively for thinking to take place. Each area has its own function but work together as a single unit. Dendrite is the substance of learning which sends an electrical message from one part of the brain to the cerebral cortex, the area directly behind the forehead, which is responsible for purposeful acts such as thought, creativity, and

judgment (Sylwester, 2007). Rushton (2011) found that higher-order thinking skills reside in this portion of the brain and, therefore, need to be developed in a careful manner.

Rushton's (2011) final principle states that the child's brain needs to be immersed in real life, hands-on, and meaningful learning experiences. These experiences should be intertwined with a commonality and require some form of problem-solving. According to Rushton (2011) problem solving is essential in brain development. Every academic activity should have some real life, meaningful learning connection. According to De Freitas and Palmer (2015), problem solving and real-life experiences have a great impact on a child's cognitive development. According to Rushton (2011), a child's ability to develop scientific concepts involves inductive generalizations from learned active experiences. The most meaningful learned experiences are at the very core of dendritic growth (De Freitas & Palmer, 2015).

Social Competence

Social competence is an outcome of early play (Van Der Linde, 1999). Children need to learn how to process their social world. Play is one of the best ways for children to acquire interpersonal skills (Polakow-Suransky & Nager, 2014). Children that do not learn appropriate interpersonal skills may have difficulty dealing with others as they grow. Children who have good social skills are empathetic, attentive to others' needs, helpful, respectful and able to engage in sustained social interactions (Stipek, 2006). In sociodramatic play, children learn how to act in different social settings and the children act out in those roles (Polakow-Suransky & Nager, 2014).

Of all the areas that have suffered from the increased academic emphasis in kindergarten classroom the area of sociodramatic play has suffered the most (Miller & Almon, 2009). According to Miller and Almon (2009), with the increased time needed for higher academic competencies, sociodramatic play has lost the most amount of time in the kindergarten classroom. That is not to say that kindergarten teachers do not value socialization, it is simply that there is not enough time for

teachers to meet the higher expectations while still providing social time for the children to improve their socialization skills. Research has shown that social skills are very important when it comes to measuring the overall success of a person (Polakow-Suransky & Nager, 2014).

Children often become very talkative when they play (Carter, 2006). Communication is a key component to the language development of a child. Communication skills can help elevate a person and provide them with an increased potential. By playing games, children learn how to communicate and interact. When children play, they are exercising their language skills and learning how to conduct themselves in social environments. According to Carter (2006), simple open-ended activities can help children with communication and with interpersonal skills.

In 2014, Di Santo and Kenneally researched students that came from two types of early childhood programs. The first program did not include social play as part of the curriculum. The second group included social play every day. Di Santo and Kenneally (2014) found that children who demonstrated significantly poorer social skills attended a preschool that did not incorporate play in the curriculum. Their in-depth study followed the children for several years and found that the students who came from early childhood programs that did not offer social play as part of their curriculum performed worse than those students that came from early childhood programs that used play-centered curriculum and social play. Di Santo and Kenneally (2014) also found that the children from programs that included play and socialization demonstrated a higher level of performance in almost all academic areas.

Polakow-Suansky and Nager (2014) also investigated children from programs that either did or did not offer time for social play. They found that children who had difficulty playing in large groups, smiled less, and frowned more were from preschool programs that did not use play in the curriculum. Those children also provided more negative feedback about their school. There were fewer behavioral problems in the programs that had a play-centered curriculum than those that used

an assessment-driven curriculum (Polakow-Suansky & Nager, 2014). Their findings provided an interesting argument for having all early childhood programs to include socialization and play.

Discovery Learning

Early childhood theorists Bodrova, Leong, Patton, and Mercer are associated with the constructivist approach to learning. They argued that discovery learning is necessary for cognitive development (Bodrova & Leong, 2005). Cognitive developmental play has been linked to growth of memory, oral language, and recognition of symbols (Escalier-Lazarte, 2013). Playing in socio-dramatic activities is an important part of most early childhood programs (Patton & Mercer, 1996). Child-initiated learning centers support literacy acquisition by encouraging children to construct their own learning in an environment that promotes exploration and engagement (Bodrova & Leong, 2005). MIT researcher Marilyn Jager Adams' foundational review of the reading research literature self-guided constructs was presented in her book, *Beginning to Read: Thinking and Learning about Print* (1990). Her scientific review of research into these constructs paved the way for programs of reading within phonological awareness and the need to teach play directly and explicitly in kindergarten. Her research led to the creation of such research/training movements like the *Reading First Initiative*. The benefit of play is that the child selects the level of learning in a stimulating environment. Children who select their level of learning are intrinsically motivated and will likely acquire knowledge at a faster rate than unmotivated learners (Mann, 1996).

Einarsdottir (as cited in Rorem, 2014) conducted a research project in preschools in Iceland that compared children who attended a play-centered curriculum kindergarten classroom to children who attended a program that used no play in the curriculum. Einarsdottir found that the children who participated in a program that used play as an integral part of their program demonstrated greater literacy proficiency at the end of the school year (Rorem, 2014). The findings also revealed that the children that came from play-centered kindergarten classrooms scored higher on reading

comprehension tests taken in third grade than students that attended kindergarten programs that did not include play curriculum. This study provided support for the traditional kindergarten pedagogy which stated that children in kindergarten must have play as part of their daily classroom activities (Rorem, 2014)

In his study conducted on play-centered classrooms, Einarsdottir noted that the philosophy of the play-centered program implies that play should be the nucleus of all kindergarten programs (Rorem, 2014). In a play-centered classroom, children use symbols, like those used in literacy, when they play. Printed materials are placed in large letters labeling everything in the child's environment. Instead of worksheets, the classrooms use games, songs, and fun learning centers, so that the children can initiate learning on their own (Rorem, 2014). To the untrained eye, it appeared that the children were simply having fun in the play-centered classrooms, but the reality was that those students were also engaged in highly academic activities (Rorem, 2014).

After the school year, the parents were interviewed, and the results showed that the children who participated in the play-centered classrooms enjoyed school more and had a better appreciation for literacy (Rorem, 2014). These students also had a higher reading level at the end of first grade and a higher reading comprehension score at the end of third grade. The students that attended the programs that did not use play demonstrated a poorer attitude towards school and on average had a lower reading level (Rorem, 2014).

Motor Skill Development

Patton and Mercer (1996) concluded that play helps develop fine and gross motor skills. Fine motor development occurs through playing with blocks, connecting Legos and manipulating props such as cars, dolls, and figurines (Bassok & Rorem, 2014). Fine motor skills are necessary for a person to be able to print, and draw (Astuto, Cahalan, & Allen, 2015). Gross motor development occurs in activities such as climbing on playground equipment, riding bikes, kicking or throwing a

ball, and running around in a game of tag (Bassok & Rorem, 2014). Children begin sensory motor play at the infancy stage. Sensory motor play is an important part of development and should be a part of every early childhood program (Mann, 1996). Play-centered kindergarten classrooms include time in the daily activities for children to engage in these activities (Astuto, Cahalan, & Allen, 2015).

A classroom that facilitates sociodramatic play will have many toys and props for the children to explore. Some of the play may be free play, but the teacher facilitates much of the play. The teacher is more of a facilitator than an observer in a child-initiated classroom (Bassok & Rorem, 2014). Learning centers will have materials that are open-ended to provide an unlimited amount of possibilities. The facilitator, to ensure conflict-free center time, must use careful planning (Reio, Maciolek, & Weiss, 2002). Any teacher that is certified to teach early childhood, which includes kindergarten, must be trained in how to properly use sociodramatic play in the classroom (Astuto, Cahalan, & Allen, 2015). Sociodramatic play should be a part of every kindergarten classroom because it creates a foundation for the child that may future lessons will be built upon (Astuto, Cahalan, & Allen, 2015).

In a play-centered classroom, the children must feel comfortable enough to engage in the open-ended activities. According to Escalier-Lazarte (2013) student centered instruction is the most important ingredient in learning. Types of play that occur in a play-centered program include sensory-motor play, dramatic-symbolic play, socio-dramatic play, practice play, symbolic play, and games with rules (DiLoreto, 2014). Many of the original early childhood theorists recognized the importance of play in a child's development (Escalier-Lazarte, 2013).

A play-centered program must include literacy enriched-learning activities (Patton & Mercer, 1996). Literacy-rich activities include books and labeled objects to help increase the children's sight word vocabulary. According to Godwin (2007), teachers should choose themes of special interest to the children. As children are playing, there are several different roles that they can play. As the

teacher reads a story, materials must be readily available for the students to act out the scenes. Music must also be included to help children learn math facts and letters in a fun manner (Van Der Linde, 1999).

Limitations to Traditional Play-Centered Curriculum

Teachers often cite academic pressure as the reason their curriculum is not play-centered (Bright, 2012). Educational leaders need to take seriously the accountability demands made on them by the local, state, and federal governments (Hernandez-Herrero, 2013). In many parts of the nation, kindergarten has gone from a half-day program to a full-day program. This has not increased playtime for children, instead the amount of playtime has decreased as the length of the school day has increased (Stipek, 2006). If early childhood education were to best serve children it must consider all the evidence of decades of research and experience (Miller & Almon, 2009). Early childhood education must begin a thorough reassessment of kindergarten policies and practices (Jennings, 2009).

In an increasing number of kindergarten classrooms, teachers must follow scripts from which they may not deviate (Miller & Almon, 2009). These practices violate long-established principles of child development and good teaching (De Freitas & Palmer, 2015). It is increasingly clear that they are compromising both children's best interest and their long-term prospects for success in school. Miller and Almon (2009) stated that high-stakes testing and test preparation in kindergarten are proliferating, as schools increasingly are required to make decisions on promotion, retention, and placement in gifted programs or special education classes based on test scores. Miller and Almon (2009) agreed that while some testing of children under age eight may be useful for screening, it is a highly unreliable method for assessing individual children and should not be used as a part of a daily kindergarten curriculum.

Structural: Lack of Training

Another possible reason for the lack of play and discovery learning in early childhood education is a lack of training (Di Santo, & Kenneally, 2014). If a teacher is not properly trained in facilitating play, the activities may be a waste of time for most students (Mann, 1996). NCLB legislation identified teacher training as a major concern for our educational system (Hoisington, 2006). Education training programs focus on current trends in learning modalities. Since there has been a decreased emphasis on open-ended constructivist approaches in early childhood classrooms, teacher training programs may be reflecting that trend (Mann, 1996).

If a teacher has a degree in elementary education, in most states that teacher can teach in a kindergarten classroom, but the training an elementary teacher receives is not the same as that of a teacher who has an early childhood certification (Miller & Almon, 2009). Early childhood training programs traditionally provide an emphasis on a constructivist approach to learning (Miller & Almon, 2009). While elementary training programs will include some components of a constructivist approach to learning, it will not covered play-curriculum or early childhood pedagogy at the same depth as those of an early childhood certification program (Miller & Almon, 2009). In many states, a teacher with a special education certification can teach in a kindergarten classroom, but again that certification program includes a different pedagogy than that of an early childhood certification program (Miller & Almon, 2009).

Darnell (2008) conducted a study of Utah teachers in relation to their developmentally appropriate beliefs and practices as related to perceptions of kindergarteners' successful classrooms, and concluded that while many kindergarten teachers believed in using DAP, few included DAP in their daily classrooms. Darnell (2008) also noted that many teachers saw the value in using play and DAP in a kindergarten classroom, but reported that there was just not enough time in their day.

Functional: Lack of Support

The decrease of play in early childhood education may also be the result of the lack of early childhood training by administration. Most school administrators do not have an early childhood background or certification and, therefore, may not understand the need for play in the curriculum (Bodrova & Leong, 2005). In most states, elementary certification does not include early childhood endorsement (Miller & Almon, 2009). Early childhood certification may be selected as a dual certification as with special education. According to Miller and Almon (2009), many kindergartens use highly prescriptive curricula geared to new state standards and linked to standardized tests. If a school is under pressure to have their annual yearly progress reports increase, an administrator that does not understand play-centered curriculum may not be supportive of that type of classroom (Bodrova & Leong, 2005). To those untrained administrators, children's play is a waste of academic time and they may believe that play has nothing to do with increasing standardized test score (Bodrova & Leong, 2005).

The lack of support may also come from the district's higher administration. Under NCLB, all states were required to test every student annually starting in third grade (Dee & Jacob, 2001). The scores were then connected to sanctions and funding. According to Dee and Jacob (2001), if a school did not meet a certain standard, that school could receive many different sanctions included loss of funding and potential closings. This kind of pressure may lead to having schools decrease any activities that do not seem to be highly academic in nature. Since most school board members and superintendents do not understand the great benefits of a play-centered curriculum, they may not be overly supportive of play in their classrooms (Miller & Almon, 2009).

Teacher Experience

Another challenge early childhood education faces is the level of competency and experience of the teachers within the school (Huang & Li, 2012). According to Great Schools (2014), a balance

of experienced and inexperienced teachers is important because experienced teachers provide stability for a school and a higher level of competency within their discipline, and beginning teachers bring a higher level of excitement and enthusiasm to a school. Harris and Sass (2011) found that more experienced teachers have a higher knowledge and understanding of highly effective educational procedures. Harris and Sass went on to imply that teaching experience increases the effectiveness of the education of the student. Tsui (2009) indicated that more experienced teachers use more of a mixed methods approach to education.

According to Hanushek and Rivkin (2006), though experience has been found to be very important, it does not necessarily imply that inexperienced teachers are ineffective. Beginners, according to Mustafa (2013), may take more time to explain things because they have not developed their pedagogical content yet, but beginning teachers may have a higher level of productivity based on their energy levels.

Pedagogy

According to Harris and Sass (2011), pedagogy can be thought of as the art of instruction based around the educator's beliefs of what is best practice. Pedagogy includes refinement, consciousness, and time-proven methodology (Harris & Sass, 2011). Traditional early childhood pedagogy includes the utilization of developmentally appropriate practices (Brown & Lan, 2015). Piaget (1970) stated that early childhood pedagogy must include a constructivist approach to learning, which means that children gain knowledge by using their senses to construct their own intelligence. Piaget (1970) argued that children develop their morality and intelligence from adapting their current knowledge as it is impacted by their environment. Teachers need to understand their students and their students' current cognitive level (Brown & Lan, 2015). If a teacher provides an activity that is not appropriate for the student, the student will become frustrated and learning will not occur (Brown & Lan, 2015).

Pedagogy in early childhood classrooms should be consistent from school to school, district to district, and state to state (Brown & Lan, 2015). Because kindergarten classrooms are taught by a wide variety of educators, these educators vary in experience, background, and training. As a result, the pedagogy of these classrooms also varies greatly (Harris & Sass, 2011).

Positive Aspects of NCLB

There were several positive aspects of NCLB. The first positive aspect was that it generated data on student achievement in math and reading that had not been accumulated prior to 2001 (Brighthouse, Ladd, Loeb, & Swift, 2016). Educational researchers and policymakers benefited greatly from the influx of student data and it provided great insight on what American students know and what they were struggling with (Brighthouse, Ladd, Loeb, & Swift, 2016). The data was not just limited to students, but it included data on schools, districts, and even teachers. The data could then be compared over a span of time to include trends and changes in the curriculum and achievements of districts (Brighthouse, Ladd, Loeb, & Swift, 2016).

A second positive component of NCLB was that schools started to be held more accountable (Dee, & Jacob, 2010). While this may have placed a lot of pressure on teachers, schools, and districts, accountability forced people to examine what was good about the educational system and what was not (Brighthouse, Ladd, Loeb, & Swift, 2016). While some educators looked at this in a negative way, the reality is that it also positively highlighted those individuals that were meeting or exceeding expectations (Brighthouse, Ladd, Loeb, & Swift, 2016).

A third positive component of NCLB was that it required that all teachers be highly qualified (Brighthouse, Ladd, Loeb, & Swift, 2016). Each state initially dealt with the requirement differently. The purpose of this was to make sure that teachers were qualified to teach the grade level and subject area to which they were currently assigned. It also caused districts to look at what training and continuing education they were providing to their teachers (Brighthouse, Ladd, Loeb, & Swift, 2016).

Negative Aspects of NCLB

There were several aspects of NCLB that were not considered positive. One problem was that the test-based accountability provided too narrow of a view of schools (Brighthouse, Ladd, Loeb, & Swift, 2016). Most educators would agree that education should be more than just teaching children how to take tests. Education must include the development of the complete child which includes more than just a high-stakes evaluation (Dee & Jacob, 2010). According to Darnell (2008), education should recognize the role that schools play in the development of children, which includes the knowledge and skills that will enable the child to not merely succeed in life, but to become good people, live rich lives, and contribute to society (Brighthouse, Ladd, Loeb, & Swift, 2016).

A second problem with NCLB was that it narrowed the curriculum by shifting instruction time toward those subjects that were tested (Brighthouse, Ladd, Loeb, & Swift, 2016). A survey conducted between 2001 and 2007 which included 349 school districts found that schools raised instructional time in English and math, but reduced time for subjects such as social studies, science, music, art, physical education, and recess (McMurrer, 2007). This narrowing of the curriculum has been proven to be negative and undermining to the potential for schools to develop the complete child (McMurrer, 2007).

A third negative aspect of NCLB was that it led to a reduction of the depth of content of certain subjects because of the heavy reliance on multiple-choice tests rather than open-ended questions (McMurrer, 2007). Test-based accountability gives teachers incentives to “teach to the test” rather than expand the content of their subject (McMurrer, 2007). Several studies have documented that the incentive for an educator to concentrate on students near the proficiency mark has reduced the proficiency of students in the outer ends of the achievement distribution (Brighthouse, Ladd, Loeb, & Swift, 2016).

A fourth flaw of NCLB was that it included highly unrealistic goals and expectations. The goal of NCLB was that every student would become proficient, but even without a 100% proficiency goal, the program itself imposed counter-productive expectations (Brighthouse, Ladd, Loeb, & Swift, 2016). One of the main goals of NCLB was to raise the academic standards of all students throughout the United States, but because the American educational system places responsibility for education at the state level, the federal lawmakers had to allow each state the ability to create their own proficiency benchmarks. If a state were to choose to raise a standard, it could do so without providing the additional resources and funding necessary to support the schools (Brighthouse, Ladd, Loeb, & Swift, 2016). The outcome was that instead of states raising their proficiency standards, some states reduced their standards (Brighthouse, Ladd, Loeb, & Swift, 2016). Many educators agreed that the goals of the program were unrealistic, and many schools were unable to meet the requirements of adequate yearly progress. According to McMurrer (2007), almost half of all schools in the United States began failing to meet their achievement standards.

A fifth negative aspect was that it had a counterproductive effect on the American education system because it had an adverse effect on teacher morale (Byde-Blake et al., 2010). It was proven that the morale of teachers in high poverty schools, as well as all educators, dropped to a point where the profession began to see a notable decrease in the number of people entering its ranks (Byde-Blake et al., 2010). Not only did the profession have less people entering the field, but it experienced a spike in the number of teachers who began to cheat in order for their scores to reflect a more positive outcome (Byde-Blake et al., 2010).

A sixth flaw was that it placed a significant amount of pressure on individual schools and districts to raise their student achievement, but it did this without providing the support needed to assure that all students had an opportunity to become successful (Byde-Blake et al., 2010). NCLB relied on test-based incentives, however the problem of low-performing schools was not that teachers

didn't care, but was more likely because of the limited capacity of some schools to meet the challenges that students from disadvantaged backgrounds brought to the classroom (Dee & Jacob, 2010).

ESSA

In December 2015, President Obama and Congress updated ESEA, which had been promised since NCLB was passed in 2001 (Brighthouse, et al., 2016). ESEA had been passed by President Johnson in 1965, but NCLB replaced it in 2001. ESSA then replaced NCLB and its requirements that with a new set of provisions. ESSA continued the requirements that states are still mandated to test all students in math and reading. There were, however, significant changes to the way states were punished or rewarded as the result of the test scores (Brighthouse, et al., 2016). One of the main changes was that state governments were given the primary responsibility for designing, implementing, and enforcing their own accountability. States will continue to be subject to some federal regulations. For example, all states must include a non-test measure of school quality or student success (Brighthouse et al., 2016). While it may be too early to predict the success of ESSA, many educators have been calling for these changes for years (Brighthouse, et al., 2016). Early childhood educators will possibly see a return to a more child-centered approach to learning, but only time will tell (Brighthouse, et al., 2016).

Summary

Early childhood professionals are concerned about the quality of early childhood programs as the result of changes in academic demands (Brown & Lan, 2015). As a more academically-oriented curriculum has become prevalent in kindergarten classrooms, there has been a higher awareness of the need for improving the quality of early childhood education programs in the United States. (Astuto et al., 2015). The NAEYC created guidelines for the development of early childhood standards. These guidelines were based on learning constructivist theories and a body of research that

had been conducted by professionals in the field. They also based these standards on the opinions of experienced early childhood professionals (Astuto et al., 2015). The publication of the guidelines for DAP was the outcome of research by early childhood professionals (Polakow-Suransky & Nager, 2014). Since the publication of these guidelines, there has been an effort to learn how early childhood teachers are using these guidelines (Astuto et al., 2015). Researchers used the NAEYC guidelines as a conceptual criterion for the study of developmentally appropriate practices of teachers in their classrooms (Pyle & DeLuca, 2013). The researchers developed a variety of teacher questionnaires and classroom observation scales in order to obtain this information (Astuto et al., 2015). After the approval of NCLB, there was a swing from a constructivist approach to learning, to a teacher-initiated approach (Heisner & Lederberg, 2011).

Since NCLB has been replaced by ESSA, it is unclear where current early childhood teachers stand on the use of DAP in their classroom. While there have been many studies on the effects NCLB on early childhood classrooms, there have not been many studies reflective of the current trends that ESSA has had on current kindergarten classrooms.

CHAPTER THREE: METHODS

Overview

The purpose of this study was to investigate the strength of the relationship between what kindergarten teachers identify as their beliefs about using developmentally appropriate practices (DAP) in early childhood classrooms and their actual use of DAP in their classroom. This information is significant in the field of early childhood education because it investigated the correlation between teacher beliefs and teacher practices. Even though researchers have supported the use of developmentally appropriate activities in early childhood classrooms, not all kindergarten classrooms include DAP as a central part of the curriculum (Charlesworth et al., 1991; Polakow-Suransky & Nager, 2014). Experts in the field of early childhood education identify DAP as necessary for future brain development and knowledge acquisition (Astuto & Cahalan, 2015).

Design

According to Gall (2007), a correlational research design is appropriate to use when studying a large group of participants. A correlational design provides a degree of relationship between the variables (Gall et al., 2007). When conducting this study, the correlation coefficient was the mathematical expression used to account the strength of the relationship between the variables (Abel, 2015). Correlational research is advantageous to educators since it provides a quantitative relationship between the variables that are being studied (Gall et al., 2007). The variables used in this correlational study were criterion and predictor variables and they were measured at the same or different points in time (Fraenkel, 1993). The online completion of a survey containing teacher beliefs survey items and teacher practices survey items created the variables used in this study.

Spearman's Correlation Coefficient was used in this study to investigate the strength of the relationship between teachers' beliefs in DAP and the extent to which they practice DAP in their kindergarten classrooms. This was obtained through teachers' responses on teacher beliefs survey

items and their responses to the actual use of DAP in their kindergarten classrooms on teacher practices survey items. Spearman's Correlation Coefficient was also obtained by comparing teachers' self-reported years of teaching experience overall and their responses to the actual use of DAP in their kindergarten classrooms on teacher practices survey items.

This study contributed to the overall body of knowledge by determining the strength of the relationship between teachers' self-reported beliefs and daily use of DAP in their classrooms, and the strength of the relationship between their years of teaching experience overall and their self-reported daily use of DAP in their classrooms. The predictor variable in RQ1 is the score from teacher beliefs survey items, and the criterion variable in RQ1 is the score from teacher practices survey items. The predictor variable in RQ2 is the number of years of teaching experience overall, and the criterion variable in RQ2 is the score from teacher practices survey items.

Research Questions

The following research questions were used to investigate this study:

RQ1: What is the relationship between a teacher's beliefs in developmentally appropriate practices (DAP) as identified in the teacher beliefs survey items and the actual daily classroom use of developmentally appropriate practices?

RQ2: What is the relationship between a teacher's number of years' experience in teaching kindergarten and his or her actual daily classroom use of developmentally appropriate practices (DAP)?

Hypotheses

The null hypotheses for this study are:

H₀1: There is no significant relationship between a teacher's beliefs in developmentally appropriate practices (DAP) and the actual daily classroom use of developmentally appropriate practices.

H₀2: There is no significant relationship between a teacher's number of years' experience in teaching kindergarten and his or her actual daily classroom use of developmentally appropriate practices (DAP).

Participants and Setting

The participants in this study were a convenience sample of kindergarten teachers from 30 public schools in the northeastern counties of Pennsylvania. The subjects were limited to certified teachers that currently teach kindergarten. At the time of this study, the total number of kindergarten teachers in the region was approximately 125. The participation goal for questionnaires returned was 72 participants which yielded a medium effect size with a statistical power of 0.80 at the 0.05 alpha level (Warner, 2013). The total number of respondents was 72, and the participant response rate was 57.6%.

The population of the northeastern counties of Pennsylvania is over 1-million people (approximately 1,035,000), with a median age of 42 (Augustine, 2016). Twenty-eight percent of the population is between 18 and 35, with the average household housing two adults (Augustine, 2016). The labor force is approximately 495,000 people with an unemployment rate of 8.7%. The median household income is \$62,000. Seventy percent of the population that is over 25 years of age has at least a high school diploma (Augustine, 2016). The participants in the study were both male and female, with the majority being female. The age of the participants ranges from 22 to 60. The survey includes education level, years of experience, and ethnicity of the participants. The number of years teaching ranges from two years to over 20 years.

School administrators were contacted to assist in the recruitment of participants for this study. The link to the online survey was given to each superintendent. The survey included items divided into two types: Teacher beliefs survey items and teacher practices survey items. The teachers had varying years of teaching experience, gender, ethnicity and academic backgrounds. To obtain a

higher participation rate, the researcher personally contacted every superintendent from each of the 30 identified schools.

Subjects were limited to certified teachers who teach kindergarten in the school districts which are geographically located in the northeastern counties of Pennsylvania. These teachers are not limited to those who have exclusively taught kindergarten but are limited to teachers who are currently teaching in a kindergarten class. The survey was only forwarded to teachers who were certified with either elementary certification, early childhood certification or special education.

The study excluded any person that was not currently a certified teacher. In early childhood education, non-certified teachers may help in a kindergarten classroom, but the head teacher must be state certified. This study only included those personnel who were state certified. The study also excluded anyone who submitted an incomplete survey. If a survey was not complete, the data was excluded from the results.

Instrumentation

The researcher selected the Teacher Beliefs and Practices Survey as the data collection instrument. This instrument has been used to collect data from kindergarten teachers who can quantify the teacher's beliefs in using developmentally appropriate practices in their classroom and quantify their actual use of DAP in their classrooms (Kim, 2005). The instrument was created based on the National Association for the Education of Young Children (NAEYC) guidelines for early childhood education. Kim (2005) completed a research on the original survey and investigated its validity. To ensure that the instrument could provide accurate quantifiable data, Kim tested the psychometric properties of the Teacher Beliefs and Practices Survey. The results of his research indicated that this instrument would be a promising measure to critically examining teachers' perceptions of their beliefs and practices of developmentally appropriate practices for children ages 3-5. Kim's (2005) research found that the survey had strong reliability and validity. The instrument

was the first known teacher survey designed to operationalize the NAEYC guidelines. The psychometric properties were examined using a recommended sample size for factor analysis (Kim, 2005). The instrument utilizes a five-point Likert Scale which provides for a continuum of ratings between the appropriate and inappropriate extremes defined by NAEYC (Bredekamp & Rosegrant, 1992; Charlesworth et al., 1993; Steipek, et al., 1992.). According to Kim (2005) the instrument has a good reliability index (Cronbach's $\alpha=.80$), and there is evidence of good content, criterion, and construct validity.

This instrument has been used in more than 30 research studies. D'Amico (2007) used the instrument in a study of the impact of educational accountability on reported teaching practices among teachers in primary and elementary schools. D'Amico found that the pressures of educational accountability affected the practices of kindergarten teachers in their classrooms. Crocker (2011) studied the influences of a teacher's learning style on the implementation of developmentally appropriate practices. Baron (2014) analyzed the beliefs of teachers and administrators regarding developmentally appropriate practices within the transitional kindergarten classroom. Baron's study explored the contextual considerations on the use of play and found that play was an essential element in a child's development. Anderson (2015) used the Teacher Beliefs and Practices Survey to investigate the beliefs about infant toddler education and care in early childhood programs. Abel (2015) used the Teacher Beliefs and Practices Survey to analyze faculty beliefs in early childhood teacher preparation programs. In each of these studies, the Teacher Beliefs and Practices Survey was recognized as being an appropriate instrument to quantify beliefs' in DAP and the extent of actual use in DAP in early childhood classrooms. It can be concluded that this instrument holds promise for use in research on kindergarten teachers' beliefs and practices (Kim, 2005). The survey can be used by practitioners and researchers who need a valid and reliable measurement to learn teachers' beliefs and practices of DAP (Kim, 2005).

In the creation of the instrument, 375 surveys completed by public kindergarten teachers in southeast Louisiana were utilized in the study (Kim, 2009). Since it is important to assure that the instrument was reliable, reliability was examined using the internal consistency method (Kim, 2009). According to Kim (2009), Cronbach's $\alpha=.86$ for the Beliefs Scale and $\alpha=.79$ for the Instructional Activities Scale. This result fell in an acceptable range; therefore, the instrument was deemed reliable.

Validity of the measure was examined in its content, criterion, and construct (Kim, 2009). In order to enhance the content validity, Kim (2009) reviewed the feedback from the nationwide experts in early childhood education on the survey before administering the measure to the targeted teachers. Criterion-related validity was supported when the findings showed that one of the sub-measures, the measure of the developmentally inappropriate practices, showed a high correlation with the score from the observed classroom practices (Kim, 2009). The results identified construct validity in three ways. First, the factors uncovered in the survey matched the important concepts of DAP in the guidelines according to Kim (2009). Secondly, predictors of DAP found to be significant from previous studies were also significant in both of the subscales (Kim, 2009). Lastly, according to Kim (2009) the low but significant correlation between the Teacher Beliefs and Practices Survey score and a theoretically related measure, the Teacher Educational Attitude Scale (Rescorla et al., 1990), was found.

Procedures

The Liberty University Institutional Review Board approval was sought and obtained (Appendix A). The researcher then enacted the study by obtaining permission from superintendents of school districts located in the northeastern counties in Pennsylvania. Superintendents forwarded the participation letter to contact principals supervising kindergarten teachers within their district or directly to the teachers. Principals were personally contacted seeking permission for their

kindergarten teachers to participation in the study, and were subsequently asked to encourage teachers' participation.

Two weeks before the study began the researcher emailed each superintendent to remind them about the study and provide instructions for teacher participation, and remind them of the security of the collected data. When data collection began, the researcher emailed the link for the online survey to every superintendent. The online survey was distributed through a website called *Survey Monkey*. The survey was distributed to each participant through the district administration and he or she forwarded it to the kindergarten teachers in that school. While the survey included demographic questions, the identity of each participant was kept confidential. The participants were encouraged to complete the survey as quickly as possible within the given time frame. The survey remained active until the goal of 72 participants was met.

Every participant signed an electronic permission form before taking the survey (Appendix B). The consent form informed the participants of the nature of the survey and addressed the handling of that participant personal information. All demographics were kept confidential. The researcher accounted for two ethical considerations within the report. A letter was sent to the administration of each school district explaining the study (Appendix C). The teachers were asked to provide honest and open answers. Since the purpose of the study is to identify current trends in early childhood education, there was no risk to participants.

Data Analysis

There are two primary methods for analyzing correlation, Pearson's Correlation Coefficient and Spearman's Correlation Coefficient. Pearson's Correlation Coefficient must pass several assumption tests, one of which is the assumption of normal distribution (Abbott, 2016) Two measures can be applied to determine whether or not the assumption of normal distribution is met: Shapiro-Wilk and Kolmogorov-Smirnov (Statistics Solutions, 2018).

Spearman's Correlation Coefficient was used for analyzing correlation instead of Pearson's Correlation Coefficient because the assumption of normal distribution test failed for both the Shapiro-Wilk and Kolmogorov-Smirnov tests (Abbott, 2016; Statistics Solutions, 2018). The inferences drawn from tests based on parametric tests may be adversely affected when population distributions are not normal (Bhar, 2014), which is why Pearson's r (a parametric test) was not used to analyze the data. When there is doubt about the nature of the distribution (as in this instance), a nonparametric method should be used (Bhar, 2014), as was done in this study. Spearman's Correlation Coefficient is a non-parametric statistic where the results vary between -1 and +1 and can be part of hypotheses tests using the same process as the hypothesis tests in parametric procedures (Abbott, 2016). Nonparametric statistics are used with nominal data that do not meet the necessary assumptions of parametric statistics (in this case, normal distribution), and are also considered to be assumption-free or distribution-free statistics (Ravid, 2014).

In the teacher beliefs survey items, participants' responses to 28 of questions based on their views on the utilization of DAP instruction comprised their teacher beliefs score. In the teacher practices survey items, participants' responses to 20 of questions based on their actual daily utilization of DAP comprised their teacher practices score. The data utilized for number of years participants taught overall was the mean of the range of values that they selected in the survey. (For example, the numeric value utilized for responses of *four to eight years* was 6.) To answer RQ1, the teacher beliefs score was compared to the teacher practices score using Spearman's Correlation Coefficient to determine whether or not there was a relationship between beliefs about DAP and use of DAP in the classroom. To answer RQ2, the number of years participants taught overall was compared to the teacher practices score using Spearman's Correlation Coefficient to determine whether or not there was a relationship between teachers' experience and use of DAP in the classroom.

CHAPTER FOUR: FINDINGS

Overview

Many early childhood professionals have voiced concerns about the quality of early childhood programs since the changes that have risen from higher academic demands (Brown & Lan, 2015). When kindergarten standards changed their focus from the development of the whole child to an academically-oriented curriculum focus, there became a concern that the traditional use of developmentally appropriate practices (DAP) was no longer being used, resulting from a higher awareness of the need for improving the quality of early childhood education programs in the United States (Asuto, 2015). The National Association for the Education of Young Children (NAEYC) based its guidelines on child development and learning theories, a body of research that had been conducted by professionals in the field, and opinions of experienced early childhood professionals (Asuto et al., 2015). The publication of guidelines for DAP was the outcome of all the research by the early childhood professional (Polakow-Suransky & Nager, 2014). Since the publication of these guidelines, there has been an effort to determine how early childhood teachers are using these guidelines (Astuto et al., 2015). Researchers used the NAEYC guidelines as a conceptual criterion for the study of developmentally appropriate practices of teachers in their classrooms (Pyle & DeLuca, 2013). The researchers developed a variety of teacher questionnaires and classroom observation scales in order to obtain this information (Astuto et al., 2015). After the approval of the No Child Left Behind (NCLB) Act, there was a change in education from a constructivist approach to learning to a teacher-initiated approach (Heisner & Lederberg, 2011).

Research Questions

RQ1: What is the relationship between a teacher's beliefs in developmentally appropriate practices (DAP) as identified in the teacher beliefs survey items and the actual daily classroom use of developmentally appropriate practices?

RQ2: What is the relationship between a teacher's number of years' experience in teaching kindergarten and his or her actual daily classroom use of developmentally appropriate practices (DAP)?

Null Hypotheses

H₀1: There is no significant relationship between a teacher's beliefs in developmentally appropriate practices and the actual daily classroom use of developmentally appropriate practices (DAP).

H₀2: There is no significant relationship between a teacher's number of years' experience in teaching kindergarten and his or her actual daily classroom use of developmentally appropriate practices (DAP).

Descriptive Statistics

In order to calculate the beliefs score, only the questions that pertained to DAP were included in the calculation. In order to obtain an accurate score, the questions that the instrument identified as DAP questions were added together and divided by the number of questions to obtain the mean score of the DAP related questions. The survey included other question about didactic learning as well, but the researcher only analyzed the DAP portion of the survey. To obtain the daily practice score, the researcher found the mean of all of the questions that had been identified by the author of the instrument to obtain a true daily practice score. The mean scores and the standard deviations for the beliefs score, the activities score, and the number of years teaching, can be found in Table 1.

Table 1

Descriptive Statistics for Data Utilized in Calculation of Beliefs Score, Activity Score, and Years Teaching Overall

Survey Data	<i>M</i>	<i>SD</i>
Beliefs Score	4.10	0.309
Activity Score	3.77	0.522
Years Teaching Overall*	10.90	8.216

Note. Years Teaching Overall Score was calculated by converting respondent ranges to numerical means. (For example, respondents who selected *One to Three* Years were calculated as “2”, the mean of the range in the selected response.)

The participants for this research study included 72 kindergarten teachers that currently taught in one of 30 schools located in the northeastern section of Pennsylvania. Of the 72 teachers that participated, 47 graduated with a four year degree in elementary education, 22 graduated with a degree in early childhood, and four graduated with a degree in special education (Table 1). This means that 69.4% of the participants were teaching in early childhood, but did not have an early childhood degree.

Table 2

Respondents' Teaching Area of Specialization

Area of Specialization	<i>N</i>	%
Elementary Education	47	65.3
Early Childhood Education	22	30.6
Special Education	3	4.2

Table 3 includes descriptive statistics for the number of years participants taught overall.

Table 3

Descriptive Statistics for Number of Years Participants Taught Overall

Length of Time	<i>N</i>	%
1-3 years	10	13.8
4-8 years	11	15.2
9-15 years	18	25.0
16-20 years	9	12.6
21-25 years	9	12.6
More than 25 years	15	20.8

The list of questions that comprised the teacher beliefs survey items is found below in Table 4, and the list of questions that comprised the teacher practices survey items is found below in Table 5. In each survey item, participants were asked to choose from among the choices of Almost Never (0), Rarely (1), Sometimes (2), Regularly (3), or Very Often (4).

Table 4- Table was removed for copyright purposes

Teacher Beliefs Survey Items

The table contains 28 rows of redacted text. Each row consists of a single black bar of varying length, completely obscuring the original content. The bars are arranged in a single column, representing the data for each survey item.

Table 5- Table was removed for copyright purposes

Teacher Practices Survey Items

The table contains 20 rows of data, all of which are completely redacted with black bars. The redaction covers the entire content of the table, making the specific survey items and their corresponding values unreadable.

Results

Spearman's Correlation Coefficient was utilized to test the first null hypotheses for strength and direction of the relationship between variables. The variables were the teachers' beliefs in DAP score as identified in their teacher beliefs survey item responses, and their actual daily classroom use of DAP as identified in their teacher practices survey item responses.

There are two primary methods for analyzing correlation, Pearson's Correlation Coefficient and Spearman's Correlation Coefficient. Pearson's Correlation Coefficient must pass several assumption tests, one of which is the assumption of normal distribution (Abbott, 2016). Two measures can be applied to determine whether or not the assumption of normal distribution is met: Shapiro-Wilk and Kolmogorov-Smirnov (Statistics Solutions, 2018).

The Shapiro-Wilk Test Calculator found online at statskingdom.com was used to examine the assumption of normal distribution in respondents' Beliefs Score, Activity Score, and Years Teaching Overall. For Beliefs Score, the Shapiro-Wilk test using right-tailed normal distribution, $n=72$, $M=4.10$, skewness -0.66 , $p = 0.02$. Since $p < .05$, it is assumed that the data is not normally distributed. For Activity Score, Shapiro-Wilk test using right-tailed normal distribution, $n=72$, $M=3.77$, skewness -0.24 , $p = 0.72$. Since $p > .05$, it is assumed that the data is normally distributed. For Years Teaching Overall, Shapiro-Wilk test using right-tailed normal distribution, $n=72$, $M=11.5$, skewness 0.63 , $p = 0.000003$. Since $p < .05$, it is assumed that the data is not normally distributed.

The Kolmogorov-Smirnov Test Calculator found online at www.physics.csbsju.edu/stats/KS-test.n.plot_form.html from the College of Saint Benedict and Saint John's University was also used to examine the assumption of normal distribution in respondents' Beliefs Score, Activity Score, and Years Teaching Overall. Kolmogorov-Smirnov

comparison of the respondents' Beliefs Score and Activity Score found the maximum difference between the cumulative distributions $D=0.39$ with a corresponding $p=0.000$. Kolmogorov-Smirnov comparison of the respondents' Years Teaching Overall and Activity Score found the maximum difference between the cumulative distributions $D=0.72$ with a corresponding $p=0.000$. Kolmogorov-Smirnov results indicated that it is unlikely that the Beliefs Score data is normally distributed $p=0.02$ where the normal distribution has $M=4.06$ and $SD=0.35$ with $n=72$, and that it is also unlikely that the Years Teaching Overall data is normally distributed $p=0.00$ where the normal distribution has $M=12.71$ and $SD=7.36$ with $n=72$. The Activity Score data indicated data is consistent with a normal distribution $p=0.34$ where the normal distribution has $M=3.74$ and $SD 0.56$ with $n=72$.

Since both Shapiro-Wilk and Kolmogorov-Smirnov found that both the respondents' Beliefs Score data and Years Teaching Overall data did not pass the assumption of normal distribution required for the Pearson Correlation Coefficient, a parametric statistic, the Spearman Correlation Coefficient, a nonparametric statistic where the results vary between -1 and $+1$ and can be part of hypotheses tests using the same process as the hypothesis tests in parametric procedures (Abbott, 2016), was utilized in this study. The histogram in Figure 1 also provides a visual depiction of the non-normal distribution for number of respondents and beliefs score, and the histogram in Figure 2 also provides a visual depiction of the non-normal distribution for number of respondents and years teaching overall.

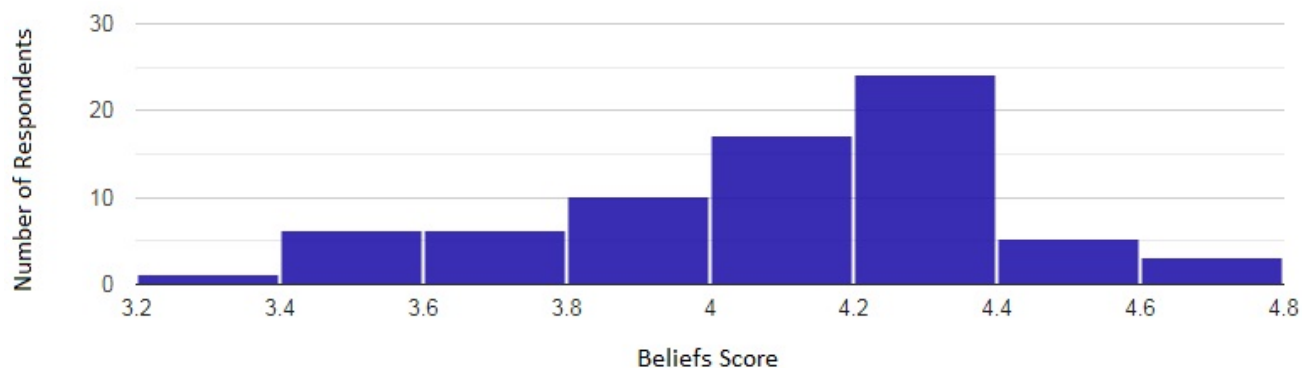


Figure 1. Histogram of Number of Respondents and Beliefs Score

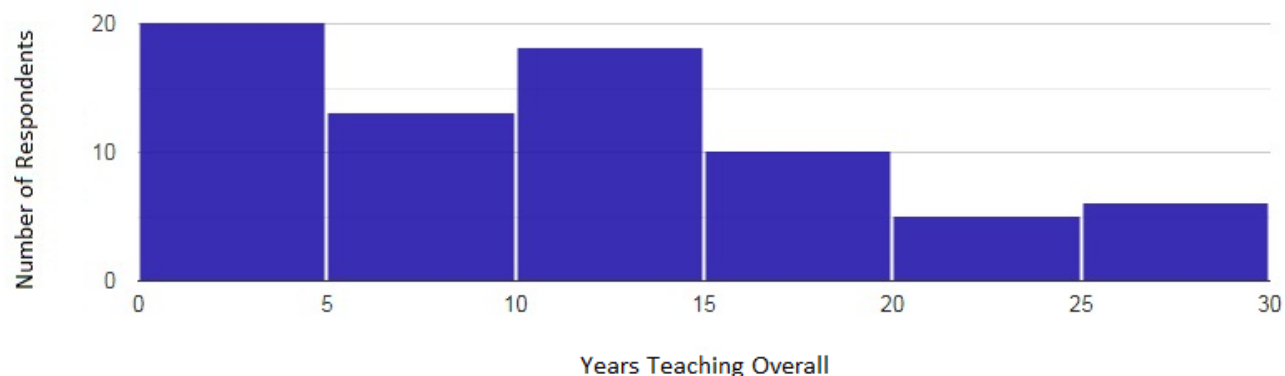


Figure 2. Histogram of Number of Respondents and Years Teaching Overall

The null hypothesis was used to explore the relationship between the predictor variables and the criterion variables in each research question. Visual screening was conducted on the data from the online survey checking for missing data, inconsistencies among the variables, and outliers. The screening attempted to identify any data errors or inconsistencies on individual responses. After a visual screening, there were no inconsistencies found among the completed surveys. Each participant completed each section of the survey, and no entries had any demographic responses missing.

The correlation coefficient expressed the strength of the relationship between the predictor variables and the calculation measure (Abel, 2015). The correlation coefficient is between -1 and $+1$. If there is a strong positive association, the correlation coefficient will be close to $+1$. If the correlation coefficient is positive but relatively close to 0 , there is a weak positive association in the data.

The predictor variable in RQ1 is the score from teacher beliefs survey items, and the criterion variable in RQ1 is the score from teacher practices survey items. The predictor variable in RQ2 is the number of years of teaching experience overall, and the criterion variable in RQ2 is the score from teacher practices survey items.

Null Hypotheses

Both Null Hypothesis One and Null Hypothesis Two involve relationship of a different variable with teachers' DAP activity score. In Null Hypothesis One, a relationship is determined between teachers' DAP activity score and teacher's DAP beliefs score. In Null Hypothesis Two, a relationship is determined between teachers' DAP activity score and number of years teaching score. Relevant data for the relationships in Null Hypothesis One and Null Hypothesis Two is found in Table 6 below.

Table 6

Spearman's Correlations of Teachers' DAP Activity Score with Teachers' DAP

Beliefs Score and Number of Years Teaching Score (n = 72)

	<i>r</i>	<i>p-value</i>
Beliefs Score	0.2386	0.0215590
Number of Years Teaching Score	0.9763	0.0000003

Null Hypothesis One

In the first null hypothesis, the relationship between a teacher's beliefs in DAP and their actual daily classroom use of DAP was examined. A Spearman Correlation was then conducted to determine if there was a relationship between the teachers' beliefs score and their DAP activity score. Because the data distribution was found to be non-normal, the nonparametric Spearman Correlation Coefficient was used in this study instead of the Pearson's r , which is a parametric test. When there is doubt about the nature of the distribution, as in this case, a nonparametric method should be used (Bhar, 2014).

A one-tailed test of significance indicated there was a statistically significant weak positive relationship between teacher beliefs and their DAP activity $r_s(70) = 0.2386, p < .05$. There was a statistically significant correlation between the beliefs score and the activities score at the $p < 0.05$ level. Since the null hypothesis stated that there is no significant relationship between a teacher's beliefs in DAP and the actual daily classroom use of DAP, the null hypothesis was rejected.

Null Hypothesis Two

In the second research question, the relationship between a teacher's number of years' experience in teaching kindergarten and his or her actual daily classroom use of DAP was examined. The null hypothesis stated that there is no significant relationship between a teacher's number of years' experience in teaching kindergarten and his or her actual daily classroom use of DAP. The correlation between the experience of the teachers and their daily use of DAP $r_s(70) = 0.9763, p < .05$ (Table 6). There was a statistically significant very strong correlation between the number of years teaching score and the DAP activities score at the $p < 0.05$ level. Since the null hypothesis stated that there is no significant relationship between the experience of the teachers and their daily classroom use of DAP, the null hypothesis was rejected.

CHAPTER FIVE: CONCLUSIONS

Overview

In this chapter, the results of the two investigations will be discussed. The results will be compared to the historical significance of play in kindergarten classrooms. The discussion will also include the relationship between beliefs of the kindergarten teachers with their actual use of developmentally appropriate practices (DAP) in their teaching. The discussion will include how the experience level of the teachers may have implications on the use of daily classroom activities. Suggestions for further investigations based on the findings of the correlations are also offered in this chapter.

Discussion

Null Hypothesis One

The purpose of this study was to investigate the strength of the relationship between what kindergarten teachers identify as their beliefs about using DAP in early childhood classrooms and their actual use of DAP in their classroom. The central question addressed in this study was: “Do early childhood teachers who reportedly value the use of DAP in early childhood classrooms actually use DAP in their own classroom?” A one-tailed test of significance indicated there was a statistically significant weak positive relationship between teacher beliefs and their DAP activity $r_s(70) = 0.2386, p < .05$ (Table 6). Since the null hypothesis stated that there is no significant relationship between a teacher's beliefs in DAP and the actual daily classroom use of DAP, the null hypothesis was rejected.

Table 7

Spearman Correlation Statistics for Null Hypothesis One

Measurement		Beliefs Score	Activity Score
Beliefs Score	Spearman Correlation	1.00	0.2386
	Sig. (1-tailed)		<.000001
	N	72	72
Activity Score	Spearman Correlation	0.2386	1.00
	Sig. (1-tailed)	<.000001	
	N	72	72

Since a play-centered curriculum, which uses DAP, has traditionally been a staple in early childhood educational programs (Polakow-Suransky & Nager, 2014), the results of this study were very encouraging. In an earlier study conducted by Astuto and Calahan (2015), a shift in early childhood education from child-centered education to achievement-based education was found to have occurred shortly after NCLB was passed. Since ESSA replaced NCLB, the results of this study may indicate a shift back towards a more traditional approach. Play is necessary for children in their early development because it creates the cognitive building blocks they will need for their future development (Astuto & Cahalan, 2015). Bassok and Rorem (2014) concluded using DAP in the classroom is essential for the development of fine and gross motor skills. While new approaches are always being developed in education, the foundation of early childhood instruction has always included some form of play (Pyle & DeLuca, 2013). Gross motor development occurs in activities such as climbing on playground equipment, riding bikes,

kicking or throwing a ball, and running around in a game of tag (Bassok & Rorem, 2014).

Children begin sensory motor play at the infancy stage. Sensory motor play is an important part of development and should be a part of every early childhood program (Mann, 1996).

The correlational research design used to conduct this study was advantageous to educators since it provided a quantitative relationship between the variables that were being studied (Gall et al., 2007). The results found that the stronger a teacher believes in using DAP, the more he or she uses DAP in their daily classroom activities. This was not found in the earlier studies conducted by Miller and Almon (2009). Even though schools are still using high stakes testing, the results of this study demonstrated that early childhood educators still demonstrate still value DAP and are using DAP in their daily activities

Results from research studies from 2002 to 2009, found that fewer early childhood educators were using DAP in their daily classroom activities classrooms (Astuto, 2006; Bassok & Rorem, 2014, Goldstein, 2007; Gullo & Hughes; 2011; McCombs, & Robyn, 2007; Miller & Almon, 2009; Rushton, 2011). Even though studies pointed out the negative effects of utilizing developmentally inappropriate practices in early childhood classrooms, once schools began using assessment based education in kindergarten classrooms, there was less DAP being used (Miller & Almon, 2009). While this study can not prove that these results are a direct result of ESSA, one could conclude that it could be a possibility.

Null Hypothesis Two

This study further examined the strength of the relationship between the number of years a kindergarten teacher has taught kindergarten and the amount of time dedicated to DAP in his or her classroom. The null hypothesis stated that there is no significant relationship between a teacher's number of years' experience in teaching kindergarten and his or her actual daily

classroom use of DAP. The correlation between the experience of the teachers and their daily use of DAP $r_s(70) = 0.9763$, $p < .05$ indicated that there was a statistically significant correlation between the number of years teaching and the use of DAP activities at the $p < 0.05$ level (Table 7). Since the null hypothesis stated that there is no significant relationship between the experience of the teachers and their daily classroom use of DAP, the null hypothesis was rejected.

Table 8

Spearman Correlation Statistics for Null Hypothesis Two

Measurement		Years Teaching	Activity Score
Years Teaching	Spearman Correlation	1.00	0.2386
	Sig. (1-tailed)		<.000001
	N	72	72
Activity Score	Spearman Correlation	0.2386	1.00
	Sig. (1-tailed)	<.000001	
	N	72	72

Prior to this study, it was unclear if a teacher's experience had any effect on his or her use of DAP in their classroom. The results of this study were significant because they provided evidence that teachers who have more experience were able to find more ways of including DAP in their classrooms. The more experienced teachers were able to use DAP, while still meeting the needs and demands of their educational system. There may be two explanations for this finding. The first reason may be that the teachers who have more experience are better equipped to use DAP in their daily activities. The more experienced teachers may be better at adapting their activities to meet the desired outcomes. The more experienced teachers have had more practice and more experiences, which may account for their high scores in the daily practices section of the survey.

A second possible reason why teachers who have taught longer, have shown significantly more use of DAP in their classroom may be that they began teaching before NCLB had been passed. When NCLB was passed, there was an increased pressure on teachers and administrators to have their students score higher on standardized assessments (Di Santo & Kenneally, 2014). As teachers and schools faced new policies for educating young children, early childhood teachers were challenged to adapt their practices to accommodate new mandates. Because of the call for a more rigorous, standards-based curriculum, teachers and administrators had been under increased pressure to improve student achievement. As a result, the focus on literacy and numeracy greatly changed the face of early childhood education (Graue, 2010). One could argue that standardized testing become the essence of many educational programs and therefore new teachers were given scripted lesson plans in order to assure that the curriculum was covered (Di Santo & Kenneally, 2014).

Most teacher training programs for early childhood educators focus on teaching practices that are developmentally appropriate for young children (Pyle & DeLuca, 2013). A teacher who facilitates developmentally appropriate classroom activities will prepare children for future knowledge acquisition (Polakow-Suransky & Nager, 2014). Some of these activities may include free play, with the teacher facilitating much of the play (Sylwester, 2007). An inexperienced teacher who began teaching once the new mandates took affect, may not have had the opportunities to explore the use of DAP in their classrooms because the new scripted lessons were being encouraged by administrators (Di Santo & Kenneally, 2014).

One of the main goals of NCLB was to ensure that all children would be proficient in reading and mathematics by the conclusion of 2013-2014 school year. Although well intentioned, Miller and Almon (2009) argued that NCLB was a fundamentally flawed law that failed to achieve its prescribed goals. In December 2015, the Every Student Succeeds Act (ESSA) was passed by Congress. Over the last 15 years, numerous research studies have presented the negative effects of utilizing developmentally inappropriate practices in early childhood classrooms (Astuto, 2006; Bassok & Rorem, 2014, Goldstein, 2007; Gullo & Hughes; 2011; McCombs, & Robyn, 2007; Miller & Almon, 2009; Rushton, 2011). These studies have been used by experts to reframe early childhood programs. The research has been unclear whether years of experience has any correlation to the use of DAP in their classroom. Up to this point, the research has has focused on the decrease of DAP, not the experience level of the teachers.

Research Problem

The ideas and philosophies of popular early childhood theorists have been taught in early childhood teacher preparation programs for a very long time. These theorists include ideology

that is consistent with using developmentally appropriate practices and a constructivist approach to learning in early childhood classrooms. The central question addressed in this study was, “Do early childhood teachers who reportedly value the use of DAP in early childhood classrooms, actually use DAP in their own classroom?”. The second question addressed in this study was, “Do more experienced teachers actually use more DAP in their classrooms?”. There have been few if any studies that examined the relationship between teacher beliefs and practices since the ESSA was passed in 2015. With the passing of the ESSA, a new shift in early childhood education may have begun. This study evaluated teachers’ use of DAP versus more didactic methods of education in the kindergarten classroom and investigated whether or not the beliefs of the teacher were consistent with the implementation of activities in the classroom.

To answer the first research question, the relationship between a teacher's beliefs in DAP and their actual daily classroom use of DAP was examined, and it was determined that there was a weak positive relationship ($r_s = 0.2386$) between teacher beliefs and their DAP activity at the $p < 0.05$ level. This means that not only did these participants value DAP, but they also reported using DAP as a significant part of their daily classroom activities. To answer the second research question, the relationship between a teacher's number of years’ experience in teaching kindergarten and their actual daily classroom use of DAP was examined, and it was determined that there was a very strong positive relationship ($r_s = 0.9763$) between teachers’ experience in years and their DAP activity at the $p < 0.05$ level. This means that the teachers that have taught more years, reported using much more DAP in their daily classroom activities. The teachers that have taught fewer years, reported using less DAP in their daily classroom activities. This may mean that less experienced teachers have either not been instructed in how to effectively use

DAP, or they may simply lack the confidence to do so because of the focus on high stakes testing.

At the onset of this study, one of the central questions posed was, “To what extent do early childhood teachers value the use of DAP in early childhood classrooms?”. The answer was clear, that kindergarten educators value the use of DAP in the kindergarten classroom. According to Astuto and Cahalan, (2015) early childhood programs underwent many significant changes after the NCLB was passed. According to Miller and Almon (2009), kindergarten teachers began using worksheets and workbooks instead of child-initiated activities. They went on to suggest that in many kindergarten classrooms, play had been taken away from the children. This would be an example of using DIP rather than DAP. Astuto and Cahalan, (2015) argued that though the increased academic standards may have been necessary for American students to remain more competitive academically with their peers from other industrialized nations, and the changes forced early childhood teachers to abandon the traditional beliefs in DAP and replace them with the use of DIP in the classroom. This study is among the first study to investigate kindergarten teachers’ beliefs of DAP since ESSA was passed, and has provided evidence that DAP has not been replaced with DIP in the kindergarten classrooms in the northeast section of Pennsylvania.

It was found that experience has a very significant positive statistical relationship with teachers’ activities score. More experienced teachers may be able to use DAP, while still meeting the requirements for their school or state standards. This finding may have far reaching implications for both early childhood curriculum and teacher preparation programs. The more experience a teacher has, the more they use DAP in their classrooms.

The survey question that the participants completed included information about their degree specializations and certification provided interesting information. The degree

specialization among the participants – all kindergarten teachers – indicated that 65.3% of the participants had an elementary certification, 30.6% had an early childhood certification, and 4.2% had a special education certification. In Pennsylvania, an elementary or a special education teacher can teach in a kindergarten classroom, but their certification program may not have included the same curriculum as an early childhood program. In an early childhood preparation program, there is usually more time dedicated to helping students understand how to implement DAP in their daily classroom activities. This may have affected the daily activities score to be lower than the beliefs score.

Implications

Historically, a play-centered curriculum has been a cornerstone for early childhood educational programs (Polakow-Suransky & Nager, 2014). With the changes to state standards and higher accountability, it was uncertain if kindergarten teachers still valued the use of DAP in early childhood classrooms. This study has found indication which supports the idea that early childhood educators still value DAP. According to Andrews (2015), play is necessary for children in their early development because it creates the cognitive building blocks necessary for future development (Astuto & Cahalan, 2015). The kindergarten teachers who participated in this study identified play as an important part of their kindergarten program. This is a change from earlier researchers who found a pedagogical change in early childhood.

Traditionally, teacher training programs have focused on teaching about what developmentally appropriate practice entails, however they may need to help find ways for inexperienced teachers to use DAP in their classroom.

The pedagogical change from a more traditional DAP curriculum to a DIP curriculum had been well documented in research projects conducted between 2000-2015. In 2015, ESSA

replaced NCLB. The results from this study may have identified a possible shift in pedagogy for kindergarten education back to a more traditional DAP curriculum. Because the geographic area of the data collection of this study was not large enough to identify this shift, this study has cast a new light on the current trend in early childhood education.

Limitations

There were several limitations to this study. The use of convenience sampling impacts the generalizability of the findings. The participants for this study were selected by a convenience sampling of kindergarten teachers who currently teach in one of districts that are in the northeastern section of Pennsylvania. The subjects were limited to certified teachers that currently teach kindergarten. Before the participants could receive an invitation to the survey, the superintendents of each of the districts were contacted to obtain permission to invite their staff into the study. The schools included both urban and rural environments, but it is uncertain which teachers took the survey. The survey included only public schools, therefore the results could be different if private schools would have been included. Furthermore, there was no consideration given to race, gender, or socio-economic situation.

Because the teachers' responses were self-reported, there was no way of validating the truthfulness of their responses. The teachers may have given responses they thought sounded better, but were not indicative of their actual daily practices or actual beliefs. Also, since the superintendents contacted the teachers to complete the survey, there is no way of telling if the superintendents offered it to all kindergarten teachers or only to hand-selected ones. There were also several superintendents that did not want their teachers to be included in the survey. This decreased the number of teachers who could complete the survey and it was not certain if some of these administrators feared that those teachers were not practicing what is best for children.

Recommendations for Future Research

After review of the findings of this study, there are many possibilities for future studies that would build upon these findings. The first recommendation is for a researcher to conduct a study that included a larger population may provide a more diverse population. It is further recommended that a future research study include all kindergarten classrooms, specifically those in private settings. A comparison of private schools and public schools may further indicate the differences in DAP and DIP practices, as influenced by the passage of NCLB (under which private schools are not mandated to adhere).

Another recommendation is that a future study include information on the type of instruction each teacher received in their undergraduate programs. Since the number of elementary teachers was so much higher than those respondents with an early childhood certification, more data in their undergraduate program could be very useful. This study could prove valuable to teacher preparation programs at colleges and universities.

It is further recommended that future research include many different geographical areas of the country. These results can only speak for this section of one state. Each state may have different standards and different achievement goals. These state standards may have a great deal of influence on daily classroom practices.

Since professional development may be affected by the implications of this study, it may be helpful to conduct a study that seeks to determine the types of continuing education that is offered to kindergarten teachers in each of these districts. It is unclear if any of the teachers receive continuing education in the implementation of DAP for their classroom.

Finally, it is recommended that a future study be conducted correlating teachers' use of DAP in the classroom and future student scores on standardized literacy tests. According to

Rorem (2014) research has shown that the children who participated in the play-centered classroom enjoyed school more and had a better appreciation for literacy. Since states have now included achievement tests for children in elementary schools, a study which correlates DAP scores with state achievement scores would be useful.

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APPENDIX A

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APPENDIX B

IRB APPROVAL



Liberty University | Training Champions for Christ since 1971

Dear Christopher Heery,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under exemption category 46.101(b)(2), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:101(b):

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
- (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Please retain this letter for your records. Also, if you are conducting research as part of the requirements for a master's thesis or doctoral dissertation, this approval letter should be included as an appendix to your completed thesis or dissertation.

Your IRB-approved, stamped consent form is also attached. This form should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document should be made available without alteration.

Please note that this exemption only applies to your current research application, and any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP

Administrative Chair of Institutional Research
The Graduate School

APPENDIX C
RECRUITMENT LETTER

Superintendent Letter

Superintendent
School District
[Address 1]
[Address 2]
[Address 3]

Dear [Recipient]:

As a graduate student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to investigate the everyday practices in kindergarten classrooms. I am writing to invite the kindergarten teachers in your district to participate in my study. If you would be so kind as to allow your kindergarten teachers to participate in this survey, I would greatly appreciate it. At the end of the research, I will forward you the results of the survey.

If you agree to allow your teachers to participate, please forward the attached recruitment letter to any current kindergarten teacher in your district. As a small gesture of appreciation, each participant will receive a \$5.00 gift card at the conclusion of the survey. The survey will take approximately 20 minutes. The recruitment letter will explain the process and procedure. Within the recruitment letter, they will find the link that will take them to the online survey. The teacher's participation in this research project will be completely anonymous, and no personal, identifying information will be collected.

I sincerely appreciate your help. I believe the data that will be collected from the survey will provide useful information pertaining to kindergarten practices and curriculum. The survey will be offered to school districts located in the northeastern section of Pennsylvania. If you have any questions or concerns please feel free to contact Christopher Heery, the researcher conducting this study. His email is caheery@liberty.edu. The chair of the research is Doctor David Gorman. His email is dagorman@liberty.edu

Sincerely,

Christopher Heery
Liberty University Student

APPENDIX D
CONSENT FORM

Dear Teacher,

Your participation in this research project will be completely anonymous, and no personal, identifying information will be collected.

I sincerely appreciate your help. I believe the data that will be collected from the survey will provide useful information pertaining to kindergarten practices and curriculum. The survey will be offered to kindergarten teachers who teach in school districts located in Pennsylvania. If you have any questions or concerns please feel free to contact Christopher Heery, the researcher conducting this study. His email is caheery@liberty.edu. The chair of the research is Doctor David Gorman. His email is dagorman@liberty.edu

We are interested in finding out how you teach your students. We are conducting a survey of teachers of kindergarten children so we can learn more about teachers' beliefs and practices.

We would like to find out about your beliefs about teaching and the specific things you do in your classroom. This survey has been revised to reflect changes in our understanding of teaching. Please take about 20 minutes to complete this survey. Your answers will be confidential. By clicking agree, you are agreeing to have your responses included in the research.