

EXAMINING THE EFFECTS OF PRE-KINDERGARTEN ENROLLMENT ON
KINDERGARTEN READING READINESS

A Dissertation
Submitted to the Graduate School
of
Tennessee State University
in
Partial Fulfillment of the Requirements
For the Degree of
Doctor of Education

Graduate Research Series No. _____

Angela M. Chapman

December 2010

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To the Graduate School:

We are submitting a dissertation by Angela M. Chapman entitled, “Examining the Effects of Pre-Kindergarten Enrollment on Kindergarten Reading Readiness.” We recommend that it be accepted in partial fulfillment of the requirements for the degree, Doctor of Education in Curriculum & Instruction.

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DEDICATION

This dissertation is dedicated to the memory of my maternal Grandparents: Corene and Leroy Gage. My grandparents have always instilled in me a deep appreciation for education. They have reminded me often about the value of education and how education is an accomplishment that no one can ever take away from me. I know that my grandmother and grandfather would be very proud of me for finishing this chapter in my life. I regret that they did not live long enough to celebrate this accomplishment with me.

This dissertation is also dedicated to my loving family. They were always there to pick me up when I was down and to celebrate life's successes. I dedicate my research to my parents, Carol and Lawrence Chapman who gave me the gift of life. From a very young age, my parents instilled in me a strong value for education and high expectations. It is because of them that I have pursued my doctoral degree. I am greatly appreciative of their unconditional love and tremendous support. I will always be grateful to them for bringing out the best in me and having faith in me.

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professional goals. I will always remember how dedicated he was to helping me focus on what I needed to do.

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ABSTRACT

ANGELA M. CHAPMAN. Examining the Effects of Pre-Kindergarten Experience on Kindergarten Reading Readiness (Under the direction of DR. CELESTE WILLIAMS).

The research indicates that there are many benefits to pre-kindergarten participation which includes positive social and emotional benefits and academic achievement gains (Barnett et al., 2005; Cody, 1993; Neuman, 2007; U.S. Dept. of Health & Human Services, 2010). The purpose of this quantitative study was to examine the effects of the pre-kindergarten programs in the Metropolitan Nashville Public School District on the kindergarten reading readiness skills as measured by the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) assessment. Determining the effects of prekindergarten on future school success will allow educators, politicians and legislators the leverage needed to advocate for additional funding to support pre-kindergarten initiatives for all students. This study examined the reading achievement gains of students in kindergarten by comparing the scores of the students who attended pre-kindergarten in MNPS compared to the students who did not attend pre-kindergarten in MNPS. The entry (August), middle of the year (December) and end of year (May) DIBELS scores from the 2008-2009 school year was compared to measure growth. The data was also analyzed to determine the differences in achievement when the following factors were controlled: a) ethnicity, b) socio-economic status, and c) Limited English proficiency. This causal comparative study allowed for comparisons of reading achievement gains of kindergarten

students who participated in pre-kindergarten in MNPS and those who did not. This study used repeated measures analysis of variance (ANOVA) to test each of the four null hypotheses at the 0.05 level of significance. The analyses did find a statistically significant difference for the tested hypotheses. In particular, the pre-k participants scored significantly higher on all three measures at the beginning of kindergarten and at each assessment period (entry, mid-year and end-of-year). The results indicated that pre-kindergarten participation has the potential to ensure that students have the kindergarten reading readiness skills needed to be successful in school. As a result, research should continue to investigate the effects of pre-kindergarten experience on kindergarten reading readiness and school readiness in general by examining student performance on other assessment tools and at various grade levels.

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CHAPTER I

INTRODUCTION

Educational policymakers over the last decade have been deeply impacted by the high stakes accountability measures that were set forth in the federal legislation, No Child Left Behind which was enacted by Congress in 2002. The main goal of this legislation was to close the academic achievement gap with accountability and flexibility, so that no child will be left behind, (No Child Left Behind, 2002). More specifically, NCLB was intended to address persistently low reading proficiency rates of fourth graders in the United States. As a result of the increased accountability, districts are working diligently to ensure that all students reach academic proficiency. However, many educators are discovering that recent reform efforts in K-12 education have not had the desired impact and aren't timely enough to warrant a change. Researchers have found startling gaps in student's achievement that indicate that students are performing significantly behind their peers in skills and measures of school readiness by the time students enter school, (Cannon & Karoly, 2007; Devarics & O'Brien, 2007). Similarly, Gormley (2005) indicated that, "Huge numbers of children are not performing at grade level, huge numbers of disadvantaged children lack basic skills, and huge numbers of advantaged children lack motivation" (p. 246). These educational gaps tend to be much more difficult and costly to close as the children progress through the K-12 educational system (Devarics & O'Brien, 2007). Educators and researchers continue to promote high

quality, voluntary pre-k as an important policy to improve our countries educational system (Gayl et al., 2009). With public schools facing more rigorous demands and responsibility in this high stakes era, pre-kindergarten (pre-k) has emerged as a vital and sustainable intervention that promotes school readiness and closes the achievement gap in elementary school and beyond (Cannon & Karoly, 2007; Gayl et al., 2009; Reynolds, 1992).

The pre-K funding spent signifies a growing financial investment in an area of education that has drawn considerable interest from educators, politicians and parents across the United States. Today, language development for preschoolers is once again making national headlines with President Obama pledging to devote ten billion dollars per year to early childhood education (Dillon, 2008). This investment would be the largest federal initiative for young children since Head Start began in 1965.

During the 2007-2008 school year, states spent \$4.6 billion on state preschool initiatives, an increase of \$872 million (without adjusting for inflation), or 23.4 percent, from the previous year. State pre-k spending ranges from \$3.25 million in Nevada, to more than \$694 million in Texas (Barnett et al., 2008). According to the Tennessee Department of Education's website (*Pre-K Fact Sheet*, 2009) Tennessee spent an average of \$83,000,000 in the 2009 fiscal year on preschool funding which averages out to about \$5,578.00 per child. "This investment is built upon a solid research base, which shows that high quality pre-k makes the most of children's crucial early brain development, meets their social and educational needs, and gives them a strong foundation for school and life," (Wat, 2007, p. 2).

Statement of the Problem

Research has validated the need for high quality early childhood education which promotes physical well being, approach to learning (curiosity), social and emotional development, use of language, cognition and general knowledge (Barnett et al., 2005; Cody, 1993; Neuman, 2007; U.S. Dept. of Health & Human Services, 2010).

There is performance data on private school programs, day care programs and the federal Head Start and Early Start programs but little reported data on public school or state funded pre-kindergarten programs as presented by the National Center for Education Statistics (NCES). According to the report entitled *Pre-Kindergarten in U.S. Public Schools: 2000-2001* (NCES, 2003), there is little data on the role public schools play in early childhood education. Most of the available data does not differentiate public school programs from other early childhood programs. Additional research is needed in order to reinforce the importance of (a) providing universal quality pre-kindergarten opportunities to all students; (b) aligning the components of high quality pre-kindergarten programs with the recommendations from the National Institute for Early Education Research; (c) addressing the academic needs of disadvantaged children; and (d) disseminating relevant information to educators, legislators and politicians that have the authority to increase funding for pre-k programs.

Purpose of the Study

The purpose of this quantitative study was to examine the effects of the pre-kindergarten programs in the Metropolitan Nashville Public School District on the kindergarten reading readiness skills as measured by the Dynamic Indicators of Basic

Early Literacy Skills (DIBELS) assessment. This study examined if participation in the pre-kindergarten programs in Metro Nashville Public schools increases student achievement in reading as measured by DIBELS. Determining the effects of prekindergarten on future school success will also allow educators, politicians and legislators the leverage needed to advocate for additional funding to support pre-kindergarten initiatives for all students.

This study examined the reading achievement gains of students in kindergarten by comparing the scores of the students who attended pre-kindergarten in MNPS compared to the students who did not attend pre-kindergarten in MNPS. The entry (August), midpoint (December) and end of year (May) DIBELS scores from the 2008-2009 school year will be compared to measure growth.

Significance of the Study

The significance of this study lies in its potential to significantly contribute to the existing body of research on the effects of public pre-kindergarten experience on academic achievement in the area of reading. Pre-kindergarten experience provides benefits to students in multiple areas: emotional growth, social development, cognitive development and academics (Barnett, 1995; Love et al., 2002; Lynch, 1986; Wat, 2007). This study was limited to examining the academic effects of pre-kindergarten enrollment. A study that could demonstrate the positive effects of pre-kindergarten participation on student achievement in the area of reading might provide educators with the evidence and data needed to expand existing pre-kindergarten programs across the state by offering Universal pre-k access to all students regardless of ethnicity or socio-economic status.

This comparative study examined the impact that pre-k has on student achievement in the area of reading. Student achievement for the following Adequate Yearly Progress subgroups will be examined: All students, White, Hispanic, Black, Economically Disadvantaged, and Limited English Proficient students. Research currently addresses the impact of pre-k participation on Anglo and African American students, while extensive research on the impact of pre-k participation on Hispanic and Limited English Proficient students is presently lacking due to the lower rates of pre-k enrollment of Hispanic and Limited English Proficient students (Magnuson, Lahaie, & Waldfogel, 2006; Wang, 2008).

Results from the 2009 nation's report card, or National Assessment of Educational Progress (NAEP), exposed a significant reading achievement gap between fourth grade students in urban public schools as compared to their peers attending urban fringe or large town schools and rural or small town schools (U.S. Department of Education, National Center for Education Statistics, 2009). On the NAEP assessments, White students had an average score that was at least 26 points higher than Black students in both Reading and Math (U.S. Department of Education, National Center for Education Statistics, 2009). This achievement gap can be explained by the fact that student's academic success can be stymied by their lack of readiness to start school (Reynolds, 1992). Children enter kindergarten at different levels of literacy development and reading readiness skills. Wright, Diener and Kay (2000) assert that because "students lack these critical early childhood experiences, the chances of them being successful in school are remote and therefore the cycle of poverty continues" (p. 100). Furthermore,

the existence of the achievement gap appears early. Chatterji (2006) and Wang (2008) asserted that the achievement gap appeared at kindergarten entry and increased at each successive grade level.

As a result, early childhood education is an early intervention strategy that is highly recommended to prevent later academic school failure for all students. This study assisted in examining the impact of public pre-kindergarten programs on student achievement in kindergarten.

Research Questions

The study will be guided by the following research questions:

1. Does pre-kindergarten enrollment increase kindergarten reading readiness for students at each assessment period (entry, mid-year, end of year) as measured by the DIBELS assessment scores?
2. Does pre-kindergarten enrollment increase kindergarten reading readiness for economically disadvantaged students at each assessment period as measured by the DIBELS assessment scores?
3. Does pre-kindergarten enrollment increase kindergarten reading readiness for students with Limited English proficiency at each assessment period as measured by the DIBELS assessment scores?
4. Does pre-kindergarten enrollment increase kindergarten reading readiness for students at each assessment period as measured by the DIBELS assessment scores based on ethnicity?

Limitations

As this study sought to examine the relationship between pre-kindergarten participation in Metropolitan Nashville Public Schools and school readiness, it should be noted that there are multiple ways to define school readiness. In this particular study, student achievement was examined to determine readiness. School readiness was measured by student mastery on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) subtests at each assessment period (entry, mid-year and end of year). Other methods of analyzing student achievement gains may be implemented in different studies that may result in findings contrary to those identified in this study.

This study was designed to be conducted in the Metro Nashville Public School District in Nashville, TN. As a result, the findings from this study may be generalized when comparing progress of other similar urban school districts. Also, the test data was limited to DIBELS assessment scores.

Another limitation to this study was that it was not known if the students who did not attend pre-k in MNPS did not attend pre-k in another school district or participate in a Head Start or other Early Childhood program prior to enrolling in Kindergarten. In addition it was not known whether or not students are receiving tutoring or other academic assistance beyond the regular school day. The time frame of this study was very limited since the data collected was based on DIBELS data from the 2008-2009 academic school year.

Definition of Terms

The following terms are defined in order to provide clarity for the context in which they will be used:

Adequate Yearly Progress Subgroups: This term refers to the categories defined by the U.S. federal No Child Left Behind Act that categorized students in the following subgroups: ethnicity (Black, White, Hispanic, Native American, Asian Pacific Islander), Economically Disadvantaged Students, Limited English Proficient Students, Students with Disabilities.

At-Risk Student: A student who faces school failure or has the potential to leave school early due to low educational attainment (Taite, 1990).

Early Childhood: Children from birth through age 8 (Bredekamp, 1997).

Economically Disadvantaged: This term refers to students who are eligible for free or reduced price meals under the National School Lunch and Child Nutrition Program and based on being from a family with an annual income at or below the official federal poverty line.

DIBELS: This term refers to a set of procedures and (one minute) fluency measures for assessing the acquisition of early literacy skills from kindergarten through sixth grade (Good & Kaminski, 2003).

Head Start Program: This term refers to the federal government education initiative that has provided children from low-income families with free access to early childhood education programs since 1965.

Limited English Proficiency Status (LEP): This term refers to a student whose primary language is other than English and whose English language skills are such that the student has difficulty performing ordinary class work in English.

No Child Left Behind Act (NCLB): enacted by Congress in 2001 as part of the reauthorization of the Elementary and Secondary Act first enacted in 1965. This federal legislation emphasizes state and school accountability for student progress and includes mandated standardized assessments in grades 3-8, teacher qualifications and public access to school data as important components (No Child Left Behind Act, 2002).

Pre-Kindergarten: The school year immediately preceding kindergarten.

MNPS Pre-Kindergarten Program: This term refers to the state funded educational program for 4-year old students who qualify either by income, language, or military dependent.

Reading Readiness: This term refers to an accomplishment of pre-readiness skills that are presumed to be the pre-requisite for formal reading instruction in school (Snow, Burns, & Griffin, 1998).

Socio-Economic Status (SES): This term identifies the current level of income to determine eligibility for free, reduced, or full price meals under the national school lunch and child nutrition program or other public assistance and is based on income documentation.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Across the country educators and politicians are struggling to meet the goals of the federal legislation, No Child Left Behind, by assuring that all students are academically proficient by the year 2014. Educators, business leaders and politicians are examining a multitude of strategies, programs and resources that are available to assist with this daunting challenge. These stakeholders realize that by the time that some students enter kindergarten, they are already performing significantly behind their peers academically. Without the proper intervention and support, these students continue to lag behind their peers as they progress through the K-12 educational system. In most cases, the achievement gap gets even wider and more difficult to address. As a result of this phenomenon, more states are allocating funds and resources to intervene early by offering prekindergarten programs to the students who need it most, with the goal of better preparing young children for school and for life (*Voluntary Pre-K in TN*, 2007). In essence, providing prekindergarten services to children who are at-risk for learning is an important strategy and intervention that has had a positive impact on economic productivity and improved student's readiness for school (Neuman, 2007; O'Brien & Devarics, 2007; Wat, 2007).