

SCHOOLING CONTEXTS AND ACHIEVEMENT:
EXPLORING RELATIONSHIPS BETWEEN SCHOOL COMPOSITION AND
NORTH CAROLINA END OF GRADE READING TEST SCORES OF HISPANIC
THIRD GRADERS

by

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ABSTRACT

KENDRA CORNWELL BOWDEN. Schooling contexts and achievement: Exploring relationships between school composition and North Carolina end of grade reading test scores of Hispanic third graders (Under the direction of DR. WARREN DIBIASE)

Nationally, Hispanic achievement lags behind non-Hispanic peers in reading proficiency scores. The gap in achievement persists through subsequent grade levels for Black, Hispanic, and poor students of all races. Current school environments present evidence of dissimilar levels of minority and poverty in schools. Identifiable differences in building level demographics emerged as a variable of interest in schools that produce lower test scores.

Aggregate data was examined from the 2007-2008 administration of the North Carolina End of Grade test of reading given to all third grade students in 68 elementary schools in an urban school district located in Charlotte, North Carolina. The purpose of this study was to understand the relationship between composition differences within participant schools and Hispanic third grade reading proficiency as measured by at or above grade level performance on the State EOG assessment in reading. Measurable building level differences in school composition include building percent minority and building percent poverty, and reading proficiency. Publicly available third grade EOG scores were used to measure building level reading performance for participant schools.

Results of correlation and regression analysis are reported for participant schools. Specifically, questions one through three address Hispanic 3rd grade reading proficiency relative to collective building percent composition for minority, poverty, and Hispanic subgroups in select participant schools; questions four through six address 3rd grade

reading achievement for the LEP subgroup relative to collective building-percent minority, poverty, and LEP composition.

Results indicate a significant relationship between some building level variables. Results of regression analysis reveal minority and poverty variables are too closely correlated and necessitating the removal of the variable building percent minority from the original research model and analyses. Building percent poverty was determined a statistically significant predictor variable in the ESL and LEP models.

DEDICATION

In loving memory of Carole Hearn Curtis
1941-2010

This work is dedicated to my parents for years of unwavering support, love, and
cheers of encouragement until the very last moment.

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-around the globe and close to home, the children, students, parents, and friends who have touched me along the way in spirit, heart, and mind: *may peace be with you only.*

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LIST OF ABBREVIATIONS

AYP	ANNUAL YEARLY PROGRESS
ELL	ENGLISH LANGUAGE LEARNER
EOG	END OF GRADE
ESL	ENGLISH AS A SECOND LANGUAGE
HLS	HOME LANGUAGE SURVEY
LEP	LIMITED ENGLISH PROFICIENT
LM	LANGUAGE MINORITY/ LINGUISTIC MINORITY
NCLB	NO CHILD LEFT BEHIND

CHAPTER 1: INTRODUCTION

Introduction and Background

Our nation is growing more diverse every day; annual reports document the increasing share of racially, linguistically, and economically different people. According to recent census reports, the overall minority population, moved beyond 100 million in 2007, thereby accounting for thirty four percent of the nations' total population (US Census, 2008). National population growth trends show the number of Hispanic minority increased almost fifty percent from 1990 to 2000, a rate far greater than the White population. Specifically, Hispanics grew at a rate that was eight times the growth of the White population; the white population only grew six percent from 1990-2000 (U.S. Census, 2001). In 2000, African Americans accounted for the nations' largest minority population comprising close to thirteen percent of the total population, or 36.4 million. During the same period, slightly more than twelve percent of the nations' population, or 35.3 million Hispanics resided in the United States; Hispanic numbers remained slightly more than one million shy of the largest minority population (U.S. Census, 2001). More recently, the Hispanic population grew beyond the Black population; forty four million Hispanic people currently make up the largest minority subgroup in the nation (U.S. Census, 2010).

Multiple regions throughout the nation have seen changes in minority demographics that include Hispanic residents. Historically, the western region of the United States has accounted for a larger Hispanic population than the South, with a delta between the two

regions just over three million. Recent trends of the emergent Hispanic population show a larger share resided in southern states from 2000 to 2006. The Hispanic populations' unanticipated increase in the southern States surpassed annual growth in the western region of the United States (National Center for Educational Statistics [NCES], 2009). The continued growth throughout the nation has moved the Hispanic population to the largest minority population in twenty-two states (Fry, 2007; Fry & Gonzales, 2008,). California, Texas, and multiple southern states including North Carolina have seen a noted increase of Hispanic minority. Compared to national growth trends, Southeastern states have experienced the largest increase in Hispanic minority; the number of Hispanic residents more than doubled in select states (NCES, 2009). In particular, the number of Hispanic people residing in North Carolina grew fifty-five percent from 2000 to 2006, and most recently North Carolina ranked fifth among states with 100,000 plus Hispanic residents (NCES, 2009).

Similar to population trends nationally the student population currently attending public school is increasingly diverse. According to section one of the 2009 Condition of Education report, Participation in Education, public schools continue to serve a declining percentage of White students while simultaneously experiencing a rise in percentage of minority students (Fry, 2007; NCES, 2005, 2007, 2009). Comparable to regional and national growth, school districts in the Western region of the United States serve the larger share of minority students. Following national trends as well, school districts in the South experienced approximately a twenty percent growth in the percentage of minority students attending public schools from 1972 to 2007 (NCES, 2009). A result of national trends, forty-three percent of the racial diversity of public school students can be credited

to minority students, with one in five, or twenty percent being Hispanic (Fry & Gonzales, 2008; Kohler & Lazarin, 2007; NCES, 2008).

The term Hispanic can include people from over 20 countries. Referencing U.S. census results for 2006, approximately two-thirds of Hispanics self classify as Mexican origin; Puerto Rico, Cuba, Dominican Republic, Guatemala, Colombia, Honduras, Ecuador, and Peru contribute to the remaining one third of the Hispanic population in the United States. Hispanic Research Inc. (2009) found the increasing number of people born in the United States who classify themselves as Hispanic or Latino also grow up identifying with the Latino culture. Results of the 2006 American Community Survey identified differences among groups within the Hispanic and Latino community tied to citizenship, Nationality, and English language proficiency. Additional group differences include mean age, education experiences, region of U.S. residence, and rates of poverty (Owens, 2006). The reported differences among the Hispanic population can make for increased variability among the Hispanic student subgroup in public schools across the United States.

Hispanic Achievement

Growth in the national Hispanic population has contributed most significantly to the rise in diversity and percent of school age minority students in public education. Approximately thirty-two percent of the nations' Hispanic population attends some form of Kindergarten through twelfth grade schooling across the United States (Kohler & Lazarin, 2007). Schools and districts nationally collect vast amounts of data used to measure achievement, performance, and proficiency. Annual proficiency scores tell a reoccurring tale of differences between ethnic subgroups, specifically the poor

achievement of minority students. The Hispanic population remains the largest growing minority, nationally and in K-12 public education, and national scores show Hispanic children continue to struggle academically in school. For example, recent reports on achievement levels nationally in math and reading illustrate the Hispanic subgroup consistently performs below peer averages (NCES, 2009); performance differences establish a clear gap in Hispanic achievement. Exploration of annual school level data shows the chronic minority achievement gap is an increasing and multifaceted national problem (Charlotte Mecklenburg Schools [CMS], 2006, 2007, 2008; North Carolina Department of Public Instruction [NCDPI], 2006, 2007, 2008; NCES, 2009).

The nationally recognized challenges with achievement among the Hispanic subgroup are evident locally as well. Analysis of student performance by NCDPI established that there was an achievement gap among local minority students observed as early as kindergarten, with achievement challenges remaining visible in students through upper elementary school years (NCDPI, 2006). Specifically, the Nations Report Card, a product of the National Assessment of Educational Progress [NAEP], shows the gap in achievement persists through multiple grade levels for Black, Hispanic, limited English proficient [LEP], and poor students of all races (NAEP, 2005, 2007; NCDPI, 2004, 2006, 2008; NCES, 2005, 2007, 2009). As test scores nationwide document an overrepresentation of minority students' challenged to perform on grade level, the capability of schools to keep up with changing academic needs of a diverse student body remains in question (NAEP, 2005, 2007).

Research related to public education shows a wide reaching and persistent curiosity extending to outside disciplines to understand the schools' response to student diversity.

NCDPI cited performance in the first years of formal schooling had a tendency to direct future gaps in student achievement. The early trajectory is followed by the difference in performance growing wider rather than narrowing for students who carry early schooling challenges into later grades (NCDPI, 2007). Subsequently, the persistent gap in annual test scores brings to question the possibility for a difference in cumulative grade level knowledge and skills. For example, by the end of fourth grade an approximate two-year gap in grade level proficiency scores has emerged on tests requiring grade appropriate information and skills (Bell, 2004; NCDPI, 2000; NCES, 2005). As students reach grade eight, achievement differences have widened further still. African American, Hispanic, and economically-disadvantaged students struggle to perform successfully in school against an estimated three-year gap in grade appropriate knowledge and skills (NAEP, 2007). Dissimilar test scores among student subgroups reveal a potential discrepancy in knowledge of grade level content and skills. Amidst the reported gap in subgroup performance, the level impact for one contributor grade level achievement remains in question; proficiency in grade identified reading skills is needed for content and test success (Au, K., & Asam, C., 1996).

The shift in education toward a reliance on standardized learning and testing leaves little room for any gap in student proficiency. Early No Child Left Behind [NCLB] initiatives were anticipated to narrow the achievement gap reported nationally in public school performance outcomes (NCLB, 2001). The guidelines under NCLB serve to hold states, districts, and schools accountable to document growth and achievement of all students. The current course of action requires schools to initiate mandatory testing in math and reading each year for all students assigned to grades three through eight

(NCLB, 2001). Equally important, accountability measures require schools to report publicly testing outcome data and building level performance of student subgroups participating in school-wide testing. Schools and subgroups that gain the most attention from current measures of accountability, tend to be those challenged to achieve under the current education system.

Limited English Proficient

Schools measuring the performance of minority, high poverty, and LEP subgroups are often under high scrutiny to improve the performance of subgroups experiencing the least amount of growth in achievement. School accountability efforts are in place to measure public school achievement and make well known the proficiency levels of marginalized populations. Such information can be obtained from The Nations Report Card published annually, and similarly performance data for student subgroups is readily available from NAEP, NCES, State, district, and school websites. A growing number of students identified as LEP can be included among the subgroups struggling to perform in public education. While multiple factors beyond language contribute to an array of subgroup diversity, acquisition of a first language other than English remains as an underlying commonality for the school-age LEP subgroup (Pardon, Waxman, & Rivera, 2005).

Researchers have looked at achievement and performance data for the LEP subgroup in public education to understand the success of school efforts directed at the academic needs of linguistically diverse students. The barrier to academic success for the LEP subgroup is often credited to learning challenges that stem from poor acquisition of a second language, specifically the English language. A large number of Hispanic students

are included in the language minority subgroup labeled as LEP. Specifically, national trends show seventy-three percent of LEP students claim Spanish as their native language (Fleischman & Hopstock, 1993). Research trends show a reciprocal nature in achievement for Hispanic and LEP subgroups. While not all Hispanic second-language learners are formally identified as LEP, improved grade level proficiency among the Hispanic subgroup has shown direct connections to performance trends of the LEP subgroup attending public school. A possible explanation for the lower than average achievement among the Hispanic and LEP subgroups may rest with the large number Hispanic students that claim Spanish as a first language. Similar to national trends, the North Carolina urban district identified for this research serves upward of 72% LEP students who are Hispanic and Spanish speakers (CMS, 2007; NCDPI, 2007). Subsequently, examining achievement and performance at the building level holds the potential to explain performance trends for student subgroups in public education. Therefore, examining trends and patterns in building-level assessment scores could offer insight into the performance challenges for the third grade Hispanic population for a school as well.

Reading Gap

One observed limitation of recent efforts to improve student achievement in school remains; the Hispanic population as a whole has yet to improve significantly on tests of grade level knowledge (Kamil, 2003; Perie, Grigg, & Donahue, 2005; Short & Fitzsimmons, 2007). National outcome scores on tests of reading show a persistent gap in minority student reading achievement. Nationally, performance on assessments measuring reading achievement for fourth grade Hispanic students consistently falls

below the performance of White and other minority peers (NCES, 2005). A national review of test scores reported slightly more than twenty-five percent of Hispanic eighth graders are able to perform proficiently on grade-level reading tests (NCES, 2005). Ongoing research finds reading struggles experienced early in school remain pervasive throughout subsequent grades (Garcia, 2000; Juel, & Leavell, 1988; Neufeld & Fitzgerald, 2001; National Institute of Child Health and Human Development [NICHD], (2000); Peregoy & Boyle, 1993, 2000; Wong-Fillmore, 1991). Challenges with beginning reading proficiency in early grades could potentially explain the starting point for the later disparity in fourth and eighth grade achievement and proficiency.

At the State level, NCDPI claims a scant twenty-five percent of the Hispanic subgroup is able to read a sophisticated text as compared to the successful reference of the same text by over half of White students (NCDPI, 2006). These findings demonstrate there is the potential for school experiences to lead to differences in reading proficiency which can potentially contribute to students' dissimilar exposure to grade level content. Examination of National performance trends can offer insight into the small percentage of the Hispanic subgroup nationally who approach or reach grade level reading proficiency; a result of successfully demonstrating grade level reading proficiency. National test scores for the Hispanic population suggest reading success may contribute to the ongoing below average performance on grade level tests of achievement.

The attainment of reading success early in a schooling career is critical (Juel & Leavell, 1988; Snow, Burns, & Griffin, 1998). Early reading success is important based on grade level instruction directed at targeted benchmark skills. Proficiency in early reading skills leads to beginning reading fluency early in school. As a result of early

grade level reading success, students benefit from reading fluency practice with grade appropriate materials. In upper elementary grades, instruction move away from earlier K-3 practices that guided students to achieve benchmark skills of a good reader. Instruction presupposes the presence of grade level reading skills, whereby skillful reading provides students the outlet to engage independently with content. At the end of third grade, a significant shift occurs in the required skill level necessary for students to demonstrate proficiency of grade level standards in reading.

Demonstrating grade-level fluency and proficiently reading-to-learn (Chall, 1996) are critical to engage successfully with text on upper elementary, middle, and high school grade level assessments. For this purpose, demonstrating successful performance on measures of higher grade-level reading achievement needs to begin with successful proficiency on early elementary grade-level tests of reading. An inability to prioritize successful reading proficiency prior to exiting third grade results in ongoing challenges with reading test proficiency throughout school. Displays of poor reading proficiency scores commonly results in a reoccurrence of reader frustration through subsequent grades in school; poor reading in repeated grades is identified in the achievement scores and feedback among students who drop out of school (Kaufman & Chapman, 2001; McNeal, 1997; Slavin, 2003). Over twenty years of reading research repeats the significant importance of early reading scores. Identified differences in reading skill for the Hispanic subgroup can have significant implications for successful participating in local, state, and national testing of grade level knowledge and reading proficiency. This study was designed to determine if the dissimilarity in the racial and economic

composition of elementary school had an impact on reading achievement scores for the building level Hispanic third grade population.

Statement of the Problem

Assessment outcome scores demonstrate dramatically different levels of proficiency among students attending public school in the United States (Diamond, & Spillane, 2004; Fix & Capps, 2005; NCES, 2004, 2005, 2007, 2008, 2009). Most noteworthy is the level of disparity in academic achievement demonstrated by minority students. When measured against White subgroups minority school age populations have a tendency to demonstrate lower levels of proficiency on achievement tests; excluding Asian minority school age populations (NCES, 2008). The impact of multiple factors found to affect achievement may contribute to the ongoing disparity in Hispanic and Black minority achievement. Research has credited achievement differences between subgroups to a variety of factors at the individual and school level (Au, 2000; Auerbach, & Paxton, 1997; August & Hakuta, 1997; August & Shanahan, 2000; Garcia-Vasquez, 1995; Gibbons, 2002; International Reading Association [IRA], 1990; Krashen & Terrel, 1985; Slavin & Madden, 2001).

Population demographics and measures of achievement contribute to how the field of education historically defined school-age populations believed to be at risk of academic failure (Coleman, 1966). Variables that gained attention at the individual and school level continue to describe performance differences linked to race, socioeconomic status, and achievement scores. Current research targeting student populations at risk of not reaching grade level success in school. This includes the identification of individual and school level factors for student subgroups and the schools they attend, followed by research on

the disparity between populations that demonstrate testing proficiency and those that do not.

Publicly documented achievement scores demonstrate a reoccurring struggle to reach grade level success in school for select minority populations. The challenge of successful achievement outcome scores is evident when examining variables at the individual and building level. For Hispanic minority students poor performance on grade level testing is demonstrated in child and group level achievement data. Test scores reaffirm that providing all children equitable opportunities to achieve success in school remains a challenge for public education. Despite the ongoing attention in research and policy, determining which factors have the potential to impact achievement differently for an increasingly diverse population is understood less well.

Recent reform efforts in education are intended to be responsive to the increasingly diverse student population and promote quality-learning experiences in school for all students. Reform efforts under NCLB aim to hold schools accountable for growth and achievement of all students each year (NCLB, 2001). The relationship between individual at-risk variables that undermine a students' potential to achieve and measures of student proficiency has raised concerns for equitable opportunities to be successful in school. Recent research studies aligned with this perspective examined data tied to a students' race, level of economic disadvantage in the home, parent(s) level of education, educative resources available in the home environment, learning experiences before formal entrance into school, and grade level achievement (Au, 2000; Auerbach & Paxton, 1997; August & Hakuta, 1997; August & Shanahan, 2000; Garcia-Vasquez, 1995).

The second research perspective considers the earlier mentioned variables that challenge individual achievement and individual outcome scores but examines phenomena as it occurs among groups instead (Farkas, 2003; Hanushek, Kain, Markman, & Rivkin, 1999; Hanushek, Kain, Markman, & Rivkin, 2003; Rivkin & Welch, 2006; Rumberger, & Palardy, 2005). To answer questions related to the impact of school environments on achievement differences, the latter perspective of research includes an examination of national, state, district, and building-level data linked to academic performance and achievement. The heightened measures of school accountability highlighted the below average performance of the growing diversity in public education. As a result, research narrowed in on subgroups most affected in the face of grade level and content area variables and factors that contribute to differences in the overall building level environment.

The composition of school has commonly been related to dissimilarities in percent minority, percent poverty, level of teacher experience and turnover rate, class size, influence of peers, and availability of educative resources (Brookover, & Lezotte, 1979; Bronfenbrenner, 1998; Conger, 2005; Edmonds, 1979; Frankenberg & Lee, 2002; Fry, 2007; Garcia, 2001). These characteristics frequently identified in urban schools are seen as contributors to school environments considered at-risk (Bronfenbrenner, 1998; Waxman, 1997). As a result, building-level composition and economic disadvantage continue to receive attention in the field of educational research. As student demographics in K-12 urban schools grow markedly diverse, researchers have examined closely the impact of school composition (Brookover, 1978; Bronfenbrenner, 1998; Edmonds, 1979; Levine & Lozette, 1990; Marzano, 2000; Scheerens & Bosker, 1997;

Waxman, 1992). Urban schools in particular, experiencing noticeable increases in attendance of Hispanic and Black minority students, face additional building level challenges through the combined impact of at-risk variables. The increasingly visible difference in the minority composition of school has the potential to undermine overall student success. Research attributes achievement differences to the influence of factors tied to racial and ethnic composition of urban school environments (Bidwell & Kasarda, 1975; Rumberger & Palardy, 2005; Rumberger & Wilms, 1992). A situation emerges for marginalized populations attending public school whereby the characteristics and variables that accompany a given subgroup (or part of it) also carry the potential to contribute to the school environment that is defined as at risk (Bronfenbrenner, 1979; Waxman, 1992). The challenge therein lies with student subgroups seeking grade level achievement and proficiency in an environment presumed at-risk of not meeting student needs. As the student body shows signs of unceasing diversity, public education faces many current and future challenges. On the contrary, the relationship between the school environment that may be at risk and performance of subgroups has received less attention in recent research efforts.

An analysis of the 1996-1997 composition of public schools revealed current school demographics present a likeness to school environments seen prior to 1960 and desegregation efforts (Frankenberg & Lee, 2002). Changing demographics nationally and in schools has reduced student exposure to peers that are different from themselves, subsequently resulting in schools with high-minority composition. National building level reports show a contributing factor in school racial composition is the reduced presence of White students in public schools that serve a largely minority student body (Fry, 2007;

Orfield & Lee, 2006). Essentially, the nations White student subgroup is served through a decreasing share of the nations' public schools (Campbell, Hombo, and Mazzeo, 2000).

The growth of Hispanic student attendance greatly influenced the racial composition of many urban public schools. Housing for the Hispanic subgroup influenced by cultural, linguistic, and financial reasons has led to the increased attendance in neighborhood schools surrounded by peers with similar demographics (Rocha, 2008). A review of public school demographics for 2005-2006 school year found forty percent of the Hispanic population attends schools with ninety percent minority enrollment, and fifty six percent of Hispanic students attend schools with majority Hispanic enrollment (Fry, 2007). The Hispanic population is currently the most segregated minority subgroup in public schooling (NAACP, 2006). Situated in isolated environments, many Hispanic students miss valuable opportunities to access a wealth of knowledge offered through interaction with peers (Hanushek, Kain, Markman, & Rivkin 2003). Daily opportunities to explore language within a positive and supporting social environment provides the key experiences needed for growth in language, content vocabulary, and school culture (Peregoy & Boyle, 2000; Reese & Goldenberg, 2006; Stewart, 2008; Waxman & Padrón, 1995). In particular, increased language learning occurs when students experience dynamic models of English language through positive interactions in the school environment (Cummins, 1981, 1994; Delgado-Gaitin, 1988; Krashen, 1981).

The 2008 Condition of Education report provides parallel documentation of economic demographics with minority subgroups attending school nationally. Schools composed largely of Hispanic and African American minority students show higher levels of overall building level poverty. For instance, one-third, or approximately thirty-three percent of

Hispanic students attended a high poverty school as compared to less than five percent of their White peers (NCES, 2007; Condition of Education, 2008). Yet others report Hispanic minority subgroups attend schools with the highest levels of poverty based on school wide participation in the federal free and reduced lunch program (August & Hakuta, 1997; Fry & Gonzales, 2008; Kohler & Lazarin, 2007; Morse, 2005; Moss & Puma, 1995; Condition of Education, 2009). National reports on public schools experiencing a rise in attendance of economically disadvantaged Hispanic students show accompanying achievement outcomes with limited increases in building level performance for this minority subgroup (NCES, 2007). The explanation for higher levels of poverty in select schools neighbors on earlier links to the increase in collective minority attendance in schools; building level minority and poverty appear to increase and decrease in a parallel manner. Notwithstanding, disaggregated test data offers little insight into the aggregate influences of poverty on learning for subgroups (Carlson, 2004; Rivera-Rodriguez, 2007).

Over a decade ago outcome scores from the National Association of Educational Progress [NAEP] revealed that attaining a standard level of grade reading proficiency escaped more than half of the nation's poorest fourth graders (Chall, Jacobs, & Baldwin, 1990; Walberg, 1983). Concentrated levels of student poverty at the building level are related to school wide opportunities and collective achievement levels, instruction by less qualified teachers, and relations with peers who also perform at lower levels of achievement (Orfield & Eaton, 1996). The significant percentage of Hispanic children reported to be living in poverty while also attending high-poverty and high-minority schools may contribute to the documented low performance scores in national reports of

reading achievement for this subgroup (Chall, Jacobs, & Baldwin, 1990;). Hispanic Ell's are provided with an inferior education further still, as they experience more extreme segregation in schools when compared to English-speaking students experiencing similar levels of poverty (Gutierrez, 2002).

Building level variables contribute to recognizable differences in the composition of schools including levels of poverty, race, and resources. Specifically, differences in race and class in schools link to resources and opportunity to learn (National Association for the Advancement of Colored People [NAACP], 2006). Research on the composition of schools reported "*resources follow color*" (NAACP, 2006). To clarify, research on school allocation of funds projects fewer resources are available to schools serving minority students of color when compared to schools serving largely White students and students from middle or upper class homes. For example, the comparison of per pupil expenditures between schools shows a difference in dollars spent on students attending different schools (Carey, 2003; Ladd, 2008). Locally, a delta between dollars spent in North Carolina Public Schools was significant between a school serving 99% minority and school serving 99% White (Jones, 2003). While many building-level factors are linked to differences in learning outcomes, the continued examination of school composition remains important for its potential contribution to achievement differences.

The chronic gap in achievement raises concerns for the future success of diverse students. The number of Hispanic students attending public school continues to grow, yet scores on tests of reading proficiency remain low for a large percentage of this minority subgroup. Research clearly reflects the early attainment of reading proficiency is critical for all children to succeed in school with proficiency in grade level reading promoting

success or failure in school. Poor performance is complicated by many factors found to impact achievement, yet subgroups who rely primarily on the school environment for exposure to content and proficiency in curricular standards to become proficient in advanced grades, grade level reading is critical.

Schools serving largely minority students struggle to successfully move Hispanic and Black students to reach academic success over multiple grade levels (Ravitch, D. (2000). The chronic proficiency challenges and the over representation of Hispanic students in high minority schools illustrates the link to research on subgroup demographics and differences in achievement outcome scores. In the event that building-level composition negatively affects achievement, taking steps to change the environment of schools may help reduce differences in test scores among student subgroups. Therefore, knowledge of building composition and the impact on achievement differences may help inform future building level efforts to close the gap in achievement seen in public schools nationally.

Evident in many public school environments serving the two largest minority populations are dissimilar individual and building level factors that influence achievement. Taking steps towards success for all students in public school begins with understanding how variables influence academic achievement differently for different groups of students. The U.S. Department of Education reported test scores in subjects related to reading and math have narrowed very little since 1990 showing efforts to reduce the racial achievement gap have been largely unsuccessful (United States Department of Education [USDE], 2000). Hispanic minority across the nation have an increasing presence in the achievement gap as they continue to trail behind non-Hispanic

peers in overall achievement; most disconcerting is the persistent low achievement scores on tests of reading proficiency (August & Hakuta, 1997; Moss & Puma, 1995; NCES, 2004, 2005, 2008).

Trends and patterns in performance data have helped researchers and schools ascertain the strength of select variables and determine factors that consistently place student achievement at risk across all populations. Minority populations are heavily included in research that examines risk factors and achievement differences. For the fastest growing minority subgroup in public school, collective impact of building level variables has the potential to increase the already present disparity in achievement (NCDPI, 2006).

Results from the recent report on the Condition of Education 2009 gives rise to a pressing need for increased attention directed towards improving achievement for Hispanic students. Specifically, differences in school composition that relate to differences in building level performance remain. Accordingly, a critical factor in the academic success of Hispanic and LEP populations are building level variables that impact differences in early literacy outcomes prior to student advancement to upper elementary grades. Therein, building level variables have the potential to contribute to differences in student achievement outcomes.

In support of the current study, research shows a tendency for Hispanic populations to attend school in an environment that places successful learning at-risk (Bronfenbrenner, 1978; Waxman, 1992). Relative to the percent of building level minority and percent of building level economically disadvantaged students, is the impact of the environment that place student learning at risk. Relative to research that describes

the increased level of minority and poverty composition in school environments most frequented by the Hispanic subgroup, successful achievement for the Hispanic and LEP school age population is at risk on multiple levels.

Research findings on the impact of building level variables of race and poverty as they relate to differences in collective school composition, helps to establish the importance of including these variables when investigating the achievement disparity of Hispanic minority populations, including those who are LEP. Research has not addressed differences in building level factors as a potential influence on achievement for Hispanic students. Combined student level factors have the potential to develop school level effects due to building level differences in minority, poverty, and reading proficiency. Therefore missing in the literature is how an environment Bronfenbrenner (1978) and Waxman (1992) term at-risk has the potential to influence achievement for Hispanic elementary school students. Existing research on Hispanic achievement has not fully explored a potential relationship between the racial composition of schools and building level factors in tandem with reading achievement. Differences in Hispanic achievement and proficiency tied to the building level environment in districts and schools has received substantially less exposure in the field of minority research. Only in the last year has within-race comparisons at the elementary level emerged in research for Hispanic students (Davis-Kean, 2008). The absence of within race comparisons for Hispanic populations warrants an exploration of differences in beginning reading performance among the Hispanic population.

Student performance is challenged when learning occurs in school environments that have less qualified teachers, high teacher turnover, proportionately high minority

enrollment and economically disadvantaged students, and possess limited resources to support academics (Bronfenbrenner, 1979; Bernhardt, 1987). Waxman (1992) provides characteristics of a school environment with the potential to be at risk of failing the needs of students. School level characteristics as described by Waxman (1992) align well with building level variables selected for use in the current study:

- alienation of students and teachers as seen in school composition
- inferior standards and low quality of education as seen in high poverty schools and low resources
- low expectations of students as seen in teacher quality/ turnover and accurate knowledge of population
- inadequate preparation of students for the future as seen in level of academic rigor among students with low achievement levels)
- high non-completion rates for students as seen in minority dropout rates
- classroom practices that are unresponsive to students' learning needs as seen in practices among teachers unprepared to serve diverse populations

Conceptual Framework

The conceptual framework for this research maintains that the composition of each school environment has the potential to develop into a learning-space where the environment is at risk of challenging the success of the attending student population. As a result of collective composition, there is then a danger for students attending an *at-risk* school environment. Specifically, collective student demographics contribute to varying degrees of building level conditions. It is the environment that gives way from variables on a larger scale, whereby these building level factors are understood to impact

achievement differences (*Kagan, 1990; Waxman, 1992*). The conceptual frame for this study is dissimilar from perspectives that identify at-risk as a characteristic embodied by a child with accompanying demographics. The current research looks to building level variables and collective impact as the impetus for the school environment that is at-risk, rather than the individual characteristics of the child (*Bronfenbrenner, 1979; Waxman, 1992*). Building level factors can help determine researchable differences in the composition of the schools and the help explain the role of collective impact and achievement differences (*NCDPI, 2006*).

Despite significant attention directed at supporting poor, Black and Hispanic subgroups in public education, poor grade level achievement remains. The chronic low-test scores reported for Hispanic students across the nation suggest variables other than individual and classroom factors may challenge growth and grade level achievement. One issue contributing to lower achievement might be building level variables common to the schools they attend. There is a possibility that a relationship exists between building level composition and academic achievement that could explain the low/poor reading EOG scores of Hispanic third grade subgroup. More specifically, demographics related to many Hispanic children (economic disadvantage, minority status, limited English proficiency) contribute to building level variables found to influence differences in achievement outcomes.

The prevalence of building level variables (economic disadvantage, minority status, limited English proficiency) therefore contributes to the schools' composition; the combined effect subsequently increases the chance that the learning environment will be at risk. To explore the potential link between the composition of schools and Hispanic

achievement differences, this study considers building level data linked to school environments and the potential influence of collective composition on building level reading achievement for third grade Hispanic students. To accredit low performance on tests of grade level proficiency to differences in school composition for the Hispanic subgroup will require further analysis of selected data. Steps for statistical analysis are outlined in the Methods section found in Chapter 3.

Overview of Methodology

This study examines the school environment that is *at-risk* as a potential indicator of poor achievement. The use of leading indicators to inform decisions is common to the field of economics yet, relatively new to the field of education (Foley, Mishook, Thompson, Kubiak, Supovitz, & Rhude-Faust, 2008). Working from this perspective, efforts to improve the performance of the Hispanic population begins with adjusting the environment rather than the child. For example, leading indicators can be useful in making decisions to address dissimilar achievement, before trends in subgroup failure occurs. Rather than relying on lagging proficiency scores and reactive interventions proactive decisions informed by leading indicators includes adjustments to the environment for learning that precedes the patterns of failure. The use of leading indicators will be further explained in the Methods section of Chapter 3.

Differences in the academic achievement of Hispanic students on tests of reading proficiency prior to the end of third grade may be linked to differences in building level variables. In the wake of NCLB and the push for increased accountability, schools and districts continue to collect a wealth of data each year. Efforts to decipher school and district data has targeted current student performance levels such as standardized

achievement outcome scores (Bernhardt, 2003; NAEP, 2007; NCDPI, 2000, NCES, 2005). Districts and schools frequently access publicly available data to understand trends and patterns of performance or failure. Data is most commonly referenced when comparing differences in growth and achievement between subgroups. Foley et al. (2008) found the examination of data to highlight indicators that project future performance and achievement is less common.

For Hispanic and other marginalized subgroups, exposure to the combined effect of building level variables has the potential to challenge opportunity for successful grade level performance and places this subgroup at high level of risk for lower test scores on assessments of grade level skills. Therefore, challenging school environments with at-risk potential requires close attention with regard to differences in performance of the Hispanic population. If adjusting the building level learning environment makes a difference in performance, it may likely open an opportunity for improved grade level achievement (Waxman, 1992). Therefore, considering alternate efforts of school reform may lead to a change in building level environments over efforts to change the child himself (Waxman, 1992). A potential shift for schools and Hispanic achievement may come through a first step of exploring indicators that precede challenges to achievement for Hispanic subgroup.

Statement of Purpose and Research Questions

This study design contributes to the growing body of knowledge related to the achievement challenges among Hispanic students in public school. This study has two objectives. The first objective is to determine dissimilarity in school composition and the relationship to differences in third-grade building level scores on the state EOG

assessment of reading. The second objective aims to explore the composition of school as a plausible reason for disparities in building level reading test scores for Hispanic students. Specifically, this objective intends to test potential building level explanations related to school composition as possible indicators that precede future achievement. Potential variables that may surface as leading indicators include variations in building level counts that influence the composition of the school, including: percent White, percent minority, racial balanced, percent Hispanic, percent LEP, percent poverty, and average third grade class size.

The research study will explore elementary schools in one Southeastern urban school district. The building level composition of schools including differences in composition will be determined and aggregate building-level test scores from the state end of grade reading assessment administered to all third grade students will be examined. This study proposes to explore the relationship between building level composition of schools and Hispanic students' performance on North Carolina third grade assessment of reading. The research will examine the potential of building level variables to serve as early indicators of future testing success and inform decisions about schooling opportunities for the Hispanic subgroup. Research questions regarding a relationship between building level factors and achievement of Hispanic students in public school emerged from a review of related literature and seventeen years as a K-12 educator in urban public schools throughout the United States and overseas. Exploration of the relationship therein was to understand interactions between variables common to at risk urban school environments and Hispanic performance on tests, including building level trends in performance,

patterns of reading proficiency, and building composition in elementary school, specifically collective composition in elementary.

The study presents a combination of factors not fully explored in current research, which makes the research outcomes of this study particularly useful to further inform existing knowledge on the achievement of Hispanic students. To achieve the purpose, the proposed study will be guided by the overarching question (1) how do building-level variables impact reading achievement scores for Hispanic students, (2) how does composition at the building level relate to differences in Hispanic and LEP students' third grade reading performance. The study seeks to answer the following questions related to building-level student populations and test scores.

Research Questions

1. What is the relationship between Hispanic 3rd grade at or above grade level reading proficiency as measured by the End of Grade (EOG) reading assessment and percent minority within a school?
2. What is the relationship between Hispanic 3rd grade at or above grade level reading proficiency as measured by the End of Grade (EOG) reading assessment and percent poverty within a school?
3. What is the relationship between Hispanic 3rd grade at or above grade level reading proficiency as measured by End of Grade (EOG) reading assessment and percent Hispanic within a school?
4. What is the relationship between Limited English Proficient (LEP) 3rd grade reading proficiency as measured by End of Grade (EOG) reading assessment and percent minority within a school?

5. What is the relationship between Limited English Proficient (LEP) 3rd grade reading proficiency as measured by End of Grade (EOG) reading assessment and percent poverty within a school?
6. What is the relationship between Limited English Proficient (LEP) 3rd grade reading proficiency as measured by End of Grade (EOG) reading assessment and building percent LEP within a school?

Significance of the Study

This study is significant because performance on end of grade assessments predicts future performance in school and continued failure holds minority students back from completing school, gaining access to higher education, and obtaining higher paying jobs. Research links low reading achievement scores attained in early elementary school to ongoing struggles with school success and likewise links students who drop out of school to differences in reading proficiency (Kamil, 2003; Snow & Biancarosa, 2003). Pew Hispanic Center (2006) found Hispanic populations are more likely to enter school later and drop out earlier than non-Hispanic peers (Cataldi, Laird, & KewalRamani, 2009; Kaufman & Chapman, 2001; Slavin, 2003; U.S. Census Bureau, 2009). Hispanic children are less likely to enter pre-kindergarten schools and therefore tend to enter Kindergarten behind peers on grade level skills related to language and beginning reading (Reardon & Galindo, 2008). For many Hispanic children the differences in achievement begin to show as early as Kindergarten; unaddressed, the early achievement challenges appear to remain throughout school. Poor grade-level reading scores pre-empting grade level achievement throughout school, may contribute to the higher dropout rate of Hispanic students. For example, the pressure on low achieving Hispanic students to perform

against content standards and the growing demand to demonstrate grade level proficiency as part of schools' annual yearly progress has lead to higher numbers of struggling students dropping out (McNiel, 2000; Valenzuela, 1999).

As a result, performing well on tests of reading early in school may increase the opportunity for success on future grade-level tests of skill and knowledge and reduce the occurrence of Hispanic students dropping out of school. This research is significant because if variables such as building level composition serve as an indicator related to variables that impact student scores, and if variables can be manipulated, then perhaps we can change the future achievement of Hispanic students.

Examining the composition of school to understand differences in the achievement of reading proficiency will provide an alternative view on challenges with academic success faced by the school-age Hispanic subgroup. This study has the opportunity to expose indicators of achievement and trajectory patterns for the Hispanic subgroup in public schools. With further research, leading indicators of achievement may have the potential to support decisions related to opportunities and achievement for the Hispanic subgroup. A discussion in Chapter 3 will address in detail uses of leading indicators in the field of education. Specifically, this study was designed to determine dissimilarity in school composition and the relationship to differences in building level reading scores on the third-grade state EOG assessment for the Hispanic population.

Definitions

Building level variables- conditions that impact all students enrolled in a given school

Early elementary- kindergarten through third grade

Economic disadvantage- synonymous with poverty

Emerging reader- student has begun learning basic literacy skills, the use of skill is inconsistent and most often when guided by a teacher, reader commonly challenged by new or unfamiliar text

Good reader- student is able to perform grade level literacy skills with ease, regularly applies comprehension strategies, aptly learns additional strategies, utilize ability to read as a source for gaining new knowledge

Grade level literacy- proficiency in grade level literacy skills required for successful participation in academic and classroom activities

High minority school (HMS) - modeled after the racial makeup of the greater district; White subgroup is reduced to less than 25% of the building level population, potentially increasing the chance for collective minority composition as high as 75% -100%.

Hispanic- Hispanic has historically been used to define race and sometimes can be used synonymously with Latino.

Low minority school (LMS) - modeled after the racial makeup of the greater district; minority < 32%; White enrollment reaches > 68% potentially increasing White subgroup to greater than double the district average

Percent minority composition - for the purpose of this study, school minority composition includes enrollment of African American, Hispanic, Asian, American Indian, and multiracial students

Poor reader- student has begun to apply beginning literacy skills, has not achieved reading fluency; new or unfamiliar text is challenging; reader relies heavily on decoding and other cues when reading which often interferes with comprehension

Poverty-the living situation that places children in challenging situations with regard to successful participation in education

Racially balanced school (RBS) - modeled after the racial makeup of the greater district; White enrollment falls within the 26% - 67% range with the minority subgroup within ranges of 33% - 74%

Upper Elementary- used in reference to grades four and five

Operational Definitions

The U.S. Census Bureau has historically used the terms “Hispanic” and “Latino” interchangeably. In 2010, recent federal guidelines no longer acknowledge the term Hispanic as an acceptable choice for one's race. Instead, the term Hispanic applies to one's ethnicity and an additional selection must be made to identify an individual's race (U.S. Census, 2010).

With regard to concerns related to race and ethnicity, members of this subgroup may identify with one of many countries of origin and possibly a non-Hispanic race; some may claim Black, White, or other. To avoid any potential misuse, the general term *Hispanic* commonly is used to address a region and includes ethnic ties to Mexico, Puerto Rico, Cuba, Dominican Republic, South or Central America, or simply of Spanish or Hispanic descent. For the purpose of this paper, school records that identify student race as Hispanic are included in the building level data for analysis of Hispanic performance. For the purpose of this study the district data collected from the 2007-2008 school year is reflective of the term Hispanic as a determinant of the students' race.

When discussing student populations and achievement, Asians are not included in “*minority*”. A general reference to minority achievement challenges refers to the two

largest minority populations- Hispanic and Black –unless otherwise specified with LEP or specific minority population. The researcher acknowledges that school composition at an individual school site can include minority White student populations or majority Hispanic populations, yet reference to a minority population, as used in the present work refers to national student populations and national performance trends.

Organization of the Study Report

Three distinct sections divide the review of related literature. When considered in combination the review offers a context for research, and demonstrates a need for the current study. The review of literature highlights standards for reading curricula, and the deliberate focus of reading standards on early proficiency. The review of current research addresses research-based skills critical to early reading success and touches on delivery options for essential early reading standards in public school.

The second section addresses the impact of testing and considers diverging perspectives on the reliance of high stakes testing in education, the use of high stake tests of reading to measure grade-level proficiency, and the impact of measurement outcomes on Hispanic student's future performance.

The final section reviews the Hispanic subgroup in current school environments and considers how schools have arrived at the current state of serving minority, specifically Hispanic minority students in public schools. The review addresses building level variables found to influence achievement; in particular, the composition of urban schools as it relates to achievement differences. In closing, the review of literature explores the building level composition in schools and the influence on achievement, as measured by high stakes tests of reading (i.e. the potential for building level factors to influence the

performance outcome potential for Hispanic students when high stakes tests of reading are used as a measure of student achievement). The review concludes with specific research questions that emerged from research and explains variables and methods used for analysis of the data.

CHAPTER 2: REVIEW OF LITERATURE

To present a context for research and reinforce the necessity of the current study, a review of literature was completed on characteristics of current public school environments. Specifically, building level variables that have the potential to influence achievement differences as measured by high stakes tests. The purpose of this chapter was to create a foundation for the importance of reading achievement and the potential influence of building level variables on differences in outcome scores.

Three topics divide the review of relevant literature in Chapter 2. The first section considers the well-researched topic of reading, and establishes the importance of early reading proficiency. The related literature identifies curriculum standards that focus on attaining proficiency in reading in the early grades along with beginning reading skills and programs used to support delivery of reading content standards. The second section includes literature related to issues surrounding testing in education. The related literature identifies the impact of testing, challenges and benefits to high-stakes testing, state end of grade tests that measure reading proficiency, and the impact of measurement outcomes on Hispanic students. The third section reviews public school environments and the presence of linguistic and racial minority students, followed by a brief history of how public schools arrived at current practices and school environments that surround minority subgroups across the nation. This section concludes with literature on building level variables known to influence achievement, specifically the impact of school

composition on achievement differences as measured by high stakes test of reading achievement.

Reading in Education

On a national and local level reading success remains among the critical topics in education to receive ongoing attention. The following excerpt shows local districts are experiencing challenges and addressing concerns tied to reading success similar to national trends:

“The state reading scores for 2007-2008 were released Nov. 6, 2008. The statewide reading standards for students have been raised significantly – and this has resulted in sharp drops in reading scores across the state and in Charlotte-Mecklenburg Schools. This indicates that we must continue to work at increasing the reading skills of all students, particularly those who are struggling” (CMS, 2008).

In another local report, an Education First task force determined grade-level reading proficiency among students would serve as a critical factor for schools trying to increase overall building level success; this insight was directed at districts seeking to potentially eliminate the gap in achievement by the year 2010 (NCDPI, 2007). In response to reading concerns, repeated federal initiatives direct support towards improving early reading success in children. Valued literature including the Reading Excellence Act (1998), the Report of the National Reading Panel (NICHD, 2000), Reading First (2002, 2008) Early Reading First (2002), and most recently the No Child Left Behind Act (2001, 2008), share a common goal for all children to read proficiently early in school; successful proficiency prior to the end of third grade is recommended (USDE, 2008). Research continues to expound on necessary steps for success while marginalized populations continue to demonstrate marked differences in achieving reading success.

For this reason, research that examines reading related variables on a national and local level will continue.

Historically, and equally common today, concerns of school success for minority populations remain linked to the beginning process of learning to read, and the challenge to achieve scores that demonstrate proficiency in grade level skills. Learning to read is not easy to define or accomplish for many students in public school. For this reason, the topic remains a critical area for research and school reform. Learning to read can no longer be reserved as the sole skill requirement needed to pass current grade level assessment measures. In public schools nationwide, too many children struggle to demonstrate proficiency scores on tests of reading fluency (Juel & Leavell, 1988; National Center for Education Statistics [NCES], 2009; NICHD, 2000). This is believed to be partially due to poor success in precursor skills introduced in early elementary grades (Teale & Sulzby, 1986, Torgesen, 2004; Torgesen, Rashotte, & Alexander, 2001). Undoubtedly, seeking a single definition for the term literacy is complex. The context in which the term literacy is nestled can heavily influence the intended meaning. Through an itemized definition accepted by early literacy advocates including the Partnership for Reading (National Institute for Literacy, National Institute of Child Health and Human Development, U.S. Department of Education) the Report of the National Reading Panel, and Reading First, explains the educative context of literacy aligned with current schooling trends.

“Reading, seen as a complex system of deriving meaning from print, requires all of the following” (NIFL, 2006):

- *the skills and knowledge to understand how phonemes, or speech sounds, are connected to print*

- *the ability to decode unfamiliar words*
- *the ability to read fluently*
- *sufficient background information and vocabulary to foster reading comprehension*
- *the development of appropriate active strategies to construct meaning from print*
- *the development and maintenance of a motivation to read*

Some researchers feel a single agreed upon definition of literacy is quite implausible (Soares, 1992). Yet, useful to this study, the aforementioned definition of literacy presents variables that can influence differences in grade level achievement when achieved at different levels of proficiency.

Beginning Skills

When achieved at different levels of proficiency, two highly referenced reading variables have the potential to excel or impede readers. Plato described knowledge of beginning phonics and phonemic awareness as, “*distinguishing between the separate letters both by the eye and the ear in order that when you later hear them spoken or see them written you will not be confused by their position*” (Plato). This definition includes the critical early skill required of successful beginning readers, the process, and the importance of its application. Interestingly, the understanding has changed very little to what researchers and educators today describe as beginning reader literacy skills to achieve in the early grades of elementary school.

Decoding and phonemic awareness skills are in fact methods used to decipher meaning from written text through knowledge of sound symbol relationships. Learning sound symbol relationships is speculated to improve a readers’ ability to draw conclusions about text, based upon sound symbol knowledge. The ability to draw conclusions about text is a skill necessary in early literacy achievement. An Equally important skill when reading is the use of decoding strategies to discover relationships

between text with similar structure. To do this, the letter and sound patterns and familiar visual structure of words derived from prior experiences with text link with the understanding and identification of the unknown text. The beginning practice of decoding new and familiar text is a step towards early reading success. Likewise, the linking of new unfamiliar text to prior experiences assists young readers with transferring learning to new situations, a skill requisite in early literacy achievement.

Foundational skills needed for ongoing successful grade level fluency develop early in the beginning elementary grades. Two publications, *Put Reading First: The Research Building Blocks for Teaching Children to Read* (2001) and the *Report of the National Reading Panel* (National Institute of Child Health and Human Development [NICHD], 2000) provide information helping parents and educators understand the research behind beginning reading and effective practices for children. Research equally suggests that establishing a foundation for future literacy in kindergarten through third grade can make a difference in a child's future opportunity for success in reading (National Foundation for Literacy [NFL], 2006; NICHD, 2000). Reading difficulties addressed prior to third grade provides the beginning reader time to develop the level of reading fluency deemed necessary for read-to-learn tasks in upper elementary grades. Undoubtedly, identifying students struggling with reading success remains time sensitive and applying intervention strategies after the third grade can often be too late for intervention or support to impact challenges with reading achievement.

Anticipated growth in reading achievement later in school or taking a chance with projected early reading proficiency scores cannot be an option for minority populations known to struggle on tests of grade level reading achievement. Children do not outgrow

reading problems, therefore waiting to apply intervention strategies does little but prolong reading challenges (Lyon, 2001). In summary, demonstrating early reading proficiency in the first few years of schooling serves as one of the most important steps towards successful achievement on subsequent tests of grade level reading.

Learning to read in the early elementary grades entails repeated practice of a clearly defined set of skills, and with successful acquisition and consolidation of essential building blocks, culminates in the early act of reading proficiently. Repeated use of decoding strategies allows beginning readers to identify relationships between new word structures and prior knowledge or familiarity. Successful decoding and reading fluency practice increases a readers' reading rate; the speed and accuracy with which the reader is able to decode the unfamiliar text. With practice, students develop an increased familiarity with words and reading of frequently used text becomes automatic. Increased proficiency in fluent reading reduces laborious efforts to decode each word encountered in a text, which reserves critical time and effort to address the content and meaning in the text; this serves as a skill requisite of successful readers.

Research has found that students who develop strong beginning literacy skills during the early years of school build on that success as fluent readers in later grades (Snow, Burns, & Griffin, 1998). At the same time students challenged by reading proficiency as early as second and third grade will find performance on grade level tests of reading lagging behind in subsequent grades. Accordingly, learning in school that involves reading and writing tasks to sufficiently attain content knowledge needed for grade level success, will remain challenging for students who repeatedly fail to achieve scores that demonstrate grade level reading proficiency.

Advanced Practice

The 2000 No Child Left Behind Act referenced in public schools throughout the nation explains reading as “*the complex manner in which meaning is extracted from text through the readers’ use of a multitude of skills*” (2001). In 2000, the growing emphasis on scientifically based teaching led to the overwhelming confidence placed on the Report of the National Reading Panel. The document identified the construct of reading fluency as “*a fundamental practice used to engage in increasingly difficult grade level content*” (NICHD, 2000). A significant shift in the practices of beginning readers and good readers is the strategies drawn from while learning to read and those used when reading well. For children working toward proficiency in early reading practices, the skills used during early experiences with text differ from advanced reading strategies required when engaged in read to learn tasks. For example, upper elementary grade literacy practices include students’ ability to consolidate beginning reading skills and actively apply that knowledge, while also organizing new information from the immediate text. This entails the students’ identification and use of appropriate beginning literacy skills, and based upon the text experience, the active adjustment of strategies and practice to resolve questions when a meaningful connection is not reached.

The Kindergarten through third grade learning environment provides beginning readers with the time needed to develop successful decoding skills and practice reading fluency practice, and acquire a readiness to utilize read to learn strategies with advanced content in upper elementary grades (Chall, 1996). Reading in upper grades requires the use of multiple skills executed simultaneously whereby reading successfully is agreeably difficult and increasingly complex. With less attention to decoding of text, the student

must judge the context from where the information was retrieved, integrate new and prior knowledge, and validate his understanding and connections to the meaning derived from the symbols; ultimately comprehending the text. Good readers arrive at these connections with text that are meaningful through continued awareness of experiences with text, growth in familiarity with the process, and responsiveness to search prior experiences to locate knowledge of existing skills.

The successful reading process, the thought processes used when engaging with a variety of text and extracting meaning from text, has been described in terms of differences in how good and beginning or struggling readers approach text. Beginning and poor readers often spend a significant amount of time making discrete connections between sounds and symbols. Not until the latter part of a reading selection do less proficient readers begin piecing together a link between the meaning within the text and the parallel alignment to decoded words. Good readers appear to have mastered early literacy skills by learning how to integrate their knowledge of sound symbol relationships, phonemic awareness, the alphabetic principle, phonics, and decoding text, and by applying this knowledge each time they engage with text (NIFL, 2007). That is to say, a scenario in which students are confronted with text displaying an arrangement of symbols that are unfamiliar to him as a reader presents a challenge for students to employ grade level proficiency skills and read, or essentially consolidate “skills and knowledge to understand how phonemes or speech sounds are connected to print”.

Undoubtedly, different levels of proficiency relate to different outcomes for decoding, fluency, and comprehension. The latter skills within the definition of literacy provided by the Partnership for Reading, “sufficient background information and

vocabulary to foster reading comprehension and the development of appropriate active strategies to construct meaning from print” can also be met in this scenario. To clarify, a student may decode text fluently and have familiarity with the sound symbol relationships and text structure, yet assuming the good readers practice of understanding and the use of abstract skills, extracting meaning from text, is a premature conclusion.

The set of academic standards are intended to make curricula available to all children and prepare students to be competitive outside of school. Students successfully prepared to read in school have a tendency to also demonstrate proficiency in grade-defined beginning reading skills. With a recent emphasis on standards of accountability, demonstrating grade level reading proficiency requires knowledge specific to grade level competencies (NCDPI, 2007). Reading success therefore is critical for learners to identify with advanced vocabulary, new content knowledge, and derive meaning from grade level text. Successful readers demonstrating proficiency in grade level reading skills can in turn increase potential opportunities to participate in everyday learning (Snow, & Dickinson, 1991; Torgesen, 2004).

Standard-based accountability systems and tools to assess proficiency emerged alongside states’ development of grade level standards tied to content, learning, and performance in public education. Yet, most recently, standards of proficiency have been used to identify a proficiency gap in knowledge, skills, and achievement among student subgroups when compared to performance in the same grade level (NCDPI, 2006, 2007). The level achieved on the state reading EOG test reflects student proficiency in grade level reading. District and state analysis of reading proficiency level reached by student

subgroups considers many variables found common among groups of students at each level of proficiency (See appendix G & H).

Grade level reading proficiency exposes students to grade specific vocabulary and content related words that are subject to appear on grade level tests. Whereas relying on underdeveloped reading skills to confront increasingly complex text in subsequent grades can lead to missed or misunderstood information. As a result, students who have established grade level fluency are more prepared to capitalize on grade level reading proficiency as a tool to achieve on tests of content and skill. Therefore, when performance scores do not demonstrate grade level proficiency on measures of reading, successfully reaching the goal of reading in higher grades may be difficult. National test scores suggest reaching grade level proficiency is a persistent challenge among students throughout the United States (NCES, 2005). Consequently this challenge represents a persistent gap in the ability to rely on grade level reading skills to be successful in school.

Reading proficiency serves as an essential element for ongoing schooling success. Some applications of early literacy skills found in education do not sufficiently fit reading, as defined in this study. Literacy and the discrete domains of reading, writing, and language that are essential to define the term can on occasion become blurred. Not all practices that involve the discrete use of skills within the domains of writing and language fulfill what is defined as reading, nor does it validate a child's ability to read. For example, using knowledge of book and print awareness to help identify beginning reader achievement of early literacy skills, students' knowledge of the information is supportive of beginning reading, but in itself the child is not reading.

Essentially, knowledge of text structure is supplemental to reading, and has no role in defining literacy without a connection to reading (Venezky et al., 1990). Additionally, the use of writing as a tool for documenting information for communicative purposes presupposes reading, otherwise, the practice itself is mere copying (Venezky et al., 1990). Therefore, while some instruction within the early elementary grades involves activities that help develop good readers, based on the definition of reading, some practices do not qualify as actively reading.

Reading and Standards

Three federal agencies known as The Partnership for Reading assist in defining the many facets of reading; agencies include the National Institute for Literacy (NIFL), the National Institute of Child Health and Human Development (NICHD), and the U.S. Department of Education (2006). The ongoing research and collaborative efforts help document the overwhelming complexity of skill that beginning readers weave together as they become successful readers in current school environments (Lankshear, 1987). In the immediate schooling sense, the term literacy elicits ideas linked to benchmark reading skills determined necessary to support successful performance on grade level standards of reading and writing. Subsequently, difficulty with benchmark reading skills can result in a continued challenge to demonstrate achievement, as measured by grade level standards of reading. In the immediate schooling sense, an achieved level of proficiency on tests that measure attainment of grade-level standards therefore defines successful literacy.

To delineate literacy as a concept rather than an isolated domain the skills, strategies, and practices related to the specific reading process are seen as inextricably influenced by the readers' knowledge, the process, the arena of use, and the task-at-hand (Lankshear,

1987). For example, a standard course of study defines what essential knowledge the student is to learn while the learning process is a timely act with each student's goal to reach proficiency in sequenced grade-level benchmarks defined in the standard course of study. The task-at-hand are reading and writing activities intended to teach standard course of study objectives, and the process then culminates in an assessment piece or measure of accountability within a school environment, which serves as the *arena of use* to demonstrate proficiency in grade level standards. Therefore successful, achievement in literacy is more than proficiency in discrete reading skills, as the concept of literacy is heavily rooted in knowledge and understanding of how reading proficiency is defined and measured.

Performance on third-grade measures of reading, tend to predict future performance in reading. Research on reading in K-3 early elementary grades has been able to link achievement of low reading scores to ongoing struggles with reading success later in school (Juel, 1988; NICHD, 2000). The Report of the National Reading Panel (NICHD, 2000) noted more than fifteen percent of the nations' students will experience reading challenges in the first three years of school. According to a study of 54 students, Juel (1988) noted the probability was 88% that a fourth grader struggling with reading, initially experienced reading challenges in first grade. Students not reaching grade level proficiency at the close of third grade, struggle with the long-term impact of poor reading fluency through middle and high school years (NIFL, 2006). Third grade proficiency therefore, demonstrates a critical point in reading performance for beginning readers, as it shows mastery in the precursor skills essential to developing practices associated with reading fluency and comprehension. NCDPI (2008) offers detailed descriptions of

student performance to accompany each of the four designated achievement levels (*appendix G*).

NCDPI and Charlotte Mecklenburg Schools arrived at several subgroup generalizations after examining characteristics among students classified as Level I. Concerning student subgroups, minority and economically disadvantaged students are disproportionately represented at Level I reading and math proficiency. Level I achievers struggle to close an estimated three to four year gap in performance behind other North Carolina test taking population. The subgroup demonstrating grade level proficiency at a level I had a higher rate of absenteeism and were more likely to repeat a grade in school. The simplification of variables impacting the performance of students performing at a level I were intended to help direct support at early achievement challenges, prior to the increasingly difficult challenges that accompany skills and curriculum in higher grades (NCDPI, 2007).

To demonstrate proficiency on assessment of advanced content in upper elementary, middle, and high school, schools must first ensure students can reach proficiency scores on tests of beginning reading skills and later proficiency in early elementary grade level assessment of reading fluency. Content used for tests of grade level reading proficiency align with grade level curricular content (NCDPI, 2004). Beyond third grade, school can be unforgiving with regard to the necessary proficiency in reading (Kame'enui, 2000). For example, the scope and sequence of grade level benchmarks or state designed standard course of study are designed on a stepwise sequence where reading fluency is assumed beyond grade three (NCDPI, 2004).

By the same token, curricula for instruction of middle and high school content, practices, or skills does not target beginning reading processes, but instead practices require reading to learn strategies and encouraging students to engage more deeply with the content (Landry, 2002). The primary goal of reading in upper elementary grades requires advanced reading skills, including text comprehension, to successfully engage in read to learn tasks (National Assessment Governing Board, 2005; (NICHD, 2000; Snow, 2002). Proficiency in advanced reading skills plays a critical role in students successfully engaging in content knowledge specific to upper elementary, middle, and secondary schools, and meeting the end goal of reading: comprehension. Snow et al. (1998) point out the necessity of complex reading skills required for grade appropriate tasks, and skills that are not sufficiently developed can hinder successful completion of high school level reading and writing tasks. Repeated failure on tests of reading demonstrates limited growth in proficiencies needed for grade level performance. As a result of ongoing reading challenges the chances increase that a schooling career will end as a high school dropout (Arias, 1986; Frankenburg, Lee & Orefield 2006; Goldsmith, 2003, 2004; National Council of La Raza [NCLR], 2007).

In summary, reading is important. The attainment of reading success early is critical due to a change in content standards and instruction practices. Reading success is important by the end of third grade based on the benefit of successful fluency practice with grade appropriate materials. When successful reading proficiency prior to exiting third grade is not a priority, the result can be ongoing reading challenges throughout school which can become increasingly frustrating and culminate in dropping out of school

Programs for Delivery of Standards

A diverse body of research suggests that early experiences have an important impact on children's later achievement in school (Snow, Burns, & Griffin, 1998). The attainment of early literacy skills and beginning fluency is an essential element for achievement in school. Thereby, reading success is an important goal in educational preparation of kindergarten through third grade students.

Prior research on improving kindergarten through third grade student's ability to achieve literacy success has focused on curricular and instructional interventions. One method involves structuring curricular programs at classroom level to improve student's ability to achieve literacy success. Schools relying on reading programs within the classroom to increase student ability provide K-3 teachers with curricula, and a set structure for lesson content, instructional process, and learner outcomes. Mustafa (2002) found the manual to be a useful guide in establishing a foundation for reading instruction, yet lessons are often implemented through whole group instruction in districts utilizing Open Court as their primary reading program. Lessons involve the use of scripts for teacher use, to ensure instruction of early literacy skills is delivered to students. Scripted instruction is believed to provide teacher proof teaching for students at risk of reading failure with the goal of exposure over mastery of content within each lesson. Adams (1995) reports repetition and practice are keys to this programs success, claiming that children will have many other opportunities to pick up the missed skills, and reassuring teachers that students will not fall through the cracks.

Another method offers additional remedial instruction outside of the regular classroom to improve student's ability to achieve literacy success. Schools utilizing

instructional programs outside of the classroom to increase student ability, provide tutors with curricula, a set structure for lesson content, instructional process, and learner outcomes. Lessons conducted in a small group setting utilize specific participant roles, and language unique to the program to teach discrete early literacy skills. *“Reading Mastery, one of several curriculum components that constitute the Scientific Research Associate’s Direct Instruction curriculum, is designed to provide systematic instruction in English language reading”* (SRA, 2007). Direct instruction is believed to reduce early literacy skills to the most basic unit, allowing students at risk of reading failure to process instruction content more readily. Programs that approach learning through a direct instruction technique are proposed to teach skills and strategies utilized by good readers when engaged in the process of reading. The rapid and highly controlled lessons are encourage student interactions and serve small groups with similar reading skill level based on program assessment scores (SRA, 2007).

A third method involves technology as an additional curricular and instructional component to improve student’s ability to achieve literacy success. Schools utilizing computer assisted reading instruction recommend time allotments for computer guided instruction sessions based on student level of early literacy skills achievement (Florida Center for Reading Research [FCCR], 2006; Torgesen, Wagner, Rashotte, & Herron, 2001). Reading support is provided through specified activities targeting literacy skills. Lessons involve activities engaging students in practice and use of discrete early literacy skills. Student performance on activities is documented, and through successful performance on early skills activities, the program advances students to subsequent lessons. Computer assisted reading instruction is believed to provide individualized

instruction and practice of early literacy skills, based on level of student performance. Imagination Station is accessed through the internet and is used to prevent emerging and poor readers from falling further behind (Arndt, 2006). The program requires a site purchase and is not intended to replace an existing reading curriculum, but serves as a support. The goal of The Imagination Station parallels many core reading curriculum products in that it aims to better reader fluency and increased comprehension (Arndt, 2006; FCRR, 2006). To model effective reading instruction, the activities within the computerized reading programs must include performance driven reading tasks centered around essential components of reading; reading practices are described in the Report of the National Reading Panel (NICHD, 2000; Blok, Oostdam, Otter, & Overmaat, 2002).

The aforementioned methods to address poor readers focus on instruction practice or instruction material, to increase performance in early literacy skills and ultimately proficiency in reading. The intent of highly structured programs is to deliver targeted reading instruction to students challenged by grade-level literacy in low performing schools. Instruction to address specific reading skills is an example of lesson delivery involving activities to help develop skills and strategies used by good readers, yet the student is not actively engaged in reading. Therefore, students challenged by the process of beginning literacy attending low-performing high-poverty urban schools are engaged in discrete skill practice disguised as active reading. Subsequently, improving fluency and proficiency of poor readers in public school is challenged as daily opportunities for active reading account for little of the reading practice. Incidentally, another connection can be made to literacy practice common to urban school environments that do not sufficiently align with the description of effective practices that support reading success.

Hispanic and LEP Subgroups

Education does not have a universally aligned scope and sequence for curricula and content. Curricula throughout the Nation and in countries outside the United States may introduce particular skills in a dissimilar sequence or alternate grade level. Accordingly, it remains difficult to arrive at assumptions about students' prior exposure to content and academic readiness as it relates to locally designed grade level content standards (Kloosterman, 2003). Lastly, the design of content and curricula assumes students, as the recipients of instructional lessons, are native English speakers, who possess academic language levels that parallel grade level content knowledge, which is a challenge for English language learners still acquiring the language of instruction in school (WIDA).

A conceivable explanation for lower levels of achievement particular to the Hispanic school-age population is the significant variation in English and Spanish language proficiency across all grade levels of enrolling students (Crosnoe, 2006; Kloosterman, 2003; Miquillan, 1998). Accordingly, the inconsistent nature of LEP student's native and second language proficiency levels challenges methods of assessment teachers use to assure that students have learned content and necessary skills (Crosnoe, 2006; Kloosterman, 2003). Hispanic students' difficulty with differences in English and Spanish language proficiency neighbors ongoing challenges with successful reading performance on grade level tests in English.

Hispanic children born in the United States enter school with similar challenges as foreign-born children. While Hispanic children born in the United States may have been exposed to English language prior to entering public school, a significant number of children will reside in Spanish speaking homes, neighborhoods, and communities, and

environments where English is not spoken fluently (U.S. Census, 2001). Relative to the necessary academic language required for success on tests of grade level proficiency, Spanish language often pales in comparison to newly acquired English content vocabulary. This mismatch between knowledge of content language can often compound the challenge with understanding academic content for second language learners.

For many Hispanic ELLs, experiencing the beginning reading process in a non-native or second language adds to the challenge of learning to read early in school (Snow, Burns, & Griffin, 1998). Peregoy (2000) determined among the significant differences between native English speakers and ELLs, language background and prior exposure to literacy practices played a significant role. Specifically, home literacy practices and availability of resources influence beginning language and reading performance prior to kindergarten. However, Hispanic children with limited English language proficiency often have limited exposure to Spanish reading resources to match beginning Spanish language development. Consequently, Hispanic children exposed to fewer early language and literacy experiences that model the content and practices of school will undoubtedly lag behind peers upon entrance into kindergarten. Challenges with achievement throughout school, stemming from a poor early reading foundation, and subsequent low grade-level reading ability may account for lower achievement levels of the Hispanic population.

The report of the panel (NICHD, 2000) contained a wealth of valuable information for researchers, schools and educators. However, findings did not address the literacy needs of English language learners (ELLs). In response, researchers interested in the success of linguistic minority students took steps to offer more direct knowledge of ELLs

and the reading process. Contributing researchers provided a synthesis of existing research that specifically addressed literacy needs of ELLs, and released the Report of the National Literacy Panel on Language-Minority Children and Youth (August & Shanahan, 2006). The findings reported by the National Literacy Panel on Language-Minority Children and Youth stated that reading as it is defined for native English speakers in the Report of the National Reading Panel also applies to ELLs, but additional variables tied to learning to read must be included to ensure reading success for many linguistic minority students (August & Shanahan, 2006; NICHD, 2001).

The National Literacy report established a link between English language learners' proficiency in reading and language, and socio-cultural contexts, teaching practices, teachers' knowledge, and assessment (August & Shanahan, 2006). The definition of successful literacy achievement in education has been influenced by the interworking of social and political demands on schools. For linguistic minority Hispanic students, LEP students, and English language learners (ELLs), literacy in school includes reading and writing specifically in the non-native English language. There too is the assumption regarding rules that accompany the reading and writing processes in public education and the greater community and are not explicitly stated. Norms and standards of school challenge the successful performance for these students, specifically the development of literacy and first and second language proficiency levels.

The sound patterns and content used to engage early elementary students in beginning reading practice of English text could potentially be more challenging for linguistic minority Hispanic and LEP students than native English speaking peers. Without the ability to link new information and knowledge to prior experiences or

understanding, new content will remain unfamiliar and offer little support in developing early literacy success. Instead, the process may lead to further unanswered questions and hinder growth in understanding new content. Understandably, a students' performance on tests of English reading achievement can have more to do with state standards and assessment measures tied to accountability, than a students' actual ability to read.

How public education currently serves linguistic minority populations is influenced by a history of seminal Court rulings and federal initiatives. *Menendez v Westminster (1946)* addressed a dimension of school composition linked to student diversity and achievement in public schools. The notable decision in this class action suit determined the placement of Mexican students in segregated classrooms violated federal law and district policies related to sorting students based on Mexican descent. The evidence showed that lack of exposure to English language due to segregated room assignments hindered potential growth in English for students whose primary language was Spanish. Ultimately, composition of the learning environment limited the Mexican students' exposure to English speaking peers as models of the essential language for learning in school. As a class action suit, the decision was able to span beyond Mexican descent to include children of Latin descent, which would later emerge as a point of interest almost ten years later in the case of *Brown v. Board of Education (1954)*. Specifically, *Menendez (1946)* arguments attacked the *Plessy v. Ferguson (1896)* separate but equal ruling pushing the view of the case as a political precedent rather than legal precedent. The *Menendez* case defended segregation on social and educational grounds, and was the first use of the 14th amendment to overthrow practice.

A second influential case, *Lau v. Nichols* (1974) challenged popular views of diversity further yet, addressing issues specific to learning opportunities and achievement for language minority populations in public education. Moving beyond acquiring English language, *Lau v. Nichols* addressed the necessity of language relative to understanding content learned in school. For linguistic minority students, this milestone increased awareness of academic achievement issues related to the composition of schools and linguistic diversity. Consequently, instruction that isolated English language as the single means to communicate instruction in school violated English language learning student's rights for equal access to education.

The seminal Supreme Court decision resulting from *Lau v. Nichols*, 1974, directed all schools to employ programs and practices targeted at leveling the playing field for linguistic minority populations forcing the Nation to consider schooling practices that limited the achievement of linguistic minority students. The ruling determined that districts serving English language learners (Ells) must take necessary steps to combat language challenges visible in the current schooling system. While the initial direction for States to provide equitable schooling for Ells was nonnegotiable, left for interpretation was *how* States and districts were to take action and meet the needs of linguistically diverse students.

Castañeda v. Pickard (1981) targeted schools ongoing challenges with serving linguistic minority populations through bilingual instruction. The original 1978 ruling was in favor of the school district, yet an appeal filed by Mr. *Castañeda* resulted in a 1981 decision in favor of *Castañeda*. Specifically, *Castañeda* argued that classroom selection relied on race and ethnicity producing a segregated environment for his

children. *Castañeda* argued under *Lau v. Nichols*, school practices must provide equitable education opportunities to language minority populations to help to overcome the language barrier. This includes programs to support children's language development to encourage equal opportunity for participation in the classroom environment; *Castañeda* believed this was not provided for his children. The *Castañeda v. Pickard* (1981) decision resulted in a multi-tiered process to aid school districts in evaluating the effectiveness of bilingual programs serving linguistic minority (Garcia, 2001; Kloosterman, 2003).

In summary, *Lau v Nichols* approach to reform attempted to improve ELLs' successful participation by addressing issues of separate classes and issues of isolation. Schools targeted functional English for ELLs and emphasized English language competence of basic communication skills. The top down approach and directives that followed did little to improve gains in ELLs' achievement in school. The second wave of ELLs support directed reform efforts towards improving practices in the through class practices and teacher efforts. The bottom up approach to public school reform shifted from attempts to improve the whole system to rethinking and restructuring schools. Specific approaches to serving ELLs emerged to include ESL pullout and two-way immersion as a modification of curriculum delivery in mainstream classes. More recently, efforts of reform for linguistically diverse populations have adopted a school-by-school approach to improve instruction for ELLs. Spurred by decisions in *Mendez*, *Lau*, and *Castañeda*, the national spotlight focused on creating environments to support increased achievement for English language learners in all schools.

Reform initiatives at the federal, state, and district level aim to improve public education for all learners including those whose first language is not English. Efforts at reform linked language and culture to schooling success and failure, holding public education and schools accountable to meet the needs of all students. Acknowledging the challenges faced by linguistic minority students the government amended the Bilingual Education Act; currently known as Title VII of the Elementary and Secondary Education Act (ESEA) (United States Department of Education). Changes to the Elementary and Secondary Education Act (ESEA) in 2001 provided an opportunity for schools to obtain funding for programs aimed at the needs of linguistic minority and economically disadvantaged students. The reauthorization of ESEA emerged The No Child Left Behind Act (NCLB) renewed earlier guidelines for serving language minority students. Currently, guidelines under Title III within NCLB direct schools to serve the diverse linguistic minority population through programs that address the complex academic and social challenges of this subgroup.

School level factors tied to achievement include reform initiatives directed at improving achievement outcomes. Title I initiatives address researched needs of economically disadvantaged children through the provision of funding for designated Title I schools (Morse, 2005). Significant numbers of Hispanic students enrolled in high poverty schools demonstrate significant challenges with grade level reading. Program initiatives in high poverty schools show continued curricular support directed at students demonstrating low performance in grade level reading skills. Therefore, while exposure to Title I initiatives is not expected for all students, targeted support through these initiatives reach many Hispanic students.

No Child Left Behind and Title III initiatives ensure the provision of mandatory English as a Second Language (ESL) programs for language minority students enrolled in public schools. In programs serving linguistic minority Hispanic and LEP students, the methods to improve student ability focus on instruction practice or instruction material targeting English language proficiency. Programs and approaches for Ells are abundant but a single program has not been identified to address all the academic needs of all Limited English Proficiency (LEP) learners. Schools have become increasingly aware of the double demands of teaching Ells. The support program titles most commonly referred to in education are structured immersion, English as a second language (ESL), content based, transitional bilingual, maintenance, and two-way bilingual programs. Bilingual and immersion programs serve linguistic minority students in grades pre-K through twelve through programs defined by the amount of native language used for instruction and practice (Linguanti, 1999). State and district efforts address the needs of students acquiring English as second language (ESL) through provision of resources and adoption of grade level programs. To address the role of improving English language proficiency in the content areas English language objectives merge with learning objectives. In support of Ells participating in learning alongside English speaking peers, teachers in the general classroom adjust daily practices to include frequent use and modeling of English language. Additional classroom based strategies can involve the use of native language, sheltered instruction, and cognitive academic learning, to bridge content and culture of class, school, and home for Hispanic students (Chamot & Omalley, 1994; Echevarria, Short & Powers, 2006; Sampson, 2003).

Public schools' basic response to the needs of linguistically challenged Hispanic and LEP students includes modification of the regular classroom experiences. In an effort to support school equity efforts included programs, tactics, and application of theories to address the cultural, linguistic, and academic needs of the increasingly diverse populations. Programs commonly recognized to support linguistic minority and Ell populations at the school level are identified by the amount of time the native and second language are used for instructional purposes (Ochoa & Rhodes, 2005). Slow to emerge on educational fronts was knowledge that Ell's language learning process differed from native English speaking peers. Each Ell program has a theoretical understanding of language, learning, and philosophical assumptions about instructional practices.

Theories on second language acquisition (SLA) grew from multiple fields of research that supported the linguistic minority student through expanding knowledge on language, culture, learning, and thinking. Research has evolved over the years, yet initial findings at the core of SLA theories remain sound, and continue to serve as a framework guiding social and academic language in schooling environments (Cummins, 1981; Freeman & Freeman, 2001). Comprehensible Input is another theory guiding language learning for LEP students. Developed by Steven Krashen, the practice allows classroom teachers to address concepts of language development by introducing information slightly beyond a learner's competence and challenging Ells to expand their use of English language (Krashen, 1981, 1985).

Language and reading challenges are more visible through adherence to national policy requiring annual assessment of English language proficiency and grade level reading proficiency as well as content standards. Many initiatives directed at improving

the achievement for ELL populations offer a vast array of practices to address linguistic challenges of students. Understandably, school based programs placed an emphasis on English language proficiency to support the achievement of ELLs’.

The responsibility to establish the critical foundation for future reading success ultimately rests with K-2 teachers. Subsequently, the regular classroom teacher serving the Hispanic and LEP subgroup in the early grades is left responsible for developing the essential proficiency in early reading skills. Contrary to the school environment that surfaced, research found teachers often consider themselves ill prepared to serve the diverse needs of students in these subgroups (Ballantyne, Sanderman & Levy, 2008; Clotfelter, Ladd, & Vigdor, 2004, 2005). As a result, the support services that emphasized English-language proficiency over literacy approaches as a means to increase achievement left ELL students struggling to perform proficiently on grade level assessment of reading (Gersten, 2000). As Hispanic and LEP subgroups struggle through the reading process, reading English text becomes less like reading and more a practices of guessing and memorizing; reading becomes absent of the meaning housed within the text (Quach & Cornwell, 2007).

Ongoing efforts are in place for schools and districts to meet the needs of diverse subgroups, and moreover, reach annual goals for equitable school services. However, indicators of grade-level achievement show a decade of policy and reform initiatives have had little impact on the growth and achievement of ELLs.

Testing and Accountability

Significant efforts to address the achievement of Hispanic students are in place at the national, state, and local level. The chronic poor achievement of the Hispanic

subgroup gives rise to questions in the field of minority achievement in public education and the need for ongoing research. The second section includes literature related to changes in assessment and testing. The review of related research examines federal initiatives that push for increasing measures of accountability, and the growing reliance on aggregate test scores as a measure of state, district, and school success (kinds of tests). The review of research speaks to challenges and benefits to the use of high stakes testing, performance on high stakes test as a measure of grade level proficiency, specifically end of grade tests to measure reading proficiency. Lastly, this section addresses reading test scores to inform decision-making in schools and the potential impact on Hispanic students.

The varying levels of Spanish and English language proficiency of Hispanic LEP students has in the past served as a barrier to participate fully in all aspects of public school. The language barrier historically delayed Hispanic LEP participation in state tests as schools struggled to determine the level of English language proficiency required to understand annual assessments; tests are commonly designed with the assumption of English language fluency (McQuillan, 1998). Prior to federal mandates, attempts at inclusion of linguistic minority Hispanic students in state and national assessments were inconsistent in schools throughout the nation. As a result, knowledge and data to support the significant achievement challenges of the Hispanic and LEP subgroup remained dormant (Abedi & Dietel, 2004)

Changes in assessment requirements followed by schools publicly reporting student outcome scores documented the prevalence of Hispanic and LEP populations struggling to perform in schools nationwide (NCLB). Updated accountability measures

under NCLB required annual testing of all students enrolled in public school, including those that are limited in English proficiency. NCLB required participation in state and local assessment of content knowledge and skills, including reading proficiency.

Specifically, NCLB guidelines required states and schools provide appropriate accommodations for LEP-student participation in regular testing or the development of annual testing measures that appropriately assess LEP student performance. As a result, current reports of achievement and coordinating grade level performance for elementary, middle, and high schools nationwide repeatedly confirm a chronic performance gap for Hispanic and LEP populations when measured against achievement levels of non-Hispanic and English speaking peers, (NCES, 2007).

The continued poor performance for a large percentage of the Hispanic population in public schools across the nation suggests that schools remain unprepared to respond to the outcome of high stakes testing. In effect, the pursuance of high stakes tests as a measure of accountability to increase student achievement presupposes the needed curricular, and instructional support in the classroom and efforts directed at school reform. The use of high stakes testing to inform decisions relies on two assumptions. First, the basic elements for academic success already exist in the classroom and second, students are ready to perform at or near the performance levels desired by the state district or school. Current research continually dispels both assumptions as national reports show countless students struggle to perform on grade level in reading and math. Therefore, high stakes decisions can often be based on inaccurate and inadequate testing information

The use of high stakes testing continues as an essential part of national reform efforts. The heightened recognition of NCLB and ideas related to assessment and accountability introduced beyond the state and district level in the education community had a strong impact. As responsibility for student growth shifted to the school level, reports of performance drifted outside the immediate testing administration. Subsequently, the awareness of accountability measures shifted, with parents, teachers, and students emerging comfortable with terminology surrounding testing of students. Acquiring testing terminology and increased beliefs related to testing can bring a surface level of awareness, and sometimes biased information; sharing of testing knowledge is often relative to a schools' level of information sharing with the community.

Tests

National policies reported to increase achievement initially sparked a great deal of trust across the nation. As an integral part of national reform efforts, acceptance of testing surfaced as a reliable format for decision making about children's future achievement opportunities. A general belief emerged that the design of high stakes tests was around a platform of fairness to all participants. Often overlooked though was the potential for the background knowledge of students to serve as a general bias. Garcia (2001) offers the understanding that schooling designed to be successful for all students must come from in school and out of school experiences.

For the Hispanic and LEP subgroup in today's schools, tests serve many functions beyond assessing student knowledge. Testing outcome scores currently have the potential to promote and retain students, determine eligibility for programs and services, measure teacher quality, ensure instruction of curricular standards of instruction and even measure

the overall success of a school. Testing practices are common among public school environments, yet less well understood is differences in test construction and subsequently what outcome scores can sufficiently inform. For example, Creighton (2007) explains a schools use of data without sufficient knowledge of test objectives can lead to confusion between a test measuring cognitive ability and one that assesses achievement or attainment of skills. Put another way, is not appropriate to rely on the same test measure student academic need and outcome proficiency. For test data to provide useful, valid, and reliable information there should be a direct link between outcome scores and what schools are seeking to assess and measure. To clarify, understanding what the test is designed to assess and what the outcome scores have the potential to measure and what they cannot measure is the key to understanding exactly what information high stakes testing scores provide. Without a clear understanding of differences in test criteria, outcome scores can be inappropriately used to explain student performance. For example, language tests used with the LEP population have historically been subjective, with proficiency standards for this subgroup stemming from a norm-referenced test originally designed for a dissimilar subgroup (Hakuta, Butler, & Witt, 2000).

Criterion referenced tests are assessments that measures mastery of critical content often defined by educational objectives. This form of assessment is not a good test to distinguish between students that exceed criterion and those that fall short (Bernhardt, 2003; Hakuta, Butler, & Witt, 2000). Norm referenced tests are able to distinguish between students that exceed standards and norms and those that fall short. Results from norm-referenced tests often allow for ranking children. Norm referenced test does not

measure whether a teacher is teaching effectively or whether students are mastering important content (Bernhardt, 2003; Hakuta, Butler, & Witt, 2000). Norm referenced tests assess the transfer of learning and allows for ranking within grade level grade performance, but does little for diagnosing problems in reading or to inform instruction on specific reading proficiency skills (Hakuta, Butler, & Witt, 2000; Lyon, 2001).

In a report to congress, Reid Lyon testified on the chronic reading challenge among students in public schools across the nation. Lyon discussed the varying types of assessment, explaining the strength of each assessment to measure a critical aspect of achievement. To illustrate the differences, diagnostic assessment and progress monitoring can help to identify instructional needs and assists in planning ongoing instruction. Early identification and screening procedures cannot qualify as diagnostic assessments, yet provide equally valuable information. With regard to measuring reading proficiency in children, assessment instruments and test results can assist with understanding components of reading including early identification, diagnosis, program evaluation, and accountability. By the same token one test alone cannot answer enough questions about a students' achievement or proficiency and should not serve as the sole measure of performance in decision-making (Hakuta, Butler, & Witt, 2000; Lyon, 2001).

Accountability and Testing

Under the current testing environment, seeking out multiple measures to fully understand reading proficiency is overshadowed by high stakes testing large scale assessments. States and districts continued use of high stakes testing is in accordance with accountability guidelines under NCLB (2001). Research has found that some forms of testing may not be suitable in measuring achievement for all student populations. The appropriateness of current testing practices remain in question as Hispanic and LEP populations struggle to

perform at a level of grade level proficiency aligned with English speaking and nonminority peers. Continued research that looks at achievement differences within subgroups may help to determine appropriateness of current testing of Hispanic and ELL populations.

Most importantly for the future schooling experiences of the Hispanic populations is the use of high stakes testing as a measurement of achievement and grade level proficiency. High stakes testing generally results in high consequences based on outcome scores. Results from high stakes assessments in reading and math are often used to determine testing accommodations, remedial and advanced placement or exit, as well as grade level promotion. The challenge to making decisions based on scores from high-stakes testing is the results do not reveal when a skill is acquired during the year nor the degree of proficiency with which a skill or strategy was performed on a given assessment. Equally important, the advantage of early exposure and practice with grade level content vocabulary prior to assessment of grade-level reading proficiency is difficult to measure. That is to say, that grade level content assessments are equally a test of grade level reading proficiency.

Standards-based accountability seeks to measure proficiency and grade level success through predetermined standards of knowledge and performance. To address the challenge of differences in grade level preparedness and align content delivery with assessment measures, the quality and quantity of curricula provided to students is reduced. When reform efforts rely on measures of standards-based accountability, instruction is directed at a basic level of proficiency of content standards. Of concern for Hispanic and LEP subgroups in public school is the widely used practice of connecting

standards based accountability to promotion and retention. Reading assessments, specifically end of grade (EOG) measures of reading proficiency are often used for promotion and grade or room placement. Results from EOG reading tests as data for decision-making, requires careful consideration with regard to what the assessment is measuring. While the assessment may measure grade level proficiency, it also measures cultural knowledge, test-taking skills, decoding skills, comprehension skills, fluency and reading rate to name a few potential differences in skill that impact differences on outcome scores. While it is difficult to accurately determine grade-level reading proficiency based on a single outcome score, a gap in achievement differences becomes evident when comparing grade level peers. Specifically the gap in performance on a third grade EOG reading assessment shows dramatically different levels of preparedness for participation in fourth grade and beyond.

Successful early reading proficiency plays a significant role in performance on tests; tests measure reading proficiency of grade level content vocabulary. North Carolina Department of Public Instruction (NCDPI) intentionally designs the states standard course of study (NCSCOS) to serve as a map of stepwise reading skills and strategies for each successive grade level. The provision of the skills and strategies within NCSCOS presumes that students learning that follows a grade-level pattern will culminate in consecutive years of successful grade level reading. Grade level reading leads to exposure to content knowledge, and assuming successful reading practice in 2nd and 3rd grade, students gain exposure to critical grade level vocabulary likely seen again on tests of grade level reading. Specifically the grade level pattern of learning outlined in the NCSCOS for reading success is as follows:

Objectives within the North Carolina Standard Course of Study (NCSCOS) provide a framework for the development of questions to include on the NC End of Grade (EOG) assessments. Consequently, teacher and peer daily use of academic language and offers exposure to content and skill vocabulary likely to appear in upcoming assessments. As shown above, ensuring successful performance on tests of beginning English reading skills prior to exiting third grade proves exceptionally important for Hispanic students. Students with low achievement scores on grade level tests of reading only possess a portion of the reading skills and fluency needed to successfully complete grade level assessments. Difficulty with grade level reading can potentially result in lower test scores. Reading fluency and automaticity allows a reader to focus on content specific words related to the assessment passage and gather a deeper understanding of the content vocabulary as it relates to larger meaning of the passage. Proficiency in grade-level reading practices potentially reduce the time required to decode content vocabulary within assessment questions; this allows for literacy efforts to be directed at processing knowledge and arriving at an appropriate answer. Additionally successful reading practice with grade level reading material provides exposure to patterns in writing used for questioning and information delivery; also likely to appear in upcoming assessments.

End of Grade (EOG) Tests in North Carolina

The state curriculum referred to as the North Carolina Standard Course of Study (NCSCOS) provides a framework for all end-of-grade (EOG) tests designed to measure grade-level proficiency. No single test can assess all skills introduced in earlier grade-levels, but the developmental design of the EOG assessment for North Carolina is to assess general precursor content skills, in addition to grade level reading and

comprehension for grades three through eight (NCDPI, 2003). The presumption is that beginning reading knowledge and skills build over subsequent years along with knowledge of content and content specific vocabulary. The design of the NC EOG test assumes that knowledge in prior grade level content standards as well as grade level standards in reading proficiency were attained and will be called on by students to successfully complete the test and demonstrate grade level expertise. The result is the successful achievement of grade level proficiency scores.

Students demonstrate proficiency in grade level reading comprehension skills through successfully navigating vocabulary within the EOG reading assessment passage followed by deciphering a series of questions related to the readers' understanding of the content. Successful performance on grade level assessments requires fluency in grade level reading in addition to establishing connections between self, content vocabulary, and questions linked to the passage meaning; demonstrating proficiency in grade level reading requires proficiency in grade level comprehension skills as well. The North Carolina EOG test of reading given to all students in grades three through eight annually "*is unforgiving of missed grade level skills or content standards*" (Ke'imu, 2000). Ultimately, students challenged by content and standards that define grade level reading will find it difficult to demonstrate proficiency on EOG reading comprehension tests.

EOG Test and Reading Disparity

The district aims for disparity in test scores based on race, ethnicity and socioeconomic status, to not exceed ten percentage points on all academic measures (CMS, 2008). The percentage of disparity on a given assessment is calculated using differences between subgroup scores (NCDPI). The percentage of students scoring in the

top two achievement levels (III or IV) on EOG exams is used to determine percent proficiency for a given content area or grade. Proficiency scores range from a level I (the lowest) to a level IV (the highest) yet, performing at or above grade level requires a score in two upper two achievement levels. A review of annually assessed grade-three reading shows district efforts historically fall short of the desired student proficiency goal (CMS, 2008).

When compared on factors such as race, ethnicity, or socio-economic status, there is a significant disparity in reading proficiency among third grade enrollment. Most recent district wide cumulative scores on the third grade EOG reading assessment dropped from 2006 to 2008 (CMS, 2008). Reports for the 2006-2007 school year show more than eighty percent of the third grade enrollment was reading proficiently, therefore scoring a three or four on the EOG assessment. More recently, annual report for 2008 show a drop in proficiency, whereby only fifty five percent of third graders were reaching that level of achievement (CMS, 2008).

District reports show an ethnic gap for EOG reading scores in 2006-2007 nearing twenty one percent, with the annual goal aimed at a difference half as wide. In 2007-2008, the district moved further from their goal, as the ethnic gap for the EOG reading assessment escalated to over forty percent (CMS, 2008). The district reported a twenty percent EOG reading economic gap for 2006-2007 school year that increased to close to thirty five percent EOG reading economic gap in 2007-2008 (CMS, 2008). Reading offers an opportunity to achieve and be successful in school. A disparity in scores between different socioeconomic, ethnic, or racial subgroups is evident throughout the district as seen in grades where reading is annually assessed.

The District has an annual goal of ninety-five percent of third through eighth grade test takers will reach reading proficiency (level III or level IV) on the EOG reading assessment. Seventy-five percent of LEP subgroup in grades three through eight show level I or II proficiency when administered the EOG reading assessment in 2007-2008 school year. Additionally, sixty-three percent of third grade free and reduced lunch subgroup, and fifty-nine percent of Hispanic subgroup demonstrated emerging (level I) and poor (level II) reading proficiency. Students who achieve proficiency on EOG reading exams are prepared for success in learning and grade level rigor. Whereas attaining an achievement level of I or II on a state EOG projects a significantly different future in school.

Research targeting achievement in school age populations continue to produce results of subgroups including racial minority, language minority, and economically disadvantaged populations, challenged by current public school environments. For Hispanic and LEP enrollment, the impact of multiple factors related to achievement may complicate the steps schools put in place for students to attain needed reading proficiency. Growth beyond emerging and poor (level I and II) on assessment of grade level reading proficiency can therefore be stalled, leaving this subgroup more inclined to exit third grade without adequate level reading proficiency. Consequently, moving beyond third grade as an emerging or poor reader of English text ensures there will be additional challenges in the grades ahead.

While reading provides an opportunity to achieve and succeed in school, the district reaching the literacy goal set for grades three through eight reading proficiency is pivotal to successful grade level performance for Hispanic students. Success in upper

elementary anticipates annual growth in achievement, hence, establishing grade level required to engage with more challenging content. To reach the district reading proficiency goal, and to prepare students for success in subsequent grades, it remains critical for elementary school students to demonstrate consistent growth and progress in reading ability throughout early elementary grades, culminating in proficiency by third grade.

Third Grade Tests of Reading

In public elementary school, early reading achievement is commonly measured through performance on grade-level assessments based on predetermined benchmark skills: phonemic awareness, sound symbol relationships, and beginning decoding skills, and early fluency. Proficiency in reading under these norms also serves as a precursor in students' preparation for successful participation in future grade level tasks. The need to consolidate and apply knowledge of beginning literacy skills is a key component of successful reading achievement. Consequently, assessments that ask learners' to consolidate early literacy skills seem appropriate to measure differences in higher grade level reading proficiency.

Grade level reading proficiency scores measure a schools level of responsibility to serving children. State tests of reading proficiency can also offer sufficient data to identify differences in the performance of student subgroups and differences within subgroups. Schools commonly rely on proficiency scores to identify populations challenged by the grade level process and to assist in decision-making to support the most academically challenged. Nationally, Hispanic and linguistic minority students enrolled in public education continue to lag behind non-Hispanic and English speaking peers in

reading achievement (NCES, 2007). Future achievement in school for Hispanic students, including those who are LEP, may therefore rest with schools early identification of indicators that signal future differences in proficiency on tests of grade level literacy skills.

Third grade scores

Publicly available performance data is limited regarding Hispanic early attempts at school success. States, districts, and schools do not publicize performance data on proficiency level reached or grade level achievement on beginning reading skill for early kindergarten through second grade elementary school students. Extensive reports are available nationally for third grade reading proficiency under NCLB accountability mandates. Of interest to this study, North Carolina proficiency scores from the administration of EOG reading test reported annually in state and district publications and nationally through the Nations Report Card (CMS, 2008; NCLB, 2001; NDPI, 2008). Performance data can include number of building level test takers for a given grade level, disaggregated to reading proficiency level achieved, and differences in building level variables of race and poverty.

Based on aggregate performance, differences in percentage achieving grade level scores for schools within a district can quantify percent of building level proficiency among of student subgroups, building level percent of grade level readers and challenged readers, and overall school proficiency. Publicly available reports show performance trends of readers and differences in achievement within and across student subgroups. Test performance data includes level of achievement, number and percent of subgroup achieving level I, II, III, and IV at the building and district level. Related to subgroup

scores, demographic data is reported for variables such as free/reduced lunch status, LEP status, Title I status, disability status, race, and gender and can be disaggregated by percent of subgroup performing at given EOG reading achievement levels.

Utilizing common reading proficiency testing outcome data makes state to state comparisons a viable option to further understand within race trends across the nation, a need identified in a report by the National Literacy Panel on Language-Minority Children and Youth (August & Shanahan, 2006). Poor reading proficiency scores link to ongoing grade level achievement in school, therefore third grade reading EOG assessment scores were explored as a potential early indicator of future differences in grade level achievement.

Districts and schools utilize data to examine areas of concern and identify variables that highlight disparate achievement results and variation in student performance. Establishing sets of indicators can provide a stronger framework to understand outcome scores. A set of indicators draws data from measures that are readily associated with performance and school improvement, alongside indicators less frequently examined that still play a role in student success; the set includes process and leading indicators (Bernhardt, 1998; Foley et al., 2008).

To explain further, process oriented indicators of performance include data linked to variables with a potential to contribute to student learning but not frequently identified as a direct measure of student performance. School composition is an example particular to this study including percent minority and economic disadvantage as part of building level factors that affect student achievement, but are not direct measures of student performance. A second indicator, leading indicators, are more promising indicators to

help with data informed decision-making and serve as a signal to schools and districts to anticipate progress in the future.

Leading indicators in education emerge through the analysis of school and district data linking preceding factors that contribute to differences in achievement levels to student trajectories, becomes evident in the review of school and district data. Researching differences in subgroup achievement in tandem with at risk public school environments may help to identify leading indicators specific to a subgroups' achievement and challenges; leading indicators serve as critical points to address in future school reform efforts. Leading indicators offer an alternative approach to working with data that prepares schools and districts for proactive rather than reactive decision-making.

Reading as a Lagging Indicator

While research has identified trends in data that link school composition and differences in achievement, looking at reading proficiency scores alone does not inform the impact of school composition on achievement differences. Schools and districts frequently address lagging scores in the analysis of standardized-test scores in reading proficiency data. End of grade tests can serve as an example of schools use of lagging scores. When decisions at the start of the year rely on performance outcome scores from the close of the previous year, those scores are lagging and may not offer a true picture for decisions due to the lag time between assessment and time of decision.

Foley et al., (2008) refers to lagging scores as test data contained in reports of achievement with long stretches of time between the date of testing and the review of performance. For example, EOG proficiency scores are often lagging when assessment results are reviewed at the start of the following school year. The use of lagging scores

for decision making can potentially limit opportunities to direct support at challenging areas that emerge from outcome scores. Lagging scores may not accurately inform schools of students' current needs when test performance is reviewed months after the date of assessment. Achievement challenges can be dynamic and content specific or situational, and may not be present at the start of following year or the challenge may have grown more severe absent of targeted support. Proficiency scores reviewed at the start of the following year can only ascertain from the data those students who struggled with grade level achievement at the time of the test (Foley et al., 2008).

The review of isolated proficiency scores does not inform relationships that may exist between potential indicators and differences in achievement outcomes. Schools and districts must move beyond examining lagging achievement scores and begin to understand additional indicators that contribute to differences in achievement (Foley et al., 2008). Consequently, the use of reading proficiency scores as a leading indicator may have a greater impact on improving performance outcomes for students. Decisions informed by leading indicators to support achievement includes schools and districts making efforts to consider building level data in tandem with grade level achievement scores, to create a more detailed view of subgroup performance.

Reading proficiency is a known indicator for ongoing student performance on tests of grade level proficiency. The absence of grade level reading ability can serve as a barrier to information whereby poor readers can show a two to three year gap in essential knowledge against peers. Based on findings that poor attainment of reading proficiency can negatively impact future school success, reading achievement scores viewed as

leading indicators, can potentially indicate a trajectory for future success or failure in school (August & Shanahan, 2006; HIHCHHD, 2000; Juel, 1988; Snow et al.,1998).

The current North Carolina testing program meets the grade level assessment guidelines put forth under NCLB. Whereby during the last month of school each year schools administer the EOG test to all students assigned to a corresponding grade level. The reported levels of achievement on the North Carolina test of reading comprehension by the state, district, and schools, allows for the comparison of student proficiency based on standards of interest also related to specific student and school demographics. Outcome scores from EOG tests help to identify trends in knowledge and skill attainment and is a commonly used measure for comparison of subgroup performance. A review of annual EOG scores can also show performance differences within a single subgroup, for a specific grade level, or comparison of a single grade over multiple years.

While some struggling readers may develop new reading skills in grades beyond upper elementary school and demonstrate a large change in grade level reading, increased performance on EOG tests may result in little change in proficiency levels on outcome scores. Alternatively, annual data clearly shows a gap between those that can and cannot read (Padrón, Waxman, & Rivera, 2002). For many Hispanic students struggling to attain academic English language in tandem with poor reading proficiency in English and or Spanish, tasks that require grade level reading and writing can be a labor intensive yielding little gain in understanding. To clarify, working at a reading level that is associated with feelings of frustration during the reading process includes tasks that require students to decipher content significantly above the individuals' level of English reading proficiency. Reading under these conditions offers little support to the reader,

limiting any opportunity to improve proficiency in reading fluency or comprehension of content knowledge; a shift towards negative feelings with regard to future attempts to practice reading is common. This negative spiral can become what is termed the Matthew Effect, whereas poor readers read less, hence acquiring less new vocabulary and knowledge, and fall behind peers who read well, and subsequently read more and acquire more word and content knowledge, and therefore are more prepared to confront tests of grade level skills and knowledge (Stanovich, 1986).

Matthew Effect and Assessment

Exposure to testing and participation in the assessment environment increases repeated practice reading academic material and expectations for content knowledge become evident. Through increased testing success, students are empowered to take ownership of improving performance. A stronger reliance on personal knowledge and skills can result in less anxiety and even higher performance than an over reliance on chance or luck. Through repeated exposure to successful testing in the English language, tests become less threatening, increasing the chance of a positive assessment experience. Subgroups comfortably involved in assessment will increase exposure to test question stems and word patterns used in academic English terminology. Increased practice helps to establish a stronger understanding of the meaning housed within the test questions and increases the chance for the successful display of skills and knowledge. Growth in academic English language proficiency increases the potential to communicate with instructors and peers to resolve environmental, academic, cultural, and schooling challenges otherwise clouded by language barrier.

Contrary to the above scenario, subgroups struggling with English language proficiency have less access to academic content provided in daily learning environments. Struggles with academic and linguistic understanding leads to potentially less confidence entering into an assessment designed with the assumption of English language proficiency. The result may be poor outcome scores leading to remediation or support through instruction targeting basic skills. Ongoing struggles will grow if left unaddressed, increasing the feeling of an uncomfortable testing environment, and a fear of the repeated negative experience of poor performance on assessment. Members of the Hispanic and LEP subgroups faced with this uncomfortable experience in the learning and testing environment may not take risks to increase English proficiency and may decrease participation in the routines requiring English language skills in the classroom.

Consequently, the result is less exposure to academic content vocabulary and questioning patterns limiting the opportunity to increase successful participation in testing experiences. Less participation in the assessment environment decreases awareness of academic material and expectations for learning grade level content needed for success in school. ELLs may develop techniques to mask their lack of understanding in the testing environment through successful reliance on peers with increased bilingual proficiency or continue an unsuccessful display of skills resulting in testing failure. The continued negative spiral in testing experiences and outcome performance scores can numb students to the poor outcome scores. Participants experiencing the Matthew effect can emerge with less practice in the testing environment resulting in continued anxiety when faced with assessment requiring the blending of English language proficiency and

academic language with content knowledge, and necessary grade level skills and English reading strategies.

In summary, the use of state, district, and school data to identify and inform leading and lagging indicators can help address the achievement of underperforming subgroups and assist with decisions making to redirect student trajectories. Reading proficiency has the power to limit and excel learning opportunities. For many minority students, an inability to reach grade level reading proficiency can impede learning success throughout school. Poor reading proficiency is disproportionately evident among minority students. The need to identify and serve this subgroup should emerge as a priority in school reform efforts. Identifying and serving struggling readers in the first few grades of school stems from attention to current school reform efforts, whereby challenges with beginning reading proficiency can be observable as early as kindergarten. Research has found that students who develop strong beginning literacy skills in the early years of schooling build on that success as fluent readers in later learning and advanced grades (Snow, Burns, & Griffin, 1998). Subsequently, children who do not establish strong early literacy skills by third grade will continue to struggle throughout their schooling career (NIHCHHD, 2000). While the approaches can vary with regard to delivery of instruction and fluency practice, the culminating task of deriving meaning from print remains the number one goal in the reading process (Chall, 1986; Lyon, 2001).

Composition of Schools

Review of the research on variables that relate to differences in student achievement has left school composition in question as a viable contributing factor effecting achievement for Hispanic minority. The final section explores the composition of school,

building level variables known to influence achievement, and the potential influence on achievement. There is research to support the relationship between school environment variables and student achievement. The third section helps to establish a connection between building-level racial and economic variables and Hispanic achievement as measured by reading test scores. This section touches on court rulings that shaped the composition of schools over the past fifty years and factors that currently contribute to current differences in the composition of schools that potentially places the environment at risk.

Public education today faces many challenges, as the population in attendance becomes increasingly diverse (NCES, 2007). Hispanic enrollment represents a student population projected to account for one in four students in public schools by 2025 (Department of Education, 2006). Thus, the most rapidly increasing subgroup are Hispanic students who constitute 75% of all Limited English Proficient [LEP] and English Language Learners [ELLs] attending our nation's schools (Kindler, 2002); close to ten percent of all K-12 enrollment (Capps, Fix, & Murray, 2005).

Reports of national enrollment in public school show a significant increase of one million English language learners (ELLs) across the nation from 1993-2000, representing a change from 5% to 7% of the national public school population during those same years (NCES, 2007). With three fourths of the LEP population identifying Spanish as their first language, the National Council of La Raza estimates these statistics are representative of approximately four million plus Hispanic native Spanish speaking students enrolled in our nation's schools (NCLR, 2008). The heightened push for states to publicly-report student performance each year raised interest in the Hispanic and LEP populations.

Specifically, increasing achievement of LEP students serves as a direct link to the reported outcome of the Hispanic subgroup as well; 75% of LEP student population is Spanish speaking.

Hispanic populations continue to increase throughout the nation, with close to 75% of the school age population served by as little as ten percent of public schools (Urban Institute, 2007). Schools with increased Hispanic enrollment tend to be situated in large urban areas. Urban schools are often associated with high poverty, low academic performance, lower teacher quality, and high minority enrollment (Clotfelter, Ladd, & Vigdor, 2004, 2005; Urban Institute, 2007). The building level environment of many urban schools situates Hispanic and linguistic minority students in less than ideal classrooms, subsequently challenging the goal of acquiring necessary English language skills to become academically and socially successful (Attunez, 2002; Ballantyne, Sanderman, Levy, 2008; Reed & Railsback, 2003). The future successful achievement of Hispanic enrollment is at risk as significant numbers are educated in schools that are at risk, hence offering less promise of success.

The largest portion of Hispanic and LEP students is enrolled in Pre-K through third grade (NCELA, 2002). The concentration of Hispanic and LEP students in urban Elementary schools places significant responsibility on early grade educators to ensure mastery of foundational content standard skills to support success in later schooling Hispanic students. Reading development and performance of early readers is a factor that continues to challenge successful achievement later in schooling. Early elementary teachers are trained to anticipate beginning reading challenges, and understandably, are more equipped to support students in the process of learning to read. In contrast, upper

elementary educators may not readily observe or address students' daily challenge with beginning reading skills, as the upper elementary grades standard course of study presumes reading fluency at that level of learning. For students engaging with new content, the ability to read and confirm information, through reading practice or peer interaction, adds to student opportunities to reach grade level success.

Composition

With the foundation for success in school established in early elementary grades, a remaining concern is the role of reoccurring building level variables known to impact achievement. More specifically, uncertainty lies with differences in composition and the ability of elementary schools to successfully meet the demand to educate the growing population of Hispanic and Limited English Proficiency (LEP) students. Increasing the potential for ongoing grade-level achievement for linguistic and racial minority requires looking critically at increased exposure to building level variables related to school composition in tandem with patterns of performance on grade level tests of skills required for successful participation in school. School composition is one variable that has the potential to influence Hispanic student's future performance on tests of grade level proficiency. Exploring differences in building level composition of schools may shed light on the potential impact of building level on achievement.

While beyond the scope of publicly accessible data for this study, the researcher would be remiss to not acknowledging factors unique to the Hispanic population who contribute to the significant diversity among this student subgroup. Factors include but are not limited to: early schooling experiences, home learning opportunities, native culture, schooling history, first and second language experiences, English and Spanish

language proficiency levels, reading level in a native language, and country of origin.

Schools frequent use of the broad race identifier term Hispanic often gives the impression that all students share similar experiences. As shown many times throughout this review, Hispanic students similarities tend to fall on factors of race and native language whereby dissimilarities occur on significantly more school, home, cultural, and personal factors.

The following section addresses Factors unique to Hispanic students.

Factors unique to Hispanic students continue to challenge successful achievement in school. First, Hispanic school-age populations consist of foreign-born students, students born in the United States, and first and second generation immigrants including refugees. Early childhood experiences are diverse on many levels limiting the potential to facilitate connections between learning at home and school, (American Federation of Teachers [AFT], 2002; Hull, 1999). For example, beginning language growth at home is associated with a readiness for content standards in the earliest grades of school and the preparedness for learning in the traditional school environment (Cummins, 1984; Lareau, 2000). Bridging early knowledge of content, language, and learning experiences from home to the unfamiliar school environment is challenging for many Hispanic children born into significantly diverse backgrounds.

Children of immigrants can experience significant family pressure directed at a students' level of appreciation for the opportunity to attain an American education yet significantly less-positive pressure emerges from the school environment. For example, student and parents' efforts to participate in schooling routines can be misconstrued due to dissimilar home and social structures and school level expectations for learning and participation in academics (Hull, 1999). Contrary to many of the misconceptions related

to the Hispanic population, for many Hispanic families and students the belief is that school is as a valuable place to learn.

Falling prey to fear of the unknown, schools may question the perceived value Hispanic parent population places on educational experience, and subsequently direct stereotypical feelings towards Hispanic students. Minority students struggle against schools overuse of stereotypical labels and the association between minority students and demographics related to poverty. Hispanic student's demographics can lead to generalizing as well. For students of Hispanic ethnicity, generalizations are made about Mexican origin and illegal or undocumented residency in the United States. Schools uninformed on immigration issues may not feel comfortable with topics related to undocumented immigrants and the potential for legal matters related to deportation tied to family members.

Schools with a history of low exposure to cultural and linguistic diversity may lack resources and staff available to respond readily to needs of enrolling Hispanic populations. Teachers in the general classroom environment commonly feel uninformed or ill prepared with regard to issues of diversity related to linguistically and culturally diverse students (AFT, 2002; Ballantyne, Sanderman, Levy, 2008; Hull, 1999; National Center for English Language Acquisition [NCELA], 2007; National Center for Education Statistics [NCES], 1997; Rhodes, Ochoa, and Ortiz 2005; Thomas & Collier, 1997). In response to arguments on teacher quality, school systems continue to look toward a professional development models as a tool to support growth in teachers and better prepare educators to serve an increasingly diverse public school population. Without efforts to deepen the scope of understanding on issues specifically related to the

Hispanic population, schools may struggle to see achievement potential among diverse subgroups resulting in teachers' lowered expectations for proficiency in grade level skills.

Legal Cases Related to Minorities in Education

Addressing issues related to achievement and diversity of school composition is not new to public education. A history of seminal court rulings and federal initiatives influenced the current composition of schools. Historically, mention of diversity in education resulted in reference to race and achievement differences for African-American and White students. Attention to achievement related to differences in school environment was brought to light through court proceedings in *Brown v. Board of Education* (1954). The seminal 1954 *Brown v. Board of Education* ruling targeted racial diversity in schools, and determined schools segregated by race contributed to unequal academic opportunities for black students, resulting in significant changes in how schools served all students enrolled in public education (1954).

Historically, patterns of racial isolation and schooling segregation were linked to differences in opportunity for minority students looking to achieve academic success. Seminal court rulings more than fifty years ago helped to bring national awareness to the unequal educative opportunities, as seen through student experiences in racially divided schools (*Brown v. Board of Education*, 1954). Observations of schools serving only minority students gave rise to questions on dissimilarities in educative opportunities for these students. More than fifty years beyond the *Brown* ruling and growing concerns for minority students continue to center around issues of opportunity for marginalized students attending racially segregated public schools. Current concerns for equitable opportunities in public school have diversified along with the definition of minority and

the changing composition of schools. For example, Hispanic minority had experienced concerns related to provision of equitable education 10 years prior to *Brown v. Board of Education* in the seminal *Menendez v Westminster case* (1946). The benefit to Hispanic people from *Brown* case rulings was small, due to the earlier definition of *minority* applied to this subgroup in the *Menendez* case.

An additional stir in education occurred with the release of the federally initiated 1966 Coleman Report. While controversial, the Coleman report did broaden the scope of accepted factors that defined differences in a diverse student body (1966). The report addressed issues of achievement complicated by racial and economic diversity among White middle class and minority low-income students. The most notable outcome for education was a shift in how factors limiting student achievement were understood relative to student performance in school. Despite thirty years of research related to specific learning needs for minority populations, measures of national performance indicate public schools are struggling to advance Hispanic students to achievement levels equal to grade level peers.

As diverse enrollment in public education increases on multiple levels, recent court rulings on issues of school composition reflect an unanticipated shift from the historic perception of racial segregation in education. Previous rulings that reference minority populations enrolled in racially segregated schools were guided by a premise of equity in public education and a potential impact on achievement for. A recent shift has occurred in court rulings tied to issues of race and achievement. In recent decisions related to school composition, courts removed mandatory segregation orders and deemed some districts unitary. Emerging policy initiatives disallow the use of race as a factor for

districts seeking resolution for racially unequal student populations in school. Regardless of how current court decisions rule on issues related to segregated enrollment, successful achievement for minority youth enrolled in racially unbalanced public schools remains transparently challenging.

Summary

For more than fifty years, public education has attempted to address issues related to diversity that challenge the goal of academic achievement for minority students. Unfortunately, for many minority students the ongoing gap in achievement tells of public schools continued struggle to provide all students with the assurance of learning opportunities leading to academic success. In closing, the review provides research in support of the conceptual design and relays the importance of continued research directed at Hispanic achievement. Exploration of available literature was to assist the researcher in further understanding current issues related to the composition of school, reading performance of Hispanic students, and building level variables that have the potential to influence third grade test scores. The persistent low proficiency among Hispanic populations nationally, invites further examination of the impact of school composition on achievement differences as measured by high stakes tests of reading. Revisiting the chronic issue of poor achievement through a new lens gives hope to future learning opportunities for Hispanic and LEP students in public schools across the nation.

CHAPTER 3: METHODOLOGY

This chapter will develop further the methodology and research design as it relates to the identified problem and objectives of the study. This section defines variables selected to measure dissimilarities among participant schools and explains variable limits. The chapter presents an overview of procedures specific to the study and the statistical analysis employed to best answer the research questions. Furthermore, this section clarifies how this study examined and measured differences in composition of building-level diversity within elementary school environments and a potential relationship to differences in third grade reading proficiency for Hispanic students.

Method Overview

The methodology employed in this study contributes to a growing awareness of building level factors and the potential impact on achievement differences. This study employed quantitative methods, which involves the collection and analysis of numerical data to understand the problem. An examination of district data included grade level test proficiency and subgroup achievement at the building level. Secondary data, specifically district and school records, were collected through a technique identified as data mining. The searchable public school data was stored and managed electronically, which is characteristic in research that uses data mining. The chosen methodology directly aligned with steps to examine the identified problem and fulfill the objectives of the research.

Examination of testing data specifically, reading achievement levels, and dissimilarity in school composition was determined a best-fit approach to answer the

research questions posed in the current study. The researcher was able to narrow the extensive amount of building level data based on Bernhardt's identification of four categories key to district and school related data (1998). Bernhardt's categories guided the collection of data to include demographic data, instructional process data, perception data, and student-achievement data (Bernhardt, 1998). District and school related variables used to define dissimilarities in participant schools also align with characteristics in schools that Bronfenbrenner (1978) and Waxman (1997) consider at risk of failing to meet the needs of students. Additionally, factors identified in environments *at risk* (Bronfenbrenner, 1998) are common among schools serving significant numbers of the Hispanic school age population.

As a result, identified common characteristics of specific school environments frame the research; schools are at risk of not successfully meeting diverse student needs. Third grade reading proficiency, a display of future proficiency on tests of grade level reading and school success, adds a dimension that is of national concern to the research framework. The research outcomes are important as well. Whereby, future efforts to address building level indicators of poor reading achievement could benefit future grade-level test success for the Hispanic subgroup and potentially preempt additional trends of poor proficiency.

Dependent Variable

The dependent variable (DV) is defined as the circumstances or characteristics that change when confronted by an independent variable (IV). Differences in building level achievement for the Hispanic subgroup served as the dependent variable for the study. Specifically, 2007-2008 building level EOG reading achievement levels reported

for third grade Hispanic students enrolled in schools of interest served as the dependent variable. This study explored differences in building level reading proficiency as measured by level of achievement on the EOG reading test administered to all third grade students during the 2007-2008 school year. Analysis of data looked at differences in the building level achievement for level I and II identified as the subgroup with reading challenges and level III and IV labeled the subgroup reading at grade level proficiency on the third grade EOG reading test. Examining differences in subgroup proficiency levels for each school measured the impact of collective composition of minority and poverty related to differences in reading-test performance levels reported for Hispanic and LEP students.

Independent Variables

The independent variable is explained as the condition the researcher is able to manipulate when trying to understand the degree in which the independent and dependent variables relate (Patten, 2007). The independent variables for this study are intended to measure dissimilarity in school composition. Those variables included:

- minority composition measured by percent minority
- Hispanic composition measured by building level percent Hispanic
- LEP composition, measured by school identified LEP subgroup
- percent poverty measured by building level poverty
- average third grade class size
- third grade reading performance in schools

Research Context

Schools of interest for this study were part of a large urban school district in the southeastern United States serving approximately 133,000 pre-kindergarten through twelfth grade students during the 2007-2008 school year (CMS, 2008). The district includes high schools, middle schools, elementary schools, and pre-kindergarten centers. Seven learning communities separate the county to provide designated boundaries, dividing the districts' 160 schools into small clusters. To accommodate student and community needs, the five school types include traditional, magnet, Title I, specialty, and alternative. The large urban district is has historically been responsive to trends of diversity in education and is nationally recognized for school performance and achievement (CMS, 2008).

The District population during the 2007-2008 school year was roughly 64% minority with approximately 15% Hispanic subgroup. The growing urban school district has consistently shown annual growth in attendance, yet, Hispanic students were the only minority subgroup to increase from the 2006-2007 school year to the 2007-2008 school year (CMS, 2008). Subsequently the LEP population also displayed growth based on the large percentage of LEP subgroup who are Hispanic, The 2007-2008 Hispanic LEP subgroup accounted for 72% of the district LEP population (CMS, 2008). Asian LEP was the next largest language-minority sub group, yet total enrollment was less than one third of the district Hispanic enrollment. Close to half of the districts' 2007-2008 student population participated in the free and reduced school lunch program. Participation in the free and reduced lunch programs is often used synonymously in school research as a measure of poverty.

Elementary School

Approximately half of the districts' students are served by K-5 elementary schools. The Hispanic subgroup accounts for 17% and LEP students make up 18% of district Kindergarten through fifth grade elementary schools population. The Hispanic LEP population accounts for almost 80% of the kindergarten through fifth grade LEP subgroup. Enrollment in Federally funded free and reduced lunch programs includes approximately 50% of the district kindergarten through fifth grade population. Hispanic students account for only 30% of the district population enrolled in free and reduced lunch, while close to 80% of the K-5 Hispanic population is a member of the economically disadvantaged subgroup.

Third Grade

The district third grade subgroup includes upward of 11,000 students, with the Hispanic population accounting for slightly more than sixteen percent of the third grade. Linguistic minority students identified as LEP account for seventeen percent of district third grade and Hispanic LEP account for close to seventy five percent of the third grade LEP subgroup.

Third grade free subgroup enrolled in the free and reduced lunch program mirrors the larger district. Upward of fifty percent of the third grade is enrolled in free and reduced lunch. The Hispanic subgroup accounts for twenty-six percent of the district third grade free and reduced lunch subgroup, yet the same subgroup represents upward of eighty percent of Hispanic third grade enrollment. Interestingly, over eighty percent of the Hispanic third grade population enrolled in free and reduced lunch is also identified as

LEP, reinforcing the importance of including LEP and Hispanic performance and achievement as part of the data collection and analysis.

EOG Reading Test

Ninety-nine percent of the districts' third grade participated in the reading EOG. The racial composition for third grade test taking population consisted of sixty-seven percent minority. Hispanic minority account for sixteen percent of the population assessed. Approximately seventeen percent of the testing population is LEP, with only sixty percent of LEP third grade students participating in the state EOG reading exam.

Design

Researchers have defined design as *the logical structure of inquiry* and not the mode of data collection (Patten, 2007). Research Design as it relates to the problem and goals of the research study also ensures that the evidence obtained enables the answering of the initial questions as unambiguously as possible (Patten, 2007). To support future replication, the research design offers a suitable guide for carrying out the research study by way of an explanation of steps and an identified sequence of events (Patten, 2007). Steps to ex post facto research identified by Isaac and Michael (1971) provided the guidelines for implementing the research design for this study.

- Define problem
- Survey literature
- Develop research Questions
- List assumptions upon which procedures will be based
- Design the approach
- Select appropriate subjects and source materials
- Select construct techniques for collecting the data
- Establish categories for classifying data that are appropriate for the purpose of the research
- Validate data gathering techniques
- Describe analyze and interpret the findings in clear precise terms

Researching schools and students through an experimental design that deliberately delivers less instruction or exposure to one group over another could be potentially unethical (Patten, 2007). Looking at the outcome of a natural setting through an ex post facto research design Patten (2007) describes as a practical approach to experimental research. Specifically, a causal comparative or ex post facto research design can assist the researcher in determining a cause or reason for identified differences in the behavior of a group (Creighton, 2007; Isaac & Michael, 1971; Landman, 1988; Patten, 2007). The main characteristics of ex post facto resemble an experiment but the difference is the variables are not manipulated. Instead, the researcher creates categories based on pre-existing characteristics of participants like race or inclusion in an identified program (Isaac & Michael, 1971; Patten, 2007).

The ex post facto research was a best-fit design based on several study characteristics. First, the researcher examined naturally occurring building level variables after they had already occurred. This step established the non-experimental aspect of the study. As well, the absence of a treatment on the study population, specifically elementary schools for this study, is characteristic of methodology that uses an ex-post facto design to answer the research questions. As part of the ex post facto methodology, treatment is included in the data set by selection of participant schools rather than manipulation of variables. The design involves selection of two groups differing on some independent variable and comparing them on some dependent variable (Isaac & Michael, 1971). The use of an ex post facto design provides a framework for initial research and development of research questions, and warrants data analysis including a variety of

descriptive and inferential statistics to confirm and explain study findings (Isaac & Michael, 1971; Patten, 2007).

The second characteristic includes the intent of the researcher to observe and describe a current condition and look to the past to identify possible causes of the condition (Patten, 2007; Landman, 1988). The ex post facto design examines district data from the 2007-2008 school year that potentially supports of the relationship between building level variables and Hispanic achievement. An advantage of ex post facto research design is the ability of the researcher to eliminate some of the extraneous factors that might influence behavior and identify predictable relationships through analysis of after the fact data. Alternatively, the research process is not as scientific as true experiments and the understanding cause of the behavior reflected in the data will require an alternative research design. In summary, an ex post facto or after the fact research design that seeks to establish causal relationships between events and circumstances, offers a useful approach to researching achievement in schools.

District Data

A comparison of district or building level performance to national performance scores may offer limited insight into regional or local school level variables that influence performance differences. Additionally, local research reports on patterns and trends for a given district or state may not align with the larger national performance. Understanding the success of a district or school at meeting the needs of diverse subgroups is therefore more evident through within-district comparison of building level data rather than a comparison to National percentages (Gitomer, Andal, & Davison, 2005). While it remains important to acknowledge subgroup performance relative to state and national

averages, it is important to examine performance differences within schools locally to highlight any underlying relationships between variables and the potential impact on achievement. The ex post facto design included a review of district data providing the necessary insight into the demographics and performance of third grade Hispanic students. While school systems commonly report on a single variable (SES, achievement levels, attendance) when examining district or subgroup performance, a deeper look into publicly available district data can expose relationships and patterns between target variables and a population of interest. Accordingly, the research focus on achievement for this study was specific to performance levels reached by Hispanic and LEP populations attending elementary schools in a single district.

Identifying appropriate measures to explain performance differences within specific school environments can help shape more effective support services and programs (Gitomer et al., 2005). Critical to advance grade level proficiency at a rate commensurate to peers is a schools level of responsiveness when confronted with differences in testing outcome scores (Creighton, 2007). Ideally, documented trends in subgroup achievement would bring about a review of disparity in achievement, followed shortly by efforts to align services for subgroups demonstrating low achievement. This study explores variables linked to underachievement through examination of building level data related to the performance of marginalized populations and builds on research that targets educational reform efforts and research on the gap in achievement for minority populations. Specific to this study, examining participant schools on multiple data points provided a more precise picture of Hispanic and Ell achievement related to school challenges at the building level.

Research Variables

Participant Schools

Select elementary schools within district served as the study sample. To report publicly student outcome scores, a school must test and receive valid scores for greater than six members of a student subgroup. For the May 2008 third grade EOG reading test, sixty-nine elementary schools tested more than six Hispanic students. Meeting the subgroup testing requirement, these schools were included in the sample.

Elementary schools reporting building level outcomes for less than six third grade Hispanic participants were identified in the researchable data. Schools do not publicly report performance outcomes for a subgroup with less than six students. Subsequently non reporting schools were considered a poor match for this study, and were dropped from the working data file. The remaining elementary schools served as the researchable data for the proposed study (n=68). To answer the research questions analysis will disaggregate data at the building level.

To assist in answering research questions tied directly to the performance differences of the Hispanic and LEP subgroup building level achievement was extracted from the building level total minority for each respective subgroup at schools of interest. Reported achievement levels used for this study was 95.5 % of the district third grade Hispanic student population (n=1721 and reported achievement levels of LEP was 51% of the third grade population (n=1737).

Building level EOG reading assessment scores reported for the 2007-2008 school year were obtained for Hispanic test takers (n=1684) enrolled in schools of interest, and EOG reading assessment scores reported by for the 2007-2008 school year were obtained

for LEP test takers (n=1024) enrolled in schools of interest. Some overlap may exist when looking at building level performance. For example, when looking at Hispanic, minority, and LEP subgroups at the building level, some scores may fall in results for all three categories. Building level scores does not allow the researcher to discern which Hispanic child received which score and whether a score also falls in the LEP or F/R subgroup as well.

Percent Minority Composition

Building level variables, including school demographics and performance data for student subgroups was accessible to the researcher through publicly available data. Subgroup percentages that aligned with the district and predetermined limits for state grade-level proficiency tests provided a clear picture of differences in building level composition.

The researcher acknowledges the use of advanced indices and statistical measurement to define segregated and desegregated environments, isolation of students by race, and exposure or interaction with diverse peers. For the purpose of this study, the researcher was concerned with building level minority composition therefore measurement of percent minority that mirrors the larger district was selected to describe the presence of high, balanced, and low building level minority composition within an elementary school of interest. The minority subgroup was selected as a racial composition variable on the back of research that explains a potential for collective composition of minority students to influence achievement differences (Caldas & Bankston, 1997; Garcia, 2005; Hanushek & Raymond, 2004; Rumberger & Palardy, 2005).

Measurement of percent minority composition for each school was determined by

building level counts for kindergarten through fifth grade White and minority subgroups for each school of interest. District demographics for kindergarten through fifth grade showed minority composition reaching approximately 66% of the total K-5 subgroup. If modeled after the greater district, a racially balanced school would reflect similar minority and White composition; composition limits used in the analysis of schools population data are as follows:

- Low Minority School (LMS) = minority < 32%; White enrollment reaches > 68% potentially increasing White subgroup to greater than double the district average.
- Racially Balanced School (RBS) = White enrollment falls within the 26% - 67% range with the minority subgroup within ranges of 33% - 74%.
- High Minority School (HMS) = White subgroup is reduced to less than 25% of the building level population, potentially increasing the chance for collective minority composition as high as 75% -100%.

Analysis of data that describes the minority composition of selected elementary schools allows for schools to be coded and grouped into categories that included high minority schools-HMS, low minority schools-LMS, and racially balanced schools-RBS. For the purpose of this study, a comparison of building level White to not White subgroup was used to determine building level minority, therefore, African American, American Indian, Asian, and multi racial minority subgroups were included in building level minority counts as they contribute to the composition of a school. While all non-White subgroups were included in determining the overall school minority composition, between race comparisons were not part of this study hence, the demographics and achievement were not reported for other minority subgroups.

Percent Poverty

The free and reduced lunch program supports proper nutrition for children challenged by conditions of poverty in public school. The lunch program serves as the federal standard of poverty and commonly measures differences in socioeconomic status in research. Collection of building level participation in the free and reduced lunch program provided school data to calculate a schools' composition of building level poverty. District reports on each school of interest provided the percentage of students assigned to free or reduced lunch status. Schools were coded and grouped into categories including high poverty schools (HPS), moderate poverty schools (MPS), low poverty schools (LPS). District kindergarten through fifth grade demographics show approximately 50% of the elementary school populations qualifies as economically disadvantaged and participates in the free and reduced lunch program; the minority subgroup accounts for 92% of the economically disadvantaged elementary school students.

- High Poverty School (HPS) 65-100% enrolled in FR lunch
- Moderate Poverty School (MPS) 26-64% enrolled in FR lunch
- Low Poverty School (LPS) < 25% enrolled in FR lunch

Achievement and Reading Proficiency

The selection of the reading EOG assessment was two-fold. First, the EOG state assessment has been supported by North Carolina as a valid measure of third grade English reading proficiency (NCDPI, 2007), and second the reading proficiency serves as the cornerstone for all future learning, with third grade being a pivotal point towards future success or future challenges for many elementary students. Reading proficiency is an important component in school success, therefore it is equally important that the tool

used to assess early reading proficiency have the ability to accurately measure proficiency on grade level skills and offer reliable and valid results.

The third edition of the test is the primary instrument used state wide in North Carolina for the assessment of third grade reading proficiency, and is administered during the last three weeks of school (NCDPI, 2007). A more detailed explanation of the State EOG is provided by NCDPI, Division of Accountability Services/North Carolina Testing Program and is explained as follows:

“The North Carolina End-of-Grade Tests are required by General Statute 115C-174.10 as a component of the North Carolina Annual Testing Program. As stated, the purposes of North Carolina state-mandated tests are “(i) to assure that all high school graduates possess those minimum skills and that knowledge thought necessary to function as a member of society; (ii) to provide a means of identifying strengths and weaknesses in the education process in order to improve instructional delivery; and (iii) to establish additional means for making the education system at the State, local, and school levels accountable to the public for results” (NCDPI, 2007)

A review of the development of the North Carolina third grade EOG reading assessment shows the state takes steps to ensure developmental assessment design, and tests for multiple measures of validity and reliability (NCDPI, 2007). A developmental scale provides an opportunity to monitor growth and compare student performance on the end-of-grade reading test over multiple grades (CMS, 2007). Student reading proficiency is defined by EOG achievement level (I, II, III, and IV) aligned with specific cut scores to

provide a standard to measure State and District student performance. Grade-level proficiency on State assessments "shall mean the achievement of Level III or above on end-of-grade tests in reading and mathematics in grades 3-8; individual levels of student performance are also explained (Appendix G). Performance within a school of interest was coded to reflect number and percent of Hispanic student subgroup demonstrating grade level reading at levels I, II, III, or IV as defined by the state.

The dependent variable, reading proficiency at the end of third grade, is measured by building level performance on the state end of grade reading assessment given to all third grade students. Successful grade level achievement is measured by predetermined proficiency levels set for the State reading EOG assessment. Building-level reading proficiency for is determined subgroups and schools by collective number and percent reported at level I-IV on the EOG reading assessment. Particularly noteworthy will be building level reading challenged subgroups performing at a level I and II, and building level successful grade level readers performing at a level III and IV within schools of interest.

Class Size

Average third grade class size, as reported on the publicly available Nations Report Card (NCDPI) is one additional variable included in data collection. Class size has often been considered a factor in early learning opportunity. With third grade critical to establishing reading proficiency, prior to entering upper elementary grades, class size in schools of interest was included as a variable to examine.

Procedures

An application was submitted to the International Review Board (IRB) to obtain approval for the proposed research. The study was determined to be exempt from IRB review (Appendix A). The conditions present that permit the study to be exempt include the collection and study of existing data, and the sources used to obtain research data are publicly available from a website maintained by the school district. School demographics and accompanying variables are presented in such a manner that subjects enrolled in schools of interest cannot be identified directly nor are identifiers linked to the subjects. Data intended to measure grade-level performance involves publicly reported outcome scores from an end of grade educational achievement test given annually to all third grade students enrolled in said district. Secondary data analysis of archival data will take place for the proposed study, and no new data will be collected. It is through the above criteria that the proposed research was granted exemption from IRB review.

Upon notification of IRB exemption, the researcher began to formally review 2007-2008 data the identified urban school district located in the southeastern United States. The framework used to research building level variables among elementary schools and differences in Hispanic achievement helped to select publicly available school, demographic, and achievement data located on the district website.

Data Collection

Initial exploration of the district website produced a list of district schools. Further searching produced detailed reports on academic outcomes for the district, schools, and levels of proficiency for multiple subgroups. Data was coded to identify potential elementary schools for use in this study, and middle and high schools were removed. The

population demographics of ninety-seven district elementary schools for the 2007-2008 school year were reviewed. Further examination of the data focused on student composition of elementary schools and availability of third grade outcome scores for the Hispanic subgroup. Demographics for elementary schools of interest were retrieved from the districts' publicly accessible website. The collection of data included building level variables informing composition differences. Building level data was collected on variables related to race, poverty, LEP status, and building level EOG proficiency level achieved for Hispanic and LEP enrollment. This data included outcome measures for the 2007-2008 EOG reading assessment administered annually to third grade students throughout the district. Building level reading proficiency scores were collected from school reported scores for EOG reading assessment administered in May 2008.

Data was entered into an Excel workbook to organize data around building level variables for schools of interest. Using column headings for research variables, building level composition demographics included subgroup factors by race for selected elementary schools. Composition was used to determine differences in building level minority composition for each school. Schools were then determined as low minority composition, racially balanced (similar enrollment as the greater district), or high minority composition. Collective number and percent performance on EOG assessment was used to define level and percent of successful readers and challenged readers for the building level third grade subgroup, Hispanic subgroup, LEP subgroup, and minority subgroup.

Reading proficiency within a school of interest was coded to reflect number and percent of Hispanic students performing at state defined levels I-IV. District reports of

EOG reading-test scores from the 2007-2008 school year were used to measure differences in reading proficiency attained by third grade students. Building level variables and EOG achievement levels were entered in Microsoft excel temporarily and later converted to SPSS statistical software. The building level data for schools of interest was entered in an EXCEL workbook and was continually verified for accuracy.

Data Analysis

The NC Statewide Testing Program provides reports of schools achievement at the student subgroup, building, district, and state level and North Carolina Department of Public Instruction (NCDPI) recommends test score analysis as a key part of the decision-making process. Initial analysis of publicly available achievement levels included disaggregation of data by demographics at the building level to identify patterns in performance. Further examination of test scores helped to reveal trends at the building level for identified subgroups and established third grade reading proficiency summaries for schools of interest.

To answer the research questions specific to this study, differences in building composition were measured against proficiency achievement scores for third grade students identified as Hispanic and LEP. Exploratory data analysis looked for unexpected and odd scores considered to be outliers. The achievement levels on EOG reading assessment for the Hispanic population was compared separately in schools of interest against building level variables, including percent Hispanic and LEP subgroup, percent poverty and minority that contributed to the building level composition. Specifically, the relationship between building level variables and differences in building level percentage of third grade reading proficient subgroup was examined.

Regression

In quantitative research, the use of statistical analysis particularly, multiple regression, is used to predict and explain. Regression offers a statistical method to describe further the nature of the relationship between variables (Tabachnick & Fidell, 2007). A multiple regression procedure involves the use of two or more potential predictor variables to explain a third measured variable (Tabachnick & Fidell, 2007).

Regression analysis is often used with naturally occurring variables to predict a dependent variable from a number of independent variables. In particular, the researcher was interested in comparing the differences in building level composition (IV's). The analysis assists in determining the degree to which each identified building level variable (IV) contributes to a valid explanation for differences in building level reading proficiency (DV) among Hispanic third grade students. Accordingly, the researcher selected the statistical procedure regression analysis to explain the impact of selected variables that contribute to building composition. A multiple regression analysis confirms that a relationship exists between the identified independent and dependent variables and is considered an appropriate analysis to arrive at answers to the research questions for this study.

Research Questions

Research questions for this study were designed to guide the investigation into building level variables and differences in third grade English reading achievement for the Hispanic subgroup. The proposed study was guided by the overarching question (1) how do building-level variables impact reading achievement scores for Hispanic students, (2) how does composition at the building level relate to differences in Hispanic and LEP

students' third grade reading performance. The study seeks to answer the following questions related to building-level student populations and reading proficiency levels.

Research Question 1 What is the relationship between Hispanic 3rd grade building level reading achievement as measured by End of Grade (EOG) reading proficiency levels and percent minority composition within a school? (% minority: % White)

Research Question 2 What is the relationship between Hispanic 3rd grade building level reading achievement as measured by End of Grade (EOG) reading proficiency levels and percent of building level poverty within a school?

Research Question 3 What is the relationship between Hispanic 3rd grade building level reading achievement as measured by End of Grade (EOG) reading proficiency levels and percent Hispanic composition within a school?

Research Question 4 What is the relationship between building level 3rd grade Limited English Proficient (LEP) reading achievement as measured by End of Grade (EOG) reading proficiency levels and percent minority composition within a school?

Research Question 5 What is the relationship between building level 3rd grade Limited English Proficient (LEP) reading achievement as measured by End of Grade (EOG) reading proficiency levels and percent of building level poverty within a school?

Research Question 6 What is the relationship between building level 3rd grade Limited English Proficient (LEP) reading achievement as measured by End of Grade (EOG) reading proficiency levels and percent building level LEP within a school?

Assumptions of Regression

Ideally, four assumptions of regression must be met to determine a best-fit analysis. Those assumptions include: number of cases, accuracy of data, normality, and linearity

(Hox, 2007; Tabachnick & Fidell, 2007). The first assumption suggests a case-to-independent variable (IV) ratio for regression analysis is 15cases for every IV in the model. The assumption was met as the cases included in the analysis for this study accurately aligned to the suggested ratio. Outliers, missing data, or potential entry errors or are considered tests for accuracy of data. School data used in the research analysis was checked for errors and outliers and missing data was removed or accounted for. The construction of a histogram can show the data is normally distributed and all histograms showed the data was normally distributed. The final assumption, linearity, in regression means a straight-line relationship exists between the IVs and the DV. A test for linearity between IV's and the DV suggests looking at the outcome of a bi-variate scatter plot. The scatter plot of the data for this study resulted in an oval shape, showing the variables of interest were linearly related.

In closing, researchers must take pause when using regression analysis, as causal relationships among the variables cannot be determined. Specifically, while results of data analysis may determine X predicts Y, concluding that X causes Y is beyond the scope of the procedure (Hox, 2007; Tabachnick & Fidell, 2007).

Summary

This chapter provided a description of participants and variables to be used in a multiple regression analysis of publicly available data from one urban school district in the southeastern United States. This type of analysis allowed the researcher to determine the relationship between racial composition of schools and reading success for third grade Hispanic students. Building level measures addressed in the analysis included minority composition in schools, specifically the presence of minority subgroups in schools that

serve significantly fewer White students. Dissimilarity in building level composition with the potential to contribute to achievement differences also includes collective level of poverty based on percent of building level participation in the free and reduced lunch program. Average third grade class size and building-level percent Hispanic and LEP, served as contributors to differences in building level composition and variables to explore relative to the impact on Hispanic achievement.

This chapter provided procedures for the statistical analysis selected to understand within race building level performance trends and patterns of third grade reading proficiency for the Hispanic subgroup attending elementary schools with dissimilar composition of minority and poverty. The next chapter will discuss answers to questions and findings from the analysis of data.

CHAPTER 4: RESULTS

During the initial review of district performance, quantitative data was examined to identify three potential predictors of building level achievement. These included building level poverty, minority composition of schools, and Hispanic and LEP subgroups as a percent of the total school population. The predictor variables were selected because they have historical and current research support related to school environments and minority achievement, because of ongoing documentation of national performance trends among the Hispanic subgroup, and because of the overwhelming research that connects reading success in early grades to future achievement in school. The purpose of this study was to answer questions regarding dissimilarities in building percent for race, poverty, and at or above grade-level in reading proficiency as measured by the EOG Reading assessment for the third grade Hispanic subgroup. In this chapter the researcher presents descriptive statistics for building level variables and the results from regression analysis of archived elementary school data from one district. The following section provides characteristics and initial treatment of building level variables.

Building Level Demographics

Building level demographic variables were used to measure dissimilarities in the composition of participant schools. Participant schools included in the research profile reported greater than six performance scores for the building level achievement of the Hispanic third grade subgroup. After removing elementary schools that did not meet the building level criteria for the Hispanic third grade subgroup, data from sixty-eight

elementary schools was available for use in answering the questions. District scores from archived data in participant schools included building level proficiency levels for all third graders (n=8469). Included in the third grade subgroup, the population of interest consisted of proficiency levels for Hispanic third graders (n=1684) and LEP third graders (n=1018); approximately 80% were Hispanic LEP.

School Environment

Building level composition was selected to describe the school environment for this study. The minority subgroup for participant schools was treated as a comparison of percent White and percent minority, while school poverty was a measure of building level participation in the free and reduced lunch program. After calculating percentages, a categorical number was assigned to each school based on building level minority composition and poverty level within the school. The dichotomous variable building level poverty was treated numerically by assigning high poverty schools a value of “3”, moderate poverty schools a value of “2”, and low poverty schools a value of “1”. Likewise, minority composition was treated numerically by assigning high minority schools a value of “3” racially balanced schools a value of “2”, and low minority schools a value of “1”.

Building Level Poverty

School poverty was measured according to collective building level participation in the free and reduced lunch program. Publicly available school data provided necessary data to calculate the composition of building level poverty for each participant school.

- High Poverty School (HPS) > 60% enrolled in FR lunch
- Moderate Poverty School (MPS) 30-60% enrolled in FR lunch

- Low Poverty School (LPS) < 30% enrolled in FR lunch

Building Percent Minority

Percent school minority was measured according to collective building-level non White subgroup as compared to the collective White subgroup. Publicly available school records provided necessary data to calculate the composition of each participant school.

- Low Minority School (LMS) = minority < 32%; White enrollment reaches > 68% potentially increasing White subgroup to greater than double the district average.
- Racially Balanced School (RBS) = White enrollment falls within the 26% - 67% range with the minority subgroup within ranges of 33% - 74%.
- High Minority School (HMS) = White subgroup is reduced to less than 25% of the building level population, potentially increasing the chance for collective minority composition as high as 75% -100%.

Percent school minority was measured according to the collective building level non White subgroup compared to the collective White subgroup. Table 1 summarizes and groups participant schools by level of composition.

Table 1

Building Level Composition for Participant Schools

Variable	Low	Moderate	High
^a Minority	10 14.7%	16 23.5%	42 61.8%
^a Poverty	13 19.1%	20 29.4%	35 51.5%

Note. Low Minority School-minority subgroup < 32%; Racially Balanced School (Moderate Minority) subgroup is 33-74%; High Minority School-minority enrollment > 75%; Low Poverty School < 25% enrolled in FR lunch; Moderate Poverty School 26-64% enrolled in FR lunch; High Poverty School 65-100% enrolled in FR lunch; ^an=68 total participant schools

Publicly available school demographics provided necessary data to calculate the minority composition of each participant school. Building level counts and percentages for the Hispanic and LEP subgroup attending each participant elementary school was also measured.

Building Percent Hispanic

The presence of the Hispanic subgroup within a school was measured according to district records for each participant elementary school. The Hispanic composition in thirty-nine schools accounted for less than twenty-five percent of the total school population. Twenty-seven schools recorded Hispanic subgroups ranging from twenty-six to fifty percent of the school population. While larger still, the Hispanic subgroup in two participant schools was greater than fifty percent of the total school population.

Building Percent LEP

Building percent for the composition of thirty-eight schools was less than twenty five percent LEP, twenty-eight schools fell in the twenty-six to fifty percent range for building

level LEP, and two participant schools had a building level LEP subgroup of greater than fifty percent of the building level population.

Building Percent Reading Proficiency

At or above grade level in reading proficiency for participant schools was measured according to collective number and building level percent of third grade reaching a level III or IV on the EOG reading assessment. Publicly available school and grade level performance levels provided necessary data to calculate third grade reading proficiency trends of each participant school. Table 2 shows slightly more than half of the third grade population (n= 4521) in the 68 participant schools demonstrated at or above grade level proficiency on the end of grade test of reading while 47% were unable to demonstrate at or above grade reading proficiency (n=3948). Thirty eight percent of the Hispanic subgroup in participant schools demonstrated at or above grade level reading proficiency (n= 659) while 61% did not demonstrate at or above grade reading proficiency, scoring a level I or II on the state end of grade reading test (n=1025). The LEP subgroup from the 55 participant schools presented fewer at or above grade level readers. Only 21% of the LEP subgroup in participant schools demonstrated at or above grade level proficiency on the state test of reading (n=213) while the remaining 78% of the LEP subgroup did not demonstrate at or above grade reading proficiency (n=805).

Table 2

Building level tabulations for 2007-2008 EOG reading achievement

Subgroup	Proficiency Level							
	I		II		III		IV	
^a Third Grade	2210	26%	1738	21%	2899	34%	1622	19%
^a Hispanic	648	38%	377	23%	516	30%	143	8%
^b LEP	572	56%	233	22%	194	19%	19	2%

Note. ^aAchievement levels reported for 68 participant elementary schools. ^b Achievement levels reported for 55 participant elementary schools

Treatment of the data

Excel was used for initial organization and storage of data. The use of a public data set required critical ongoing review of elementary school data. As one of the largest districts in the state, schools are added and removed annually from the list of active district elementary schools. Subsequently, aggregate district reports commonly contained inconsistencies in the list of schools included in demographic and achievement reporting.

SPSS was selected to complete the statistical analysis. While this research included only a subset of all district elementary schools, the data set for each building level variable was manually checked for accuracy prior to transfer to computer software program used for statistical analysis. Prior to analysis of data, all predictor variables and dependent variable were reviewed again for accuracy of data entry and missing or outlier values for each participant school. Collected data from state and district web sites was processed through SPSS to determine significance of the model and potential relationships between variables.

Regression

Publicly-available district data and school-performance variables helped determine measurable differences in the schools environment. Building level variables for participant schools helped to explain differences in building percent at or above grade-level reading. When a problem references the potential for a relationship between some independent variables and a dependent variable, the appropriate analysis is standard multiple regression.

Multiple regression is used to determine how well a set of variables is able to predict a particular outcome, which variable in a set of variables is the best predictor of an outcome, and whether a particular predictor variable is still able to predict an outcome when the effects of another variable are controlled for (Pallant, 2006). Simple linear regression is used to predict values of one variable, given values of another variable (Tabachnick & Fidell, 2006). Simple linear regression is also referred to as a bivariate correlation between the independent and dependent variable. A standard multiple regression stems from the same concept as a simple linear regression, but instead uses several independent variables in predicting the dependent variable. Multiple regression is used to evaluate the relationships between a set of independent variables and a dependent variable. Standard multiple regression tells you the predictive value of the overall model, as well as how well each independent variable predicts the dependent variable while controlling for each of the other independent variables.

Assumptions of Regression

Assumptions refer to distribution of scores and any underlying relationship between variables (Pallant, 2006; Tabachnick & Fidell, 2006). To ensure the output of regression

analysis is reliable Pallant (2006) recommends fifteen cases for each predictor variable. The 68 valid cases and three independent variables selected to answer questions one through three meet the suggested ratio minimum of valid cases to independent variables for multiple regression analysis. Fifty-five valid cases will be used to address questions four through six, and while slightly less than the first model the number of cases remains within the suggested limits (Pallant, 2006).

Regression also has an assumption of linearity. Linearity means that there is a straight line relationship between the IVs and the DV. A test for linearity between an IV and the DV is possible by looking at a bi-variate scatter plot. If the two variables are linearly related, the scatter plot will be rectangular with no noticeable patterns (Pallant, 2006). Residual plots serve as an acceptable test for linearity as well. Residuals are the difference between obtained and predicted DV. The relationship between the residuals and the predicted DV scores tend to be linear due to a linearly relationship between the IVs and DV. Examining a plot of the "residuals" also serves as a test for normality within the regression analysis. A visual examination of the scatter plot verified a relationship between variables for included cases, therefore meeting the assumptions of regression for questions one through three (Tabachnick & Fidell, 2006).

Level of significance

To ensure selected research variables are associated with the outcome measures it is necessary to find a statistically significant relationship between the independent and dependent variables, and ensure the relationship is of sufficient strength (Pallant, 2006). Statistical significance was set at the customary level of .05 and in relevant cases *p*-values greater and less than .10 were noted. Effect sizes and *p* values are reported and

interpreted for the analyses used to answer research questions one through six.

Indications of effect size including r , r^2 , and adjusted r square values, are interpreted in accordance with Cohen's general guidelines, whereby correlations of $r = .50$ are considered "large," $r = .30$ are considered "medium," and $r = .10$ are considered "small."

Descriptive analyses were conducted for each independent variable to identify missing data, frequencies, and distribution patterns. Each potential predictor variable was examined to assess the parameters of its relationship with the dependent variables. Prior to conducting the regression analyses SPSS was used to test for the presence of outliers, violation of the assumptions of multicollinearity or singularity, normality, linearity, and homoscedasticity of residuals.

Correlations

Standardized EOG reading proficiency levels were examined with composition differences for participant schools. To address the problem statement, questions one through three include the independent predictor variables "minority composition" [mnty_school], "composition of poverty" [FR_school], and "Hispanic composition" [Hisp_school]. The dependent variable for questions one through three remained the same "Percent third grade Hispanic subgroup at or above grade-level reading proficiency" [Hisp_Third_LVL_III_IV]. Questions four through six also address the problem statement and included the independent predictor variables "minority composition" [mnty_school], "composition of poverty" [FR_school], and "LEP composition" [LEP_school]. The dependent variable for questions four through six remained the same "Percent third grade LEP subgroup at or above grade-level reading proficiency" [LEP_Third_LVL_III_IV].

The relationship that occurs between highly correlated variables is termed multicollinearity or singularity. Multicollinearity occurs when the predictor variables are very highly correlated (greater than .90). Singularity is the result of joining of one or more other variables and can be observed through a perfect correlation between variables. Indicators of multicollinearity and correlation coefficients confirmed the variables percent minority and percent poverty are linearly related. Due to the overlap of variable influence with a correlation of this strength, the specific level of impact on variance in building percent at or above grade-level reading can be difficult to discern using selected building level predictor variables percent poverty and percent minority composition. Table 3 provides correlations for building level variables.

Significantly correlated predictor variables may misrepresent some significance when multicollinearity is involved. Further examination of the analyses may reveal individual variables with insignificant coefficients while the regression as a whole is significant. This is part in part due to significantly correlated predictor variables that share in the percentage of variance they explain relative to the dependent variable (Pallant, 2006). Therefore, when there are two or more predictor variables, the *b* coefficient can be referred to as a partial regression coefficient, but more often it is reported as a regression coefficient. Correlations of this type are to be anticipated given the nested nature of building level demographics within a school environment.

Examination of correlations between predictor variables revealed building percent minority and building percent poverty were significantly correlated (.948**), yet a correlation at this level violates the acceptable limit of .7 suggested by Tabachnick and Fidell (2007).

The correlations coefficients for building percent at or above grade level (Table 3) resulted in a Pearson Correlation that is very similar for percent poverty and percent minority composition at $-.580^{**}$ and $-.545^{**}$ respectively, significant at the 0.01 level. While only slightly stronger, percent poverty within a participant school serves as a stronger predictor of at or above grade-level reading proficiency than building percent minority.

Table 3

Correlations for Participant Schools

Variable	Building Percent				EOG Level III/IV		
	1	2	3	4	5	6	7
1 % BL Minority	1						
2 % BL Poverty	.948 ^{**}	1					
3 % BL Hispanic	.602 ^{**}	.646 ^{**}	1				
4 % BL LEP	.644 ^{**}	.699 ^{**}	.938 ^{**}	1			
5 % 3 rd Grade	-.912 ^{**}	-.930 ^{**}	-.484 ^{**}	-.552 ^{**}	1		
6 % Hispanic	-.545 ^{**}	-.580 ^{**}	-.314 ^{**}	-.386 ^{**}	.642 ^{**}	1	
7 % LEP	-.342 [*]	-.369 ^{**}	-.045	-.110	.480 ^{**}	.714 ^{**}	1

Note. ^{**}. Correlation is significant at the 0.01 level (2-tailed).

^{*}. Correlation is significant at the 0.05 level (2-tailed).

Regression Analysis

For questions one through three the dependent variable, building percent at or above grade level in third grade reading-proficiency for the Hispanic subgroup, was regressed

on to each of the three independent variables: building percent minority, building percent poverty, and building percent Hispanic. For questions four through six the dependent variable building percent at or above grade level in third grade reading-proficiency for the LEP subgroup was regressed on to three independent variables: building percent minority, building percent poverty, and building percent LEP.

Unlike other regression models, when using standard multiple regression analysis the independent variables are entered into the regression equation at the same time.

Subsequently, building level variables including percent poverty, percent collective minority, and percent Hispanic or percent LEP for participant schools were entered into the SPSS regression analysis at the same time to answer the research questions. Research questions one through three related to the Hispanic subgroup, and four through six related to the LEP subgroup, are answered in the following section.

Research Questions

Question One: What is the relationship between building level Hispanic 3rd grade achievement as measured by End of Grade (EOG) reading proficiency and percent minority composition within a school?

Model I included building percent at or above grade-level reading for Hispanic 3rd grade and predictor variables building percent Hispanic, building percent minority, and building percent poverty. The correlations between predictor and criterion variables revealed building percent minority composition and building level poverty were highly correlated (Table 3). Therefore, Model I was adjusted and predictor variable data related to building percent minority was removed from the analysis. Analysis with variables in Model II was completed absent of the predictor variable building percent minority, yet

only slight differences were evident between the results for Model I and Model II. In Model I, approximately 31% of the variance in building percent at or above grade level is predicted by the combined impact of the three predictor variables including building percent poverty, building percent minority, and building percent Hispanic ($r = .585$, $r^2 = .343$, Adjusted $r^2 = .312$, statistically significant at the $p < .000$ level). An Examination of Beta weights for Model I reveals a statistically less significant outcome for the model.

Table 4 displays the analyses of Model I and Model II. Model II accounts for 32 % of the variance in the building percent at or above grade-level reading proficiency, $r = .585$, $r^2 = .342$, Adjusted $r^2 = .322$, $p < .0005$.

Table 4

Two separate Hispanic model summaries for predictor variable percent school minority

Model I

	Including BL Minority				
	r	r^2	Adjusted r^2	f	p
	.585	.343	.312	11.113	.000 **
Variable	B	SE	B	p	
% BL Minority	.036	.218	.053	.868	
% BL Poverty	-.448	.213	-.698	.040	
% BL Hispanic	.122	.155	.105	.433	

Note. Calculations for 68 participant schools

Model II

	BL Minority - Variable Removed				
	r	r^2	Adjusted r^2	f	p
	.585	.342	.322	16.908	.000**
Variable	B	SE	B	p	
% BL Poverty	-.415	.085	-.647	.000**	
% BL Hispanic	.121	.154	.104	.433	

Note. SPSS 17; Calculations for 68 participant schools

Removing the predictor variable, building-percent minority, resulted in slight changes in the model, specifically the part of the variance in the DV that is predicted by the IV. There was no change in the model for r (.585), and differences from Model I to Model II for r^2 was slight ($r^2 = .343$, .342 and adjusted $r^2 = .312$, .322 respectively).

The f -test is used to test the significance of r , and subsequently r^2 , and the regression model as a whole. The results from the f -test in Model I ($f=11.113$) increased in Model II ($f=16.908$) and remained statistically significant. In other words the second regression

model became a stronger model with percent minority removed from the analyses, while the probability remains significantly better than would be expected by chance. Building percent Hispanic remained statistically insignificant in Model II, yet the unique contribution of building percent poverty increased from Model I to Model II ($\beta = -.698, -.647$ respectively).

Model I was no longer used for analysis. Question two was addressed based on the Model II whereby percent school minority was removed from the analysis. Model II included the predictor variables building percent Hispanic and building percent poverty. Subsequently, a regression analysis was performed controlling for predictor variables building percent poverty and percent Hispanic composition in participant schools.

Question Two:

What is the relationship between building level Hispanic 3rd grade achievement as measured by EOG reading proficiency and building level poverty within a school?

I examined standardized building level EOG reading levels for the Hispanic third grade subgroup relative to the percentage of building level poverty for participant schools. Specifically, I regressed the DV, building percent at or above grade level for the third grade Hispanic subgroup on the IV, building percent poverty. The correlation coefficients in Table 3 shows a Pearson Correlation of $-.580$ for building percent at or above grade level for the third grade Hispanic subgroup and building percent poverty. The correlation is statistically significant at the 0.01 level. With adjusted β of $-.647$, building percent poverty is statistically significant at the 0.01 level contributing the greatest unique effect on the variance in the DV for Model II.

Question three:

What is the relationship between building level Hispanic 3rd grade achievement as measured by End of Grade (EOG) reading proficiency and percent Hispanic minority within a school?

In order to assess achievement for the participant schools, a standard linear regression analysis was conducted. Building percent at or above grade level for the Hispanic third grade subgroup as the DV was examined with building percent Hispanic as the predictor variable. Table 3 shows a Pearson Correlation of $-.580$ statistically significant at the $p < .01$ level for building percent at or above grade level for the third grade Hispanic subgroup and building percent Hispanic. Analysis of building percent at or above grade-level reading proficiency for the third grade Hispanic subgroup with building percent Hispanic was statistically significant with Pearson correlation of $-.314$ at the 0.05 level of significance. Building percent Hispanic demonstrated a statistically significant Pearson correlation,

Further examination required the review of standardized building level EOG reading levels for the Hispanic third grade subgroup, relative to the predictor variable building percent Hispanic for participant schools. Specifically, the DV building percent at or above grade level for the Hispanic subgroup was regressed on the IV building percent Hispanic for participant schools. Beta weights in Model II were examined to understand the unique influence of the building percent Hispanic on percent at or above grade level reading proficiency for the Hispanic subgroup was statistically insignificant. The adjusted β $-.104$ was statistically insignificant at the $p < 0.433$ level. This indicates there is no significant difference in the effect of building percent Hispanic on percent at or above

grade-level reading proficiency for the building percent third-grade Hispanic subgroup in participant schools.

Building percent poverty was the only statistically significant predictor variable for Model II, ($\beta = -.647$, $p < .001$). Considering the results of the analysis, there is a 95% chance of Model II being true if the two predictor variables and the criterion variable are included.

Questions 4-6 LEP

Regression analysis was selected to examine the third grade LEP subgroup at participant schools. A subgroup heavy with Hispanic membership increases the need to explore specific building level variables to explain dissimilar proficiency outcomes for building percent of third grade LEP, performing at or above grade level as measured by tests of reading proficiency. Data and variables were used to identify dissimilarities in the environment of participant schools.

To answer research questions four through six, LEP criterion and predictor variables were entered simultaneously into regression analysis. The dependent variable building percent at or above grade level in third grade reading-proficiency for the LEP subgroup was regressed on to three independent variables: building percent minority, building percent poverty, and building percent LEP. As with the Model I and II, correlations between variables were examined to confirm assumptions of regression. A visual examination of the scatter plot verified a relationship between variables for included cases for questions four through six, therefore meeting the assumptions of regression (Tabachnick & Fidell, 1996).

Correlations coefficients for building percent LEP at or above grade level included

building percent minority ($-.342^*$ significant at the 0.05 level), building percent poverty ($-.369^{**}$ significant at the 0.01 level) and building percent LEP ($-.110$ not statistically significant). Predictor variables for Model III only accounted for approximately 10% of the variance in building percent at or above grade level ($r^2 = .159$); adjusted $r^2 = .109$), which was marginally significant at the $p=.031$ level. Building percent poverty ($\beta = -.499$, $p=.152$) building percent LEP ($\beta =.191$, $p = .250$), and building percent minority ($\beta =.013$, $p = .968$) were statistically insignificant (see Table 5).

Table 5

Two separate LEP model summaries for predictor variable percent school minority

Model III

Including Minority					
	<i>r</i>	<i>r</i> ²	Adjusted <i>r</i> ²	<i>f</i>	<i>p</i>
	.399	.159	.109	3.210	.031
Variable	B	SE	<i>B</i>	<i>p</i>	
% BL Minority	.009	.211	.013	.968	
% BL Poverty	-.307	.217	-.499	.152	
% BL LEP	.199	.171	.191	.250	

Note. Due to reporting criteria for inclusion of subgroup performance in publicly available data, only 55 participant schools were included in LEP calculations.

Model IV

Without Variable Building Level Minority					
	<i>r</i>	<i>r</i> ²	Adjusted <i>r</i> ²	<i>f</i>	<i>p</i>
	.398	.159	.126	4.908	.011
Variable	B	SE	<i>B</i>	<i>p</i>	
% BL Poverty	-.300	.100	-.487	.004	
% BL LEP	.198	.168	.190	.245	

Note. Due to reporting criteria for inclusion of subgroup performance in publicly available data, only 55 participant schools were included in LEP calculations.

This indicates that variables included in Model III there is no significant difference in the effect of building percent LEP, building percent poverty, or building percent minority on percent at or above grade-level reading proficiency for the building percent third-grade LEP subgroup. Concerns of multicollinearity and singularity occurred when examining analysis under Model III. Model I showed the removal of the predictor variable building level minority improved the overall model. Given the relationship

between first language experiences among the Hispanic school age population and the dominant presence of the Hispanic population in the LEP subgroup, correlations are anticipated for the LEP model.

While not part of the regression model, the highly correlated variables percent LEP and building level percent Hispanic, .938 significant at the 0.01 level can be considered the result of multicollinearity. The relationship can be the result of the joining one or more other variables referred to as singularity. Data for the predictor variable building percent minority was removed from the analysis, yet only slight differences were evident between the Model III and more recent Model IV. Table 5 displays the analyses of Model III and Model IV. Model IV accounts for 12 % of the variance in the building percent at or above grade-level reading proficiency, $r = .398$, $r^2 = .159$, Adjusted $r^2 = .126$, $p < .011$ (see Table 5). With building percent minority removed from the design Model IV presents a slightly stronger model as seen in the difference in the f - test results for Model III and Model IV respectively ($f=3.21$ $p < .031$ and $f = 4.90$, $p < .011$).

Question Four:

What is the relationship between building level 3rd grade LEP achievement as measured by End of Grade (EOG) reading proficiency and building percent minority within a school?

I examined standardized building level EOG reading levels for the LEP third grade subgroup relative to the percentage of building level minority for participant schools. Specifically, I regressed the DV, building percent at or above grade level for the LEP subgroup on building percent minority, the IV. An examination of correlation coefficients for LEP at or above grade-level reading proficiency and the predictor variable building

percent minority, revealed a moderately significant correlation of $-.342$ at the $p < .05$ level. Model III included building percent at or above grade-level reading for LEP 3rd grade and predictor variables building percent LEP, building percent minority, and building percent poverty. The predictor variable building percent Minority in Model III showed adjusted $\beta = -.0134$ with $p = .968$ which was statistically insignificant. This indicates there is no significant difference in the effect of building percent minority on percent at or above grade-level reading proficiency for the building percent third-grade LEP subgroup.

Question Five:

What is the relationship between building level 3rd grade LEP achievement as measured by End of Grade (EOG) reading proficiency and building percent poverty within a school?

I examined standardized building level EOG reading levels for the LEP third grade subgroup relative to the percentage of building level poverty for participant schools. Specifically, I regressed the DV, building percent at or above grade level for the LEP subgroup on percent building level poverty, the IV. Building percent at or above grade level reading proficiency for the third grade LEP subgroup resulted in a statistically significant Pearson Correlation of $-.369^{**}$ for building level percent poverty.

The correlation displayed in Table 3 shows a statistically significant Pearson Correlation of $-.369$ at the 0.01 level for building percent at or above grade level for the third grade LEP subgroup and building percent poverty. With an adjusted $\beta = -.487$ building percent poverty is statistically significant at the $p = .004$ level and contributing the greatest unique effect on the variance in the DV for Model IV.

Question Six:

What is the relationship between building level 3rd grade LEP achievement as measured by End of Grade (EOG) reading proficiency and percent building LEP within a school?

I examined standardized building level EOG reading levels for the LEP third grade subgroup relative to the percentage of building level LEP for participant schools. Specifically, I regressed the DV, building percent at or above grade level for the LEP subgroup on percent building level poverty, the IV. A Pearson Correlation of $-.110$ is not statistically significant for predicting building percent at or above grade level for the third grade LEP subgroup based on building level percent LEP composition (see table 3).

The adjusted beta weight for building percent LEP ($\beta = .190$) in Model IV shows the unique influence on percent at or above grade-level reading proficiency for the LEP subgroup was statistically insignificant ($p = .245$). This indicates there is no significant difference in the effect of building percent LEP on percent at or above grade-level reading proficiency for the building percent third-grade LEP subgroup.

Summary

This chapter presented building level variables and demographics characteristic of participant schools and the results of regression analyses. The research looked to study the effect of building level composition on achievement, as measured by building percent reading proficiency. Regression analysis was selected to address the research questions. Select variables helped to determine the relationship between building level composition and achievement, whereby examining the unique contribution of variables that affect

achievement, including building level differences in composition including poverty and race.

Question one through six examined if composition of minority and poverty at the building level could significantly predict reading achievement for Hispanic and LEP third grade subgroups. Specifically, questions one through three explored Hispanic 3rd grade reading proficiency relative to collective building percent composition for minority, poverty, and Hispanic, subgroups, while questions four through six examined 3rd grade reading achievement for the LEP subgroup relative to collective building-percent minority, poverty, and LEP composition in select participant schools.

The results indicated that there was a significant relationship between some building level variables. The results of the regression analysis revealed that minority and poverty were too closely correlated and it was necessary to leave building percent minority out of the model and analyses. Building percent poverty was determined a statistically significant predictor variable in both models. Further interpretation of the results will follow in chapter 5.

CHAPTER 5: SUMMARY AND DISCUSSION

This final chapter provides a review of the research problem, followed by a summary of research findings, and a discussion of results with conclusions. The next section addresses limitations of the current study and recommendations for future research.

The chronic gap in achievement raises concerns for the future success of diverse students. The number of Hispanic students attending public school continues to grow, yet scores on tests of reading proficiency remain low for a large percentage of this minority subgroup. Research clearly reflects the early attainment of reading proficiency is critical for all children to succeed in school and proficiency in grade level reading can potentially serve to promote success or failure in school. Poor performance is complicated by many factors found to impact student achievement, yet for those children in advanced grades who rely primarily on the school for exposure to content and proficiency in curricular standards grade level reading is critical.

Many factors within public education are found repeatedly and unequivocally to influence opportunities for successful student achievement. For Hispanic students, experiencing multiple factors at the onset of formal schooling, may significantly impact all subsequent grade level achievement opportunities. Building level variables contribute to recognizable differences in the composition of schools including levels of poverty, race, and resources. Specifically, differences in race and class link to resources and opportunity to learn, whereby examination of the composition of schools revealed resources follow color (National Association for the Advancement of Colored People

[NAACP], 2006). To clarify, financial spending reports fewer resources are available to schools serving minority students of color when compared to schools serving largely White students and students from middle or upper class homes. Incidentally, school composition remains important in the achievement of minority subgroups relative to the impact of building-level factors known to affect learning outcomes (Brookover, 1978; Hanushek, Kain, Markman, & Rivkin, 2003; Kagan, 1990; Stewart, 2008; Waxman, 1992; Wilson, J. 1986).

This study examined the relationship between building composition of school and building percent reading performance at or above grade level for the Hispanic and LEP third grade. The purpose of this study was to understand interactions between building level trends in performance, patterns of reading proficiency, and building composition in elementary school. Specifically building percent poverty and building percent minority and Hispanic reading performance on the end of grade reading test was examined through the collection of publicly available data. Dissimilarities in school composition was explored as a plausible reason for disparities in proficiency for Hispanic third grade students. This study design contributes to the growing body of knowledge related to the achievement challenges among Hispanic students in public school.

Research questions emerged regarding the relationship between building level factors and achievement of Hispanic students in public school. Hispanic and LEP reading performance in participant schools was determined from aggregate building-level proficiency levels from the state end of grade reading assessment administered to all third grade students in the spring of the 2007-2008 school year. Specifically, this study looked to examine the potential of building level variables as indicators of future

proficiency. This research tested potential explanations related to building level school composition as indicators that may precede future achievement. Potential variables considered for their value as a leading indicator includes variations in building percent that can influence the overall composition of the school; including building percent minority, Hispanic, LEP, and poverty. This investigation differed from traditional research on Hispanic achievement because the outcome targeted within race comparisons rather than across race analysis. The study presents a combination of factors not fully explored in current research, which makes the research outcomes of this study particularly useful to schools concerned with the proficiency and achievement of Hispanic subgroups.

This study was guided by six research questions which addressed how building-level variables impact reading achievement scores for Hispanic third grade subgroup at participant schools and how building level composition relates to differences in Hispanic and LEP third grade reading performance. This investigation sought to explore dissimilarities in school composition and the relationship to Hispanic achievement in third-grade; reading proficiency served as the measure of achievement for this study.

Summary of Research Findings

Building level variables contribute to recognizable differences in the composition of schools including levels of poverty, race, and resources. Specifically, differences in race and class in schools link to resources and opportunity to learn (NAACP). School composition remains important because many building-level factors are known to affect learning outcome. The relationship between individual at-risk variables that undermine a students' potential to achieve and measures of student proficiency has raised concerns for

equitable opportunities to be successful in school. The analysis of data examined if composition of minority and poverty at the building level could significantly predict reading achievement for Hispanic and LEP third grade subgroups. Questions explored 3rd grade reading proficiency for the Hispanic and LEP subgroups relative to building percent composition for minority, poverty, and Hispanic, and LEP subgroups at participant schools. The results indicated that there was a significant relationship between some building level variables. The results of the regression analysis revealed that minority and poverty were too closely correlated and it was necessary to leave building percent minority out of the model and analyses. Building percent poverty was determined a significant predictor variable in both models. The strength and impact of collective race and poverty on achievement will be addressed in the results and conclusions that follow.

Discussion of Building Percent Minority and Percent Poverty

The research results revealed that percent minority in participant schools paralleled percent poverty. This finding suggests that when multiple minority subgroups are considered as a single subgroup, many students are equally enrolled in the Federal free and reduced lunch program, a measure of poverty. The 2008 Condition of Education identified one-third of Hispanic students attended a high poverty school (NCES, 2007; Condition of Education, 2008). Likewise, recent research has emerged finding high minority schools are increasingly seen as high poverty schools as well (August & Hakuta, 1997; Fry & Gonzales, 2008; Kohler & Lazarin, 2007; Morse, 2005; Moss & Puma, 1995; Condition of Education, 2009). This current study adds to the existing research on achievement challenges linked to poverty and highlight the need to begin addressing the challenge for the rising number of Hispanic and LEP subgroups.

Concentrated levels of student poverty are related to school opportunities and achievement-level in school. Public schools experiencing a rise in attendance of economically disadvantaged Hispanic students also show limited growth in building level performance (NCES, 2007). Large scale and national reports show poverty continues to return as a significant predictor of achievement differences, beyond the issue of race. In the current research as well, poverty emerged as the most significant predictor variable. A single poverty related variable is not targeted as the culprit that robs students of achievement opportunities. As seen in this small study, it is more likely a result of multiple joining factors that increase proportionately with building percent poverty including percent minority, school resources, classes taught by less qualified teachers and building level peers with lower levels of achievement (Clotfelter, Ladd, & Vigdor, 2004, 2005; Orfield & Eaton, 1996).

Discussion of Reading Proficiency and Poverty

The analysis of participant school data aligns with the national challenge of grade level reading proficiency and limited success in school for Hispanic school age population. Evident in this research is the unceasing challenge to attain reading proficiency in early elementary grades. Far from a new idea in research, presenting analysis of data that shows poor reading proficiency seems superfluous. Walberg (1983) raised concerns over a decade ago relative to more than half of the nation's poorest fourth graders unable to demonstrate reading proficiency. Based on building level EOG proficiency levels observed in this study, the researchers' concerns rest with 47% of third graders, 61% of Hispanic third graders, and 79 % of LEP third graders who are unable to achieve or demonstrate the necessary grade level reading proficiency. While all

elementary schools were not included in the current study, analysis of district EOG outcome levels and that of participant schools in this research aligned (see table 6).

Building percent poverty demonstrated a strong relationship with percent at or above grade level reading proficiency for the Hispanic and LEP third grade subgroup. Specifically, the results revealed that building percent at or above grade level reading proficiency for Hispanic and LEP subgroups showed a negative relationship with building percent poverty. This finding suggests that to increase the percent of participant schools achieving at or above grade level proficiency, the building percent poverty must go down. Put another way, fewer level III and IV's at a school equates to higher levels of poverty. This result was not surprising, since previous research found a high prevalence of Hispanic students attending the highest poverty schools and demonstrating limited success.

When aligned with the predictor variable percent building poverty, building percent minority, the variable which represented achievement and demographics for all non White members of the building level population for participant schools showed a very similar outcome analysis for correlation, strength in significance, and grade level reading performance. Interestingly, building percent Hispanic and building percent LEP serve as a subset of the building percent minority variable, yet when were considered in the model, neither one showed a significant correlation with building percent at or above grade level reading proficiency. Therefore the increased presence of either group does not significantly increase or reduce the percent of at or above grade level reading proficiency; percent poverty is the overriding variable.

It was necessary to keep the scope of this study narrow, and rather than random assignment or experimental design, participant schools were selected through an ex post facto research design. While the results are not generalizable, this study does highlight a relatively untouched perspective to explain the relentless low performance scores in national reports of reading proficiency.

Implications for Practice and Further Study

Schools that remain focused on lagging indicators of achievement and wait to identify students challenged by reading in third grade may be setting themselves up for an endless road of reactive efforts of support for struggling readers. Students that fail to demonstrate reading proficiency on the assessment of early skills in the first years of formal schooling should attract attention as a subgroup in need of immediate targeted support until proficiency is reached.

Comparing and evaluating student performance can be the most challenging and potentially misleading part of making comparisons with student achievement data. Many combinations of characteristics and circumstances affect the final outcome in schools, as seen each year in how well students learn. Support efforts can be direct and meaningful when schools come to understand the served population and the impact of identified indicators of achievement. Identifying leading indicators of achievement (Foley, et. al, 2008) can help schools and districts develop a clear directional picture for building level performance. Subsequently proactive efforts can inform decisions related to school environments considered at risk (Waxman, 1997; Bronfenbrenner, 1978) to address student achievement prior to the cycle of poor reading proficiency outcomes scores.

Foley et al., (2008) suggest seeking out hard to quantify indicators, specifically those factors not readily looked at by schools. A more accurate population specific picture of achievement emerges when probing questions narrow in on predictors and indicators of achievement and not simply outcome scores. School level data commonly reveals potential indicators, yet to serve as predictors some creativity may be required when seeking out ways to measure less widely used indicators (Foley et al., 2008). When school and achievement data is blended with leading indicator data, collected specific to a population of interest, districts can act early to ensure effective intervention strategies fulfill the objective to detour students from a path of poor achievement (Foley et al., 2008). Driving the preemptive efforts, researchers suggest schools “*intervene without being intrusive, tell the story, and make it shift in a different more positive way*” (Foley et al., 2008).

Little information is collected or analyzed on indicators that can serve as signals of progress; indicators that precede eventual achievement gains yet, inform schools of anticipated gains to occur in the future (Foley et al., 2008). To identify potential leading indicators of achievement in schools with less promise of building level success, this study examined indicator variables associated with performance and school improvement. The role of building level composition in the success of Hispanic and LEP subgroups is less frequently examined as an indicator of future school level achievement. According to Foley et al, (2008) demographic data, instructional process data, and opinion perception data should be considered when seeking out potential indicators of trends and patterns.

Public schools across the nation can anticipate ongoing grade level challenges for Hispanic students that fall in the minority achievement gap for proficiency in grade level reading. When comparing U.S. public schools or districts, it is crucial to consider not only a variety of factors, but also the circumstances behind them that help to explain differences among districts or schools that otherwise seem similar.

Early schooling variables impact achievement beyond a single isolated grade level; future achievement is impacted in subsequent grades as well. Therefore, the schooling environment in the first years of formal schooling needs to ensure the opportunity for early grade proficiency for all students is present. Building level poverty contributes significantly to achievement differences, yet what remains for future research is examining the persistent presence of poor grade level reading proficiency compared to the building level economic wealth of peers. More research is needed to understand the dismantling effects of poverty and reading proficiency on opportunities for future success in school. Specifically for this study, demographic data is used to understand dissimilarity in building percent poverty and building percent minority in participant schools.

More than fifteen percent of the nations' students will experience reading challenges in the first three years of school according to The Report of the National Reading Panel (NICHD, 2000). Research on reading in K-3 early elementary grades has been able to link achievement of low reading scores to ongoing struggles with reading success later in school (Juel, 1988; NICHD, 2000). Therefore, performance on third- grade measures of reading tend to predict future performance in reading making it a critical time for all students, but most of all for those whereby building level variables potentially impact their opportunity to be successful.

Students not reaching grade level proficiency at the close of third grade, struggle with the long-term impact of poor reading fluency through middle and high school years (NIFL, 2006). Students who have established grade level fluency are more prepared to capitalize on grade level reading proficiency as a tool to achieve on tests of content and skill. When performance scores do not demonstrate grade level proficiency on measures of reading, successfully reaching the goal of reading in higher grades may be difficult. Therefore informed with knowledge of the impact of building level poverty relative to building percent at or above grade level in reading proficiency, schools must be proactive before the third grade. The use of reading in third grade as a lagging indicator can only offer marginal reactive support for future success in reading achievement.

Key to success is having in place population-specific strategies that offer a positive trajectory for subgroup success rates before the opportunity arises for negative outcomes to occur (Bernhardt, 1998; Foley et al., 2008). For districts that identify successful 3rd grade reading proficiency as a leading indicator of grade level reading proficiency throughout high school, the building level goal then becomes increasing the number of students reaching the early grade level reading benchmarks and proficiency before the close of third grade.

It should be noted this study represented one of the few studies that chose to address inter Hispanic performance across a district whereby comparing Hispanic to Hispanic, rather than the more commonly noted between race comparisons. Though the variables did not all significantly relate, this study did reinforce beyond suspicion the prevalence of reading challenges for the Hispanic and LEP subgroup that remain challenged to perform on tests within the district.

Future studies that are able to investigate student level performance and demographics, looking potentially at other common demographics associated with the Hispanic and LEP subgroup could further inform opportunities for future reading achievement. The large amount of district and building level data that is publicly available and therefore leaves no room for educators and administrators to remain uninformed with regard to the low achievement patterns among the school population. Taking steps to drill down beyond building level data into classroom teacher and student level variables can serve as a first step to apply statistical reasoning to understand the performance of Hispanic and LEP population in their class and school.

Limitations

Weakness for the studies research design includes the nested nature of factors at student, classroom, and building level revealed an interconnectedness of variables. Researching school environment variables at the building level makes it difficult to isolate the influence of a single building level factor on achievement differences. Specifically, the multi- level impact of school variables makes it difficult to look toward a single variable in building level data to explain differences in school performance. Accordingly, this study design accepts the dissimilarity of site-specific student, class, and school factors that contribute to achievement differences as beyond the reach of this research. The researchers' understanding of achievement related to testing outcome reports was weakened as well by the format of State, district, and school level reports. Specifically, summaries of building level of data limited the scope of information available to explain subgroup performance and achievement. A second limitation lies with accuracy of public data inconsistencies were identified early with misdirected links

and inconsistencies within select labeling while all data was obtained from the district managed data base, information related to a participant school may differ depending on the path sequence that was used to drill down to the specific subgroup data.

Aggregation Bias and Ecological Fallacy

An ecological view in research proposes that direct and indirect influences, a result of contextual factors at multiple levels, impact the experiences of the child (Neugebauer, 2008). Ecological fallacy refers to a process where a researcher may attempt to arrive at conclusions about individual relationships solely based on the analysis of aggregate data (Hox, 2002 p.3). An error occurs when aggregate statistics from naturally occurring data are used to inform inferences about individuals who, while members of the larger population, were not part of the research data (Isaac & Michael, 1971).

Stereotypes, a term more commonly used in education, is one form of ecological fallacy that makes the assumption that student subgroups are homogeneous based on their membership in the identified group. Accordingly, results from data analysis for this study relate to building level variables and reported test scores for select elementary schools in said district only. Put another way, results are not generalizable to populations or school environments outside of the research sample. The researcher suggests additional studies to answer questions related to populations outside of this district.

Yet another limitation, schools frequent use of the broad race identifier term *Hispanic* often gives the impression that all students share similar experiences. As shown many times throughout the review of research, Hispanic students similarities tend to fall on factors of race and native language whereby dissimilarities occur on significantly more school, home, cultural, and personal factors. The researcher would be remiss not to

acknowledge the contributing factors within the Nations' Hispanic population that contribute to the diversity of the student population. While beyond the scope of publicly accessible data, factors include but are not limited to: early schooling experiences, home learning opportunities, native culture, schooling history, first and second language experiences, English and Spanish language proficiency levels, reading level in a native language, and country of origin., information on length of time in U.S. schools, language proficiency for the LEP and Hispanic subgroup can be telling of performance differences yet was not part of the analysis. A correlation for language proficiency scores with reading proficiency scores may have further informed the impact of building level variable considered in this study.

A final limitation in using building level variables is data does not take into account specific qualitative teacher interaction, instruction, or classroom environment variables. Teacher efficacy and performance as a successful teacher trained to serve diverse populations remains challenging for schools. ESL classes and services provided within each school also remain unknown for this study. Many factors can potentially impact a successful schooling experience and increase performance on grade level tests for Hispanic populations. Specifically, many school environment variables beyond race and economic disadvantage relate to the experiences of students in school and have the potential to increase scores on assessment of reading early in school.

All public elementary schools have in place literacy and language guidelines and necessary curricula proposed by the State to serve the districts' kindergarten through third grade population. Limitations with the research design of this study include variables left unknown at the classroom, teacher, and student level. With the best intentions, program

implementation and adherence to the standard course of study across classrooms and schools within the district would offer equal exposure to general content and curriculum aligned with the state EOG assessment measures. Yet another limitation of this study, the potential for dissimilar levels of exposure to curricula in sample schools cannot be confirmed without further research.

All elementary schools in the district follow the state SCOS for kindergarten through fifth grade. Identified grade level benchmarks align with the NCSCOS and are used to progress monitor and test proficiency in grade appropriate reading skills and fluency. While not publicly reported, the researcher has personal experience with district wide accountability measures in place to progress monitor and measure growth in beginning and early indicators of early literacy skills for kindergarten through second grade and reading fluency in third grade. The DIBELS is given to Kindergarten through third grade students throughout the district three times a year, and also serves as a measure to monitor monthly progress of challenged readers.

Under Title III Federal mandates annual English language proficiency scores must show growth and achievement for the language minority subgroup. Federal mandates require all school in the district to provide services to support equitable achievement opportunities for school age linguistic minority students. Based on annual assessment of English language proficiency, services are offered through ESL programs to accommodate the needs of linguistic minority or LEP students.

To clarify for this study, the role additional home and school variables that explain differences in Hispanic achievement, are beyond the scope of this study, and therefore not addressed in data analysis. The researcher cannot disregard the significance of quality

educators, instruction, and curricula, in the process of reading achievement, as well as necessary cognitive ability for grade level success. Albeit contributing factors, the above mentioned areas of education that can impact performance in public school, remain beyond the focus of this research study.

Conclusions

A great deal of research has gone into understanding and subsequently efforts to meet the needs of the growing diversity in public education as well as the importance of successful reading prior to exiting third grade for all children. However based on current district reading proficiency scores, strategies appear less than successful for too many of the third grade Hispanic subgroup in this one district. To take much needed steps towards improving opportunities for success in school for all students and to truly impact the achievement of diverse subgroups, knowledge from local and national research must become part of how schools function and serve our most marginalized subgroups.

In order to enhance our understanding of factors that relate to Hispanic achievement in public education further studies are needed to reveal variables that serve not as lagging indicators, but instead early indicators of future achievement. Accordingly, this research was designed to investigate how selected building level variables predicted the achievement of Hispanic third grade.

Public schools across the nation can anticipate ongoing grade level challenges for Hispanic students that fall in the minority achievement gap for proficiency in grade level reading. Based on the outcome of the research, the collective composition of race and poverty and the impact in schools, serves as a potential indicator for districts and schools

to consider when making decisions about achievement opportunities for Hispanic minority in early elementary school.

If tied to levels of performance, future attention to these factors may help to narrow the chronic performance gap between Hispanic and nonminority peers. The identification of potential leading indicators can allow schools to move proactively to address student challenges, before the reading failure later in school has a chance to occur. Equally critical is a necessary shift in how schools view the severity of the matter, followed by a commitment to combat the cycle of failure. Districts and schools can begin efforts by taking necessary steps to assure reading proficiency by third grade is a non negotiable goal for all children and all learning environments.

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- Public Schools of North Carolina
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- Public Schools of North Carolina
<http://www.ncpublicschools.org/accountability/policies/naep/naep>
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- Public Schools of North Carolina
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- Public Schools of North Carolina
<http://www.ncpublicschools.org/curriculum/languagearts/scos/2004/14gradesk2>
- Public Schools of North Carolina <http://www.ncpublicschools.org/readingfirst/>
- Public Schools of North Carolina
<http://www.ncpublicschools.org/curriculum/languagearts/scos/2004/32appendixa>
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APPENDIX A: INSTITUTIONAL REVIEW BOARD EXEMPTION LETTER



UNC CHARLOTTE

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Institutional Review Board (IRB) for Research with Human Subjects

Approval of Exemption

Protocol #	09-04-26		
Title:	Schooling Context and Opportunity for Hispanic Achievement: Exploring School Composition and Third Grade Reading Scores		
Date:	4/30/2009		
Student Investigator	Ms. Kendra	Bowden	Middle, Secondary, K12 Educ
	Cornwell		
Responsible Faculty	Dr. Warren	DiBiase	Middle, Secondary, K12 Educ

The Institutional Review Board (IRB) certifies that the protocol listed above is exempt under category 4 .

Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

Please note that it is the investigator's responsibility to promptly inform the committee of any changes in the proposed research, as well as any unanticipated problems that may arise involving risks to subjects. Amendment and Event Reporting forms are available on our web site: <http://www.research.uncc.edu/comp/human.cfm>

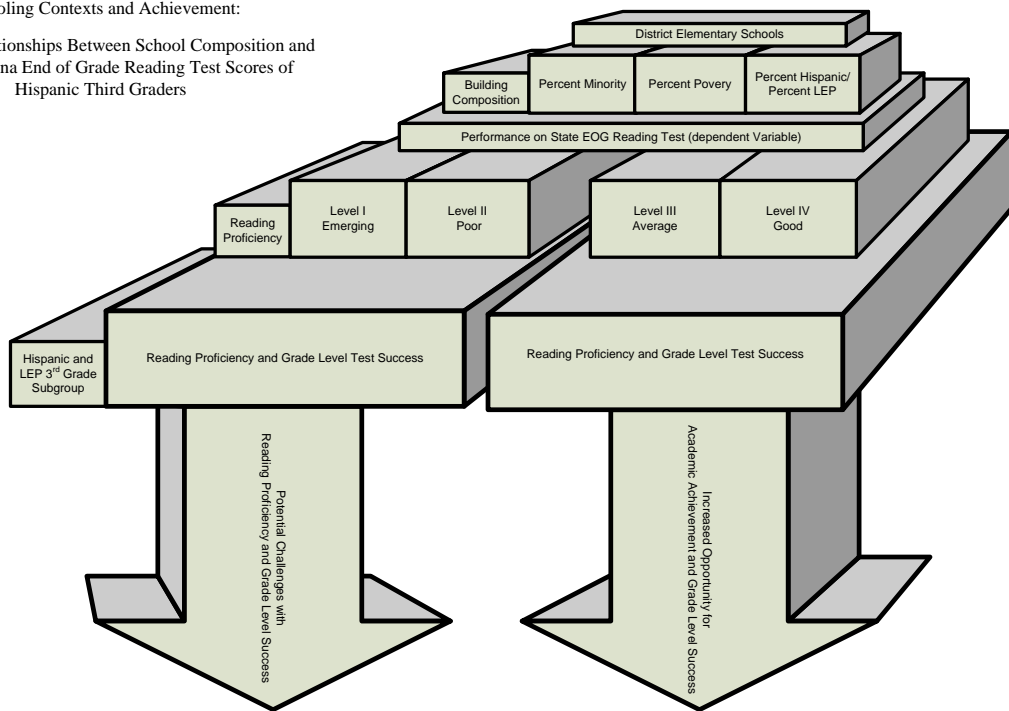
 4-30-09
Dr. M. Lynn Exum, IRB Chair Date

The UNIVERSITY of NORTH CAROLINA at CHARLOTTE
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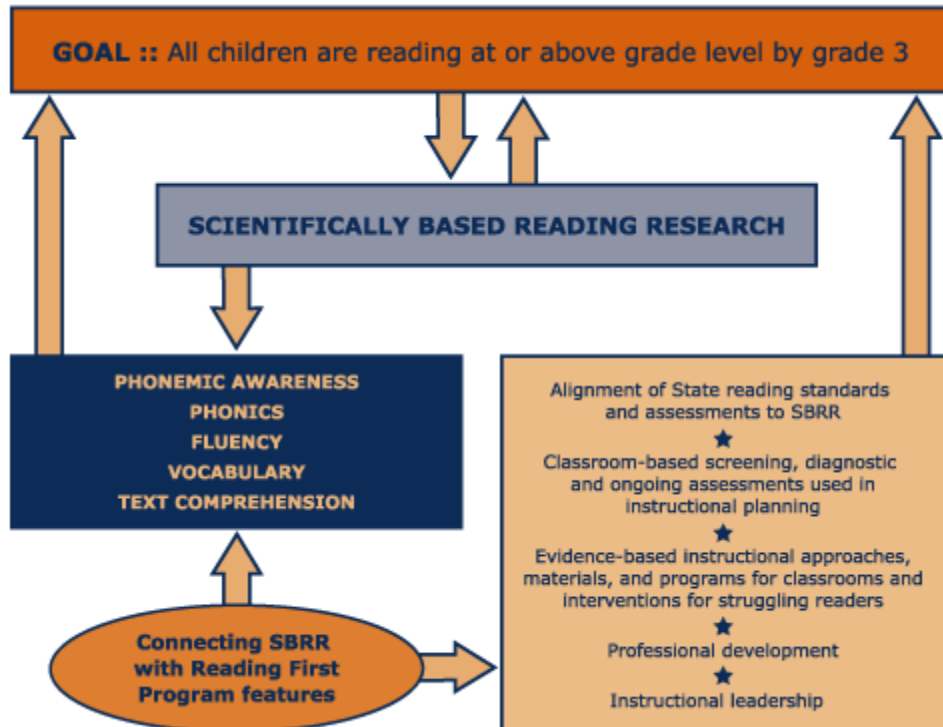
APPENDIX B: GRAPHIC REPRESENTATION OF STUDY

Schooling Contexts and Achievement:
Exploring Relationships Between School Composition and
North Carolina End of Grade Reading Test Scores of
Hispanic Third Graders



APPENDIX C: READING FIRST GRAPHIC FOR 3RD GRADE READER GOAL

Retrieved from <http://www.ncpublicschools.org/readingfirst/>



APPENDIX D: NC THIRD GRADE READING INTERVENTION PROGRAM

North Carolina Public Schools Third Grade Intervention Programs to Support Reading success

Retrieved from <http://www.ncpublicschools.org/readingfirst/programs/intervention/03grade>

PROGRAM NAME / PUBLISHER	READING COMPONENTS					PROGRAM REQUIREMENTS			
	Phonemic Awareness	Phonics	Fluency	Vocabulary	Comprehension	Placement Test	Progress Monitoring	Group Size	Lesson Length
Corrective Reading / SRA	I	I	I	I		Y	Y	Small	45 min daily
Foundations / Wilson Language Training Corp. *	I	I	I	I		N/A	Y	Small	30-45 min daily
Great Leaps Reading / Diarmuid *			I			Y	Y	In	5-7 min
Phono Graphix / Read America *	I	I				N/A	N/A	Small	30-45 min daily
Reading Mastery <i>or</i> Reading Mastery Plus / SRA	I	I	I	I	I	Y	Y	Small	30-45 min daily
Spell Read P.A.T. / Spell Read	I	I	I		I	Y	Y	Small	60-90 min daily
Language! / Sopris West	I	I	I	I	I				
Wilson Reading System /Wilson Language Training Corp	I	I	I		I				
PLATO Early Reading Program *	I				I				
LeapTrack/LeapFrog SchoolHouse*	I	I		I	I				
Language First/LeapFrog SchoolHouse *				I					
**Quick Reads *			I		I				
Soar to Success *			I		I				
Voyager Passport *	I	I	I	I	I				
SuccessMaker Pearson Digital Learning *					I				
Accelerated Reader Best Classroom Practices					I				
Lindamood Phonemic Sequencing Program		I							
Bears/ Frances Evans		I	I	I	I				
Cubs/ Frances Evans		I	I						
My Sidewalks on Reading Street/Scott Foresman		I	I	I	I			Small	30-45 min/day
Breakthrough to Literacy/ Wright Group McGraw Hill	I	I	I	I	I		Y	5-6 students	10-15 min/day
Charlesbridge Reading Fluency Software/ Charlesbridge School Division			I	I				In	
Discover Intensive Phonics for Yourself/ HEC Software, Inc.	I	I	I	I				Whole, Small	30-90 min/day
Elements of Reading/ Steck-Vaughn/Harcourt Achieve	I/S	I/S	I/S	I/S	I/S			Whole Small	90-120 min/day
Joseph's Readers Talking Software/ Failure Free Reading				I/S					
Read Well/Sopris West	I/S	I/S	I/S	I/S	I/S			Whole Small	30-90 min/day
Sound Sensible/SPIRE/ Educators Publishing Service	I	I	I	I	I			Small/ Indv.	60 min/ day
Early Intervention in Reading	I	I			I			Small	20 min/ day 4 days/

									week
Fast ForWord Scientific Learning Corp	I	I							
Ladders to Literacy/ Brookes Publishing	I	I	I	I	I				
Voyager Universal Literacy System/ Voyager Learning	I	I							

** Quick Reads may be more effective with the technology piece.

Key:

* The program can also be used as a supplemental reading program.

Reading Components (main focus of the program):

I – Intervention Program

Program Requirements: Placement Test: Y = Yes; N/A = placement test information not available/ Progress Monitoring: Y = Yes; N/A = progress monitoring information not available/ Group Size: Sm = Small group (3-6 students); In = Individual

APPENDIX E: NC THIRD GRADE READING PROGRAM SUPPLEMENT

North Carolina Public Schools Third Grade Supplemental Programs to Support Reading success

Retrieved from <http://www.ncpublicschools.org/readingfirst/programs/supplemental/03grade>

PROGRAM NAME / PUBLISHER	READING COMPONENTS					PROGRAM REQUIREMENTS			
	Pho- nemic Aware- ness	Pho- nics	Flu- ency	Voca- lary	Com- pre- hen- sion	Place- ment Test	Pro- gress Moni- toring	Group Size	Lesson Length
Great Leaps Reading / Diarmuid *			S			Y		In	5-7 min daily
QuickReads / Pearson Learning			S	S	S	Y	Y	In/ Small	15 min
Elements of Reading: Vocabulary / Steck- Vaughn				S		N/A	Y	Whole	30 min daily
Corrective Reading / SRA	S	S	S	S					
Wilson Reading System /Wilson Language Training Corp	S	S	S		S				
Success For All	S	S	S						
Formula Three		S	S	S	S				
PLATO Early Reading Program *	S				S				
LeapTrack/LeapFrog SchoolHouse*	S	S		S	S				
Language First/LeapFrog SchoolHouse *				S					
**Quick Reads *			S		S				
Soar to Success *			S		S				
Voyager Passport *			S	S	S				
SuccessMaker Pearson Digital Learning *					S				
Comprehension Plus/Modern Curriculum Plus				S	S				
Keep on Reading Science/Peoples Education					S				
My Sidewalks on Reading Street/Scott Foresman		S	S	S	S			Small	30-45 min/ day
Leveled Reader Program /Macmillan/McGraw-Hill		S	S	S	S				
Fluency Formula /Scholastic			S	S	S				
Plaid Phonics/Modern Curriculum Press		S							
Read for Real/Zaner-Bloser			S	S	S				
Ready Readers/Pearson Learning Group	S	S	S	S	S				
Treasure Chest for English Language Learners /Macmillan/McGraw-Hill	S	S	S	S	S				
Breakthrough to Literacy/ Wright Group McGraw Hill	S	S	S	S	S		Y	5-6 stu./ group	10-15 min/ day
Elements of Reading/ Steck-Vaughn/Harcourt Achieve	I/S	I/S	I/S	I/S	I/S			Whole Small	90- 120 min/ day
Gear Up!/ Wright Group/ McGraw-Hill	S	S	S	S	S				
Guided Reading Program/ Scholastic		S			S				
iOpeners/ Pearson Learning Group				S	S				
Joseph's Readers Talking Software/ Failure Free Reading				I/S					
Making Connections/ EPS Books					S				
Making Meaning/ Developmental Studies					S				

Center									
Orchard Gold Star/ Siboney Learning Group	S	S	S	S	S				
Phonics for Reading/ Curriculum Associates		S	S						
Phonics for the Real World/ Rosen Publishing	S	S	S						
Super QAR/ Wright Group /McGraw Hill					S				
Read About/ Scholastic				S	S				
Read Well/Sopris West	I/S	I/S	I/S	I/S	I/S			Whole Small	30-90 min/ day
Rosen REAL Readers/ Rosen Publishing			S	S					
Spell Read/ Kaplan	I/S	I/S	I/S		I/S			Small	60 min/ day
Text Talk/ Scholastic				S	S				
Treasures/ Macmillan/ McGraw-Hill		S		S	S				
Reading Triumphs/ Macmillan/McGraw-Hill	S	S	S	S	S				
Word Wisdom/ Zaner-Bloser				S	S				
Words Their Way/ Pearson Learning Group		S						Small	

** Quick Reads may be more effective with the technology piece.

APPENDIX F: SUPPLEMENTAL/INTERVENTION TECHNOLOGY

North Carolina Public Schools Third Grade Supplemental/Intervention Technology Programs to Support Reading Success

Retrieved from <http://www.ncpublicschools.org/readingfirst/programs/technology/03grade>

PROGRAM NAME / PUBLISHER	READING COMPONENTS					PROGRAM REQUIREMENTS			
	Pho- nemic Aware- ness	Pho- nics	Flu- ency	Voca- ulary	Compre- hension	Place- ment Test	Pro- gress Moni- toring	Group Size	Lesson Length
Destination Reading / Riverdeep	S	S	S	S	S	N/A	Y	In/Sm	20 min
Earobics Literacy Launch / Cognitive Concepts	S/I	S/I	S/I	S/I	S/I	N/A	Y	In/Sm	In: 20 min 3x a week Sm: 25-30 min a day
Focus Reading and Language Program / Plato	S/I	S/I	S/I	S/I		N/A	Y	In/Sm	In: Tech-35 min per week Sm: Class Kit- 50 min 4x a week
Read Naturally / Read Naturally, Inc.			S/I		S/I	Y	Y	In	30 min 3x a week
Read, Write, and Type Learning System / Riverdeep	S/I	S/I	S/I			N/A	Y	In/Sm	30-60 min 3x a week
Soliloquy Reading Assistant / Soliloquy Learning, Inc.			S	S	S	N/A	Y	In	15 min daily
Waterford Early Reading System / Waterford	I	I	I	I	I	Y	Y	In	30 min daily
PLATO Early Reading Program	S/I				S/I				
LeapTrack/ LeapFrog SchoolHouse	S/I	S/I		S/I	S/I				
Language First/ LeapFrog SchoolHouse				S/I					
Quick Reads			S/I		S/I				
Soar to Success			S/I		S/I				
Charlesbridge Reading Fluency Software / Charlesbridge School Division			I	I				In	
Discover Intensive Phonics for Yourself / HEC Software, Inc.	I	I	I	I				Whole, Small	30-90 min/ day
Joseph's Readers Talking Software/ Failure Free Reading				I/S					
Phonics for the Real World / Rosen Publishing	S	S	S						
Rosen REAL Readers / Rosen Publishing			S	S					
SpellRead / Kaplan	I/S	I/S	I/S		I/S			Small	60 min/ day

APPENDIX G: NC EOG READING PERFORMANCE DESCRIPTORS

Achievement Level I

“Students performing at this level do not have sufficient mastery of knowledge and skills in this subject area to be successful at the next grade level.

Students performing at Level I typically show minimal use of decoding and comprehension skills required in the North Carolina Standard Course of Study at grade three. Students can identify characters and setting. These students read a variety of short and repetitive texts. Students at this level have limited vocabulary”.

Achievement Level II

“Students performing at this level demonstrate inconsistent mastery of knowledge and skills that are fundamental in this subject area and are minimally sufficient to be successful at the next grade level. Students performing at Level II can apply limited enabling strategies and skills to read and comprehend some texts, including fiction, nonfiction, poetry, and drama as required in the North Carolina Standard Course of Study at grade three. Students read and demonstrate literal comprehension of some third grade genres. Students are able to identify literary elements, such as characters, setting, problem, and main events. They use basic word identification strategies. They can draw simple conclusions and identify sequence of events in a variety of texts. They are developing the ability to use story structure and text organization”.

Achievement Level III

“Students performing at this level consistently demonstrate mastery of grade-level subject matter and skills and are well prepared for the next grade level.

Students performing at Level III demonstrate grade-level reading comprehension skills as required in the North Carolina Standard Course of Study at grade three.

Students are developing fluency as they read and comprehend a variety of third-grade genres, such as fiction, nonfiction, poetry, and drama. Students interpret and analyze text by utilizing skills and strategies such as summarizing, making inferences and predictions, drawing conclusions, determining main idea, and making connections. They also use text features and text structures to comprehend. Students analyze characters, identify problems, determine the meaning of unfamiliar words, and develop an expanded vocabulary”.

Achievement Level IV

“Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at grade-level work.

Students performing at Level IV demonstrate an independent application of the reading comprehension skills required in the North Carolina Standard Course of Study at grade three. Students at this level read with fluency and comprehend a variety of third-grade genres, such as fiction, nonfiction, poetry, and drama.

Students analyze and integrate information to infer, draw conclusions, determine author’s purpose, and generalize. Students independently compare and contrast elements within and between texts. They also analyze the effect of figurative language, author’s craft, and literary elements”. HSP-C-018

APPENDIX H: PROFICIENCY DESCRIPTORS LEVEL I-IV

(a) "Level I" shall mean that the student fails to achieve at a basic level. Students performing at this level do not have sufficient mastery of knowledge and skills in this subject area to be successful at the next grade level.

(b) "Level II" shall mean that the student achieves at a basic level. Students performing at this level demonstrate inconsistent mastery of knowledge and skills that are fundamental in this subject area and that are minimally sufficient to be successful at the next grade level.

(c) "Level III" shall mean that the student achieves at a proficient level. Students performing at this level consistently demonstrate mastery of grade level subject matter and skills and are well prepared for the next grade level.

(d) "Level IV" shall mean that the student achieves at an advanced level. Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at grade level work.

Effective December 1, 1999 (NCDPI)