POLICY IMPLICATIONS: REPLACING THE READING TAKS CUT SCORES

WITH THE COMMON CORE CURRICULUM READING CUT SCORES ON THREE

MIDDLE SCHOOL CAMPUSES

A Dissertation

by

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ABSTRACT

As school accountability intensifies, school districts strive not only to prepare their students to meet the No Child Left Behind (NCLB) mandates, but also to prepare students for college and careers after high school. Understanding the necessary reading rigor to ensure academic success is key for educators. Although Texas opted not to adopt the Common Core Curriculum Standards and the accompanying Stretch Lexile measures for reading that require higher reading levels at each grade, Texas educators must still prepare students for academic success. This study determined how the use of more rigorous Lexile standards found in other states and associated with the Common Core Curriculum Standards would affect passing scores on Texas reading assessments in grades 6-8. The population for this study included three middle schools during the 2010 school year within one large suburban school district. State reading assessment data collected from these three schools included students' scores from grades 6, 7, and 8. A Chi-square Test for Independence determined that there was statistical significance for some groups of students in the accountability system: all students, Hispanic students, and economically disadvantaged students. Each of these groups was found to pass at a significantly lower rate when using the Stretch Lexile standard.

Results were also examined in terms of political, economical, educational, and social policy implications. The policy implications discussed in this study are far-reaching for Texas educators and students, especially economically disadvantaged and Hispanic students. The higher standards can potentially trigger the school improvement

process for campuses and districts failing to make NCLB's required adequate yearly progress. Additional expenses related to supplemental educational services, school choice, and professional development drain district Title I budgets due to mandatory set-aside amounts, disallowing funds for other student-centered programs.

Implications for practitioners include clearly establishing intervention systems, adhering to a multi-tiered intervention system, and providing a screening tool for teachers so that progress monitoring can be accomplished for students as they move toward more rigorous reading expectations that will result in college and career preparedness.

DEDICATION

This dissertation is dedicated to these amazing and special people that I am fortunate to have in my life: Kevin Reed, Carol Floyd, Kathleen Derrick, Karen Pentecost, Kevin Derrick, Kelly Derrick, Ricardo Lozano, Carol O'Connor, Susan McHenry, and Maggie O'Toole.

I would also like to dedicate this dissertation in honor of my mother, Mary Anne Osredker Derrick.

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CHAPTER I

INTRODUCTION

The Commission on Excellence in Education's report, *A Nation at Risk: The Imperative of Educational Reform* (1983), described the condition of education in the United States as unsatisfactory. A year later, the Texas Legislature passed House Bill (HB) 72, which mandated sweeping reforms in the state's public education system. The bill established a minimum competency testing program with an exit-level test for graduation and prohibited social promotion. *No Child Left Behind* and other educational reforms of the 21st century have focused on state-mandated testing results to determine academic ratings for accountability; recently college and career readiness have become additional goals for educators. Texas identifies specific skill areas that can have the greatest impact on students' achievement levels across all areas of curriculum. Schools are expected to have all students meeting minimum competencies by 2014. This expectation is intended to prepare students for either college or work. School reformers and educators search for improvements to boost graduation rates, knowing that students will have a need for knowledge and problem solving that allows them to compete globally. "In today's highly competitive global 'knowledge economy,' all students need new skills for college, careers, and citizenship. The failure to give all students these new skills leaves today's youth—and our country—at an alarming competitive disadvantage" (Wagner, 2008, p. 11).

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Other legislative mandates at state and federal levels have occurred to ensure that students are receiving educational opportunities that will prepare them for life after high school. One important policy decision coordinated by the National Governors Association (NGA) and Council of Chief State School Officers (CCSSO) was the creation of standards that are internationally benchmarked and backed by evidence showing that students' mastery of them leads to preparedness for higher education and the workforce. The initiative defines college and career readiness as the ability to succeed in entry level, credit-bearing academic college courses and in workforce training programs (Common Core State Standards Initiative, 2012). These college and career readiness standards were developed with input from teachers, school administrators, and experts. The standards are informed by the highest, most effective models from states across the country and countries around the world, and provide teachers and parents with a common understanding of what students are expected to learn. Consistent standards provide appropriate benchmarks for all students, regardless of where they live (Common Core Standards Initiative, 2012). Furthermore, the standards

1) are aligned with college and work expectations

2) are clear, understandable, and consistent

3) include rigorous content and application of knowledge through high-order skills

4) build upon strengths and lessons of current state standards

5) are informed by other top-performing countries so that all students are prepared to succeed in our global economy and society, and

6) are evidence-based.

The Common Core State Standards Initiative released its first set of standards for English language arts in June 2010. Texas did not participate in the consortium of states to develop the standards, with Texas opting out due to assertions that the state's curricular objectives are equally high-quality and rigorous. The Fordham Institute (2009) compared the curricular objectives of each state with the Common Core Curriculum Standards. Texas was awarded a grade of "A minus" on English language arts curricular objectives. The Fordham Institute study also found the Texas English language arts curricular objectives to be clearly written, better presented, and more logically organized than the Common Core Standards. Although Texas did not adopt the Common Core Curriculum Standards, Texas was the first state to adopt college readiness expectations. These expectations were jointly created through a process that included Texas public educators, higher education, and business community stakeholders. The 79th Texas Legislature, Third Called Special Session, passed House Bill 1, the "Advancement of College Readiness in Curriculum"; furthermore, Section 28.008 of the Texas Education Code (TEC) seeks to increase the number of students who are college and career ready. The legislation required the Texas Education Agency (TEA) and the Texas Higher Education Coordinating Board (THECB) to establish vertical teams to develop College and Career Readiness Standards (CCRS) in the areas of English language arts, mathematics, social studies, and science. These expectations specify what students must know and be able to do to succeed in entry-level courses at postsecondary institutions. On February 23 the Texas Education Agency (2010a) released an analysis showing that Texas' English and mathematics college and career readiness expectations not only

meet, but exceed the national expectations for college and career readiness. Commissioner of Education Robert Scott commented on the analysis by stating that the report confirms that Texas' college readiness standards in English language arts and mathematics are superior to the national standards, and Texas students are well-served by the standards. The analysis provided a comparison of the Texas and national expectations through a "gap analysis" or crosswalk. The analysis was validated by a crosswalk reviewer appointed by the TEA. The reviewer determined that the methodology and work of the Phase I and Phase II Crosswalk Teams as represented in the *Gap Analyses Reports and Alignment Spreadsheets* provided by the Texas Education Agency indicate that both the findings and the methodology employed are both accurate and valid (Texas Education Agency, 2010a). The Common Core Curriculum Initiative uses its College and Career Readiness expectations as a backbone for its curricular objectives. Additionally, the curricular objectives are research and evidence based, aligned with college and work expectations, rigorous, and internationally benchmarked.

According to Daggett (2010), as we complete the first decade of the 21st century, American educators must understand that students need a different and more diverse set of skills than their parents were taught a generation ago. Recognizing this and striving to promote positive change in educational outcomes, the federal government has placed new mandates on schools receiving funding through the American Recovery and Reinvestment Act of 2009 (ARRA), which has allocated $100 billion for school improvement efforts; furthermore, the Obama administration has called for new steps to better align the Elementary and Secondary Education Act (ESEA) in support of college-

and career-ready standards. The Obama administration released a blueprint for revising

ESEA on March 13, 2010. In the reauthorization, the U.S. Department of Education

(2010) asks that states adopt college and career-ready expectations and reward schools

for producing dramatic gains in student achievement. U.S. Secretary of Education Arne

Duncan announced on June 1, 2009 that the National Governors Association and the

Council of Chief State School Officers would create Common Core Standards in

mathematics and language arts (U.S. Department of Education, 2011) that align with

college and career readiness expectations. Duncan also stated the following:

> When children are told that they are 'meeting a state standard,' the logical
> assumption for that child or for that parent is to think that they are on-track to be
> successful. But because these standards have been dumbed down and lowered so
> much in so many places, when a child is 'meeting the state standard' they are in
> fact barely able to graduate from high school. What we have had as a country is a
> race to the bottom. We have 50 different standards, and 50 different goal posts.

> However, Texas is not eligible for any of the federal funding set aside for *Race to*

the Top due to the decision to opt out of adopting the Common Core Curriculum

Standards. In a letter from Governor Rick Perry to Education Secretary Arne Duncan,

Perry stated:

> Texas is well-positioned to continue progressing under the watchful eye of Texas
> citizens, and we will build upon our successful record of educational reform. I
> firmly believe that states like Texas, working with local educators, employers,
> and citizens, are best suited to determine the curriculum standards for their
> students—not the federal government. I also believe that Texas citizens, not
> federal employees, are best suited to set the education agenda and spending
> priorities that are right for Texas and our future. (Office of the Governor, 2010).

> States feel pressure to implement the Common Core Curriculum Standards so

that they can compete for federal funds at a time when state and local funds are crucial to

providing districts with much-needed financial support. Reeves (2010) stated that any state competing for the billions of *Race to the Top* funds must demonstrate that its political, educational, and legislative officials support national standards. In order for states to receive the funding to improve instruction based on the more rigorous standards, they must also be willing to accept the federal funding to support the implementation process.

Background

The state and federal curricular objectives overlap accountability systems, and students are accountable for meeting curricular objectives for both systems in mathematics and reading. Furthermore, students' movement to the next grade level in grades 3, 5, and 8 is tied to scores in reading and mathematics. The *No Child Left Behind Act* signaled a fundamental change in American schools that would require states to set academic targets while receiving support from the federal government. The law's intent was to achieve steady gains for students in the area of math and reading. The intent was also to close the nation's achievement gap between disadvantaged and minority students and their peers. According to the federal government (U.S. Department of Education, 2010), before NCLB fewer than half the states fully measured their students against clear curricular objectives; all states now hold schools accountable for improving academic achievement. Furthermore, every state now participates in the National Assessment of Educational Progress (NAEP). The Common Core Curriculum Standards promote continuity with states' adherence to the same curricular objectives in reading and mathematics. The federal government continues to implement legislation to ensure that

states are providing rigorous targets and measuring their students' academic achievement. Arne Duncan accused states of setting the bar too low in order to comply with the regulations for the *No Child Left Behind Act of 2001* (U.S. Department of Education, 2009). He said that a common goal is to have career-ready internationally benchmarked standards. The NCLB requirement that students achieve "proficiency" on state tests by 2014 has had unintended consequences. According to the Fordham Institute (2009), the difference in rigor on state assessments from state-to-state vary greatly, which makes a mockery of the 2014 NCLB deadline that all American students will be proficient in reading and math. Many educators agree that a common core curriculum is an essential means of increasing equity in America's schools. Many policymakers also believe that a change in standards will improve America's schools--not intensified accountability measures.

The Common Core State Standards Initiative represents a significant reform in U.S. education. The Common Core Standards define a "staircase" of increasing text complexity designed to move all students to college- and career-ready levels of reading no later than the end of high school (ACT, 2010).

One of the key requirements of the Common Core Standards for Reading is that all students must be able to comprehend texts of increasing complexity as they progress through school. According to these standards (Common Core State Standards Initiative, 2012), by the time students complete the core, students must be able to read and comprehend independently and proficiently the kinds of complex texts commonly found in college and careers.

Since the 1920s, there have been many tools developed to measure a text's depth and complexity. Researchers and educators have sought reliable and valid measures to match students with text and determine a student's instructional range for comprehending text. Most of the frameworks developed measured text by examining sentence length and syllables. According to Betts' (1954) seminal work, the instructional range is defined as the optimal level of text a student should read in order to make progress as a reader. Betts also determined that a student has three reading levels: independent, instructional, and frustration. Traditionally this has been determined through an informal reading inventory (IRI). In an IRI, instructional reading level is determined by analyzing a student's reading accuracy (percentage of words read correctly), reading comprehension, and reading fluency. The instructional reading level is determined by analyzing a student's performance across these measures. One framework, the Lexile Framework for Reading (MetaMetrics, 2011), is unlike traditional readability formulas that are limited to assigning a grade level to a certain text because the Lexile framework places a reader and the text on the same scale. Assessments assign certain Lexiles to the text that is used, and comprehension questions over the text yield a reader measure; therefore, state assessments can determine not only a Lexile measure for a student, but they can measure Lexile growth over time as well. According to Metametrics (2011), the developers of the Lexile Framework for Reading, 21 states currently use Lexile text and reader measures on state assessments.

Knowing a student's Lexile level enables teachers to offer scaffolding and tiered lessons that are appropriate for each student. A student gets his or her Lexile reader

measure from a computer-based reading test. This test provides educators with knowledge that can help them determine interventions and support for struggling students and match level-appropriate texts with all students. Until spring 2012, TEA adhered to the MetraMetrics Framework of both reader and text measure and provided Lexile reports to parents on students' confidential test results.

TEA's conversion of raw scores (number of questions answered correctly) to Lexile measures allowed educators to better understand the reading comprehension rates of students. Providing students with text that prepares them for college and career readiness has become both a state and national priority. Daggett (2003) asserts that there is not only a gap in students' levels and instructional materials in schools, there is also an even more alarming disconnect in the gaps found between student levels and real-world reading requirements. For example, the U.S. Department of Justice (INS) Employment Eligibility Verification form has a text Lexile of 1340L; the W-4 Employee Withholding form has a text Lexile of 1260L. Although a great deal of emphasis is placed on the importance of pre-K-6 reading initiatives, little resources are focused on students in grades 7-12. According to the National Center for Educational Statistics (2008), studies show that reading achievement for U.S. fourth graders ranks among the best in the world; by 8th grade, U.S. student performance declines to around the international average, and by 12th grade, U.S. students rank even lower.

Statement of the Problem

The Common Core Standards have a commitment to college and career readiness. In fact, MetaMetrics has developed a Stretch Lexile measure intended to align with the reading requirements found in the Common Core Standards for reading. Higher cut scores are used in statewide assessments by those states adopting Common Core Curriculum Standards. Table 1 further illustrates the differences in TAKS (Standard Lexile) cut scores and the Stretch Lexile cut scores. The Common Core Standards for reading, currently aligned with the higher Stretch Lexile measures, are aligned with texts that are based on college and career readiness.

Table 1
Comparison of Texas TAKS Lexile Text Measure Cut Scores with Stretch Lexile Text Measure Cut Scores

Grade	TAKS Lexile Measure Cut Score	Stretch Lexile Measure Cut Score
6	855L	955L
7	915L	1015L
8	980L	1080L

The research has not been completed to study middle schools in Texas to determine if students who took TAKS reading in 2010 would have failed the state reading assessment if after the more rigorous Stretch Lexile measures associated with Common Core Curriculum Standards had been applied; furthermore, it is not known how accountability ratings might differ if Stretch Lexile measures were used instead of

TAKS Lexile measures for reading. Implementing a state test based on the Common

Core Curriculum Standards could create policy implications; the intent of the standards

is to provide the same high-quality, rigorous instruction to all students. The Campaign

for High School Equity (2010) expects to see the following assurances from the adoption

of the Common Core Curriculum Standards:

1. Ensure that all students taught to the same standards—regardless of zip code.

2. Ensure that all students have access to high-quality content, support, and
   opportunities.

3. Allow parents to more effectively assess children's progress and compare it
   across state lines.

4. Make resources available to create assessments that can reliably measure
   progress of every student.

The reading assessment division for the Texas Education Agency recently declared

that readability formulas and Lexile Measures, which are used extensively to measure

students' growth in comprehension for states using the Common Core Curriculum

Standards, will be discontinued in Texas for both student and text Lexile measures.

Furthermore, Victoria Young from the Texas Education Agency has declared that as

readability formulas will be abandoned in 2012, teachers will determine appropriate

texts for students and a computerized readability formula will not be used (V. Young,

personal communication, April 2, 2012). Young, Director for Reading, Writing, and

Social Studies Assessments presented this statement at the Coalition of English and

Reading Supervisors of Texas on April 2, 2012, "Educators, not readability formulas, are

primary determiners of grade-level appropriateness of reading level" and that the decisions to include texts on assessments will be the result of "internal review by TEA and contractor reading content teams to edit selections and questions." Without assurances similar to those found in the Common Core Curriculum Standards, and without scientific formulas to determine appropriate text measures, parents will be unable to determine their child's reading ability on a scale that is used extensively in standardized testing and will also be unable to correlate their child's text measure with a standardized reading measure. Furthermore, it will no longer be possible to determine the rigor in the Texas reading assessments and how closely the standards align with those found in other states because Texas assessments will not be aligned with a common measure.

Educators and parents could potentially discover that policy issues surrounding the decision by Texas Education Agency not only fail to embrace Stretch Lexile measures, but also abandon Lexile measures entirely, especially since most states have adopted the Common Core Curriculum Standards and the higher text measures that are associated with college and career readiness. The Stretch Lexile measures are designed to correspond with text needed for college and career readiness and provide the rigor level for the text on tests using the Common Core Curriculum Standards. The 79th Texas Legislature, Third Called Special Session, passed House Bill 1, the "Advancement of College Readiness in Curriculum" (TEC 28.008) to increase the number of students who are career and college ready when they graduate high school. These expectations specify what students must know and be able to do to succeed in entry-level courses at

postsecondary institutions in Texas. According to the Annual Report (2008) prepared for the Bill & Melinda Gates Foundation, only one third of U.S. high school seniors graduate ready for college today, and the rates are much lower for economically disadvantaged and minority students.

Furthermore, ACT (2010) recommends that states should undertake three strategies as they work to implement the Common Core State Standards to better prepare students with college and career readiness.

1. Conduct research to evaluate where students are performing relative to the Common Core State Standards. Estimating where a school's relative strengths and weaknesses lie will allow educators and policymakers to allocate current resources most appropriately.

2. Invest significant efforts in mapping the transition from current state standards to the Common Core State Standards. This interpretive process can create a rational and aligned blueprint for strengthening instructional frameworks, curricula, and professional development models.

3. Develop challenging yet realistic performance goals based on individual student growth. With this approach, educators can evaluate student performance against higher, more challenging standards.

Purpose of the Study

The purpose of this study is threefold:

1. To determine if the distribution of passing rates for students taking the Texas reading assessments will change if cut scores associated with the Common Core Curriculum Standards (Stretch Lexile measures) are used as a standard for the Texas reading assessments.

2. To determine if the distribution of passing rates for student groups identified in the accountability system will change if cut scores associated with the Common Core Curriculum Standards (Stretch Lexile measures) are used as a standard for the Texas reading assessments.

3. To determine the policy implications that may result from changes in the distribution of passing scores on Texas reading assessments after higher cut scores associated with the Common Core Curriculum Standards (Stretch Lexile measures) are used to determine passing rates.

Research Questions

To fulfill the purpose of the study, three research questions will be explored:

1. What, if any, are the changes in distribution of passing rates among students taking the Texas reading assessments on three middle school campuses in a large Texas school district if cut scores associated with the Common Core Curriculum reading assessments are used as a standard for the Texas reading assessments?

2. What, if any, are changes in distribution of passing rates among student groups identified in the accountability system on three middle school campuses in a large Texas school district if cut scores associated with the Common Core Curriculum reading assessments are used as a standard for the Texas reading assessments?

3. What are potential policy implications that may result from changes in the distribution of student TAKS reading scores on three middle school campuses in a large Texas school district if higher cut scores are used to determine passing rates?

Null Hypothesis for Research Question Number One

The Null Hypothesis is that the distribution of passing cut scores using 2010 TAKS reading standards will not change when instead using cut scores associated with the Common Core Curriculum Standards and Stretch Lexile measures for all students on Campuses 1, 2, and 3.

Null Hypothesis for Research Question Number Two

The Null Hypothesis is that the distribution of passing cut scores using 2010 TAKS reading standards will not change when instead using cut scores associated with the Common Core Curriculum Standards and Stretch Lexile measures for all students on Campuses 1, 2, and 3 for the following student accountability groups: economically disadvantaged, African American, Hispanic, and White.

Operational Definitions

The findings of this dissertation are to be reviewed within the context of the following operational definitions:

AYP: NCLB states that each state is required to define AYP in a manner as follows: (i) Applies the same high standards of academic achievement to all public elementary school and secondary school students in the State; (ii) is statistically valid and reliable; (iii) results in continuous and substantial academic improvement for all students; (iv) measures the progress of public elementary schools, secondary schools and local educational agencies and the State based primarily on the academic assessments; (v) includes separate measurable annual objectives for continuous and substantial improvement for each of the following: (I) The achievement of all public elementary school and secondary school students. (II) The achievement of—(aa) economically disadvantaged students; (bb) students from major racial and ethnic groups; (cc) students with disabilities; and (dd) students with limited English proficiency (No Child Left Behind Act, 2001).

Achievement Gap: Achievement gaps occur when one group of students outperforms another group and the difference in average scores for the two groups is statistically significant (National Center for Educational Statistics, 2009).

Accountability Rating: Campus accountability ratings based on state testing results and are presented in the Academic Excellence Indicator System (AEIS) published by the Texas Education Agency for state and federal accountability purposes (Texas Education Agency, 2011).

College Readiness: The level of preparation students need in order to be ready to enroll successfully without remediation in credit bearing entry level courses at two- or four-year institutions, trade schools, or technical schools (ACT, 2010).

College and Career Readiness Standards: The 79th Texas Legislature, Third Called Special Session, passed House Bill 1, the "Advancement of College Readiness in Curriculum." Section 28.008 of the Texas Education Code, seeks to increase the number of students who are college and career ready when they graduate high school. The legislation required the Texas Education Agency (TEA) and the Texas Higher Education Coordinating Board (THECB) to establish Vertical Teams (VTs) to develop College and Career Readiness Standards (CCRS) in the areas of English/language arts, mathematics, science, and social studies. These standards specify what students must know and be able to do to succeed in entry-level courses at postsecondary institutions in Texas (Texas Higher Education Coordinating Board, 2009).

Common Core Curriculum Standards: These standards define the knowledge and skills students should have within their K-12 education careers so that they will graduate

high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs. The standards:

- Are aligned with college and work expectations;

- Are clear, understandable and consistent;

- Include rigorous content and application of knowledge through high-order skills;

- Build upon strengths and lessons of current state standards

- Are informed by other top performing countries, so that all students are prepared to succeed in our global economy and society; and

- Are evidence-based (Common Core State Standards Initiative, 2009).

College and Career Readiness: Standards that reflect what high school graduates must know in order to be successful in higher education and beyond (Texas Higher Education Coordinating Board, 2009).

Lexile Framework for Reading: The Lexile Framework evaluates both reading ability and text complexity on the same scale. Unlike other systems, the Lexile Framework uses assessment results to match readers with texts essential for growth and monitor their progress toward standards. (MetaMetrics, 2011).

Lexile Reader Measure: Represents a person's reading ability on the Lexile scale; can be used to monitor a reader's growth in reading ability over time (MetaMetrics, 2011).

Lexile Text Measure: Books and other texts receive a Lexile text measure from a software tool called the Lexile Analyzer - it describes the book's reading demand or difficulty (MetaMetrics, 2011).

Stretch Lexile Measure: The Common Core Standards advocate a "staircase" of increasing text complexity, beginning in grade 2, so that students can develop their reading skills and apply them to more difficult texts. At the lowest grade in each band, students focus on reading texts within that text complexity band. In the subsequent grade or grades within a band, students must "stretch" to read a certain proportion of texts from the next higher text complexity band. This pattern repeats itself throughout the grades so that students can both build on earlier literacy gains and challenge themselves with texts at a higher complexity level (MetaMetrics, 2011).

TAKS Reading Assessment: The Texas Assessment of Knowledge and Skills (TAKS) measures a student's mastery of the state-mandated curriculum, the Texas Essential Knowledge and Skills (TEKS). The reading TAKS is administered for grades 3–9 in English and grades 3-5 in Spanish. (Texas Education Agency, 2010b).

Texas Essential Knowledge and Skills (TEKS): The state standards for what students should know and be able to do (Texas Education Agency, 2010c).

Assumptions

1. The methodology proposed and described here offers the most logical and appropriate design for this particular research project.

2. The researcher is impartial in collecting and analyzing the data.

3. The Stretch Lexile Framework for Reading is an accurate measure of a student's reading level.

Limitations

1. The study is limited to one state-wide reading assessment at three Texas middle schools in 2010.

2. The study is limited to students who were present October 30, 2009 on each campus.

Significance of the Study

Currently, there are limited data analyzing the impact of higher standards on state reading tests for Texas middle school children. The ability to read texts that prepare students for college and careers is crucial. This study will provide data related to implementation of higher reading standards in a large Texas school district. A statistically significant difference in distribution of scores could affect both state and federal accountability expectations and resource allocation. If campuses are able to determine if certain campuses among a cluster will be affected to a greater extent after the new Stretch Lexile measures are used, proactive measures could be taken ahead of time in regard to which campus or campuses are in greatest need of resource allocation. The level of college and career readiness of Texas students has deep policy and equity implications worthy of study. Furthermore, educational opportunity gaps could occur if higher measures are used in some states but not in others.

CHAPTER II

REVIEW OF THE LITERATURE

Initial Research on Sentence Length and Readability

In 1893, Professor of English Literature at the University of Nebraska, Lucius Adelno Sherman, began to teach literature from a historical and statistical point of view by determining that modern prose differed in sentence length from older prose; he noticed that over time, sentence length had changed (Sherman, 1893). He decided to examine the sentence length statistically and began counting average sentence length per 100 year periods. Table 2 shows the results of his analysis by time periods associated with the study of literature.

Table 2
Sherman's Comparison of Words Per Sentence by Literary Time Periods

Pre-Elizabethan times	50 words per sentence
Elizabethan times	45 words per sentence
Victorian Times	29 words per sentence
Present (Sherman's time)	23 words per sentence

Sherman's (1893) research produced the following assumptions that would remain at the forefront of readability research for the next century and beyond:

- Literature is a subject for statistical analysis.

- Shorter sentences and concrete terms increase readability.

- Spoken language is more efficient than written language.

- Over time, written language becomes more efficient by becoming more like spoken language.

Sherman also discovered that writers are remarkably consistent in their average sentence lengths. This consistency was to become the basis for the validity of using samples of text rather than the whole thing for readability prediction. Sherman's belief that over time sentences were becoming less abstract and simpler due to the influence of the spoken language on written English was to be an important point for linguistic study. Sherman (1893) also pointed out that readability can also be influenced by the reader's interest in the subject matter.

Other early studies attempted to have a better understanding of readers and what they read. Kitson (1921), a professor of psychology at Indiana University, made one of the first attempts to apply modern empirical psychology to advertising. Although Kitson did not create a readability formula, he analyzed newspapers to determine differences in their readerships. Kitson (1921) found that the average word and sentence length in the *Chicago American* newspaper were shorter than in the *Post*, and the *American* magazine's style simpler than *Century's*, accounting for differences in their readership. He also found that, in addition to the difficulty of style and text, differences in interests can influence and reflect readership. Kitson's noteworthy study provided evidence that readability is not the same for every reader. Although the studies by Sherman and Kitson

focused on adult readers, the work of subsequent researchers turned research into readability toward a younger audience.

Measuring Vocabulary Complexity

Lively and Pressey (1923) presented a seminal study that examined the use of academic language in textbooks. This study attempted to address two important questions regarding the readability of a school textbook: how and what words should be selected to determine a reliable indication of reading ability and how can the difficulty of the words in the sample be measured? To obtain this information, the numbers of pages in a text were noted, as were the numbers of words per line. Words were counted on the third line of each fifth page until 1,000 words were obtained. This was to ensure even distribution of the sample throughout the book. This method was adjusted for the length of the textbook. The 10,000 words were listed and alphabetized. E.L. Thorndike's *The Teacher's Word Book* (1921) was used to note which words were listed in the 10,000 most common words of the English language. The words are followed by an index number indicative of its commonness. A common word such as "and" has an index number of 210, while a relatively uncommon word like "atom" would have a value of 4; a word such as "neolithic" would not appear on the list and its value would be zero. The results of the study indicate a range of vocabulary words, size of highly technical vocabulary used in academic texts, and the weighted median index number. For each textbook examined, two counts were made in order to determine the text's readability; the first count used the pages 5, 10, 15, and 20; the second count used pages 1, 6, 11, and 16. Table 3 indicates the weighted median index numbers for the various texts that high

school students encountered in 1923. Table 3 also yields the information from the study indicating the range of vocabulary, the size of highly technical vocabulary (zero value words, and weighted median index numbers). For each book, two counts were made to ensure reliability of the method.

Table 3
Weighted Median Index Numbers for the Various Texts that High School Students Encountered in 1923

	Range		Zero value words		Weighted median	
Counts	1	2	1	2	1	2
Second grade reader: Jones	371	350	4	4	86	88
Second grade reader: Horace Mann	412	421	9	9	78	83
Second grade reader: Aldine	367	353	7	6	77	79
Fourth grade reader: Jones	471	454	12	20	71	62
Fourth grade reader: Horace Mann	466	472	15	17	65	66

Table 3
Continued

Counts	Range		Zero value words		Weighted median	
	1	2	1	2	1	2
Fourth grade reader: Aldine	450	455	24	11	63	69
Stevenson: Kidnapped	402	415	21	30	67	65
Thackeray: Vanity Fair	490	459	43	34	43	54
Columbus Dispatch	528	581	49	45	33	37
American History	533	506	24	30	38	40
Introduction to Science	483	491	22	25	52	50
General Science	480	463	30	30	43	45
Elements of Biology	464	467	57	57	28	34
Physiology	422	473	108	94	4	10

Table 3 shows the difference in range for a variety of texts. There is a small range in the vocabulary of second grade readers, but this range increases with the complexity of the text. It is probable that the science book has a low range because words are repetitive, and simple words are used to describe complex concepts. According to the authors of the study, these figures could be used as a basis to determine norms for readers in various grades and for a variety of texts.

The Winnetka Formula for Readability

One of the most significant studies in readability was conducted by Vogel and Washburne (1928). This study identified structural characteristics of text and used a criterion based on an empirical evaluation of text. Factors such as word difficulty and sentence length were used to determine grade level of a text with the reading ability of the reader. The Winnetka formula was validated against 700 books that had been named by at least 25 out of 27,000 students as books they had read and liked. They used the reading scores of children in developing their formula, which correlated highly (r = .845) with the reading test scores. The grade level of the text could be matched with the reading ability of the reader, and this formula became the first to predict difficulty by grade level. This formula became the first prototype for modern day readability formulas (Vogel & Washburne, 1928). The formula is derived by the following technique:

1. Make a sampling of 1,000 words from the book as follows:

    a) Determine the number of pages in the book.

    b) Determine the number of words per line by counting the number of words in ten lines scattered throughout the book and dividing by ten.

    c) Divide 1,000 (the number of words needed) by the number of words per line.

    d) Divide the number of pages in the book by the number of pages from which samples are to be chosen.

    e) Copy on a separate card every word from the top line (or any given line) of every page to be sampled. Put a *p* in the corner of each card containing a word used as a preposition.

f) After copying the words from a given line on the number of pages estimated in c, count the cards. If there is not an even thousand, discard any excess, or add cards by copying words from additional lines until an exact thousand is reached.

g) Arrange the cards in strictly alphabetical order so that all duplicates of any given word come together. Eliminate all duplicate cards, writing the total number of such cards on the one card that remains.

2. Count the cards after the duplicates have been eliminated, thus obtaining the number of different words in 1,000. Call this number X_2.

3. Count the total number of prepositions in the 1,000 words. Records the total number of prepositions as X_3.

4. Check each word card with Thorndike's word list. Count the total number of word cards, including duplicates, which do not count in Thorndike's list. Record the total number of words not included in Thorndike's list as X_4.

5. Make a sampling of seventy-five sentences from the book as follows:

a) Count the total number of pages in the book, excluding picture pages.

b) Divide the number of pages in the book by 75 to determine which pages must be chosen.

c) Tabulate as simple or not simple the first complete sentence that is sampled. A simple sentence is defined as one in which there are no dependent clauses and only one subject and one predicate.

6. Count the number of simple sentences in the 75 sentences sampled. Record this number as X_5.

7. Apply the following regression equation to the data, X_1 being the reading score, X_2 the number of different words in 1,000; X_3 the number of prepositions in 1,000 words; X_4 the number of uncommon words in 1,000, and X_5, the number of simple sentences in 75:

$$X_1 = .085X_2 + .101X_3 + .604X_4 - .41X_5 + 17.43$$

The answer to the equation score will be the score on the paragraph meaning section of the Stanford Achievement Test necessary for reading the book measured. The reading score translates to a reading grade in Table 4.

Table 4
Grade Standards—Paragraph-Meaning Section of the Stanford Achievement Test

Score	Grade	Score	Grade
4-6	2	80-86	8
18-34	3	88-94	9
36-52	4	96-102	10
54-62	5	104-112	11
64-70	6		
72-78	7		

The Winnetka Readability Formula provided a system to analyze books for correct grade placement based on structural difficulty; therefore, when books are

analyzed and children's reading ability is measured, it became possible to give children books which fit their ability.

The Lorge Readability Index

Lorge used a formula to demonstrate that vocabulary load is the most important aspect of difficulty (Lorge, 1939). Lorge published the *New Lorge Index* to predict readability of text based on a formula with three components: average sentence length in words, number of prepositional phrases per 100 words, and number of hard words not on the Dale list of 769 easy words (Lorge, 1948). The 1948 publication also explained that reading comprehension is an interaction between reading ability and readability. Lorge's tenets of readability were presented in an earlier article (Lorge, 1944), and novel ideas regarding reading ability stated that proficiency in reading was a combination of intelligence, environment, interest, and purpose for reading. Furthermore, Lorge (1948) presented reading comprehension as an interaction between reading ability and readability. The average citizen completed 8.8 years of education in 1948, and Lorge created a readability index that would allow a writer to write at a specific level for audience readability. This index focused on intricate calculations regarding vocabulary and sentence structure, resulting in a chart for determining at which grade a passage can be understood. The index placed textbooks and other books in appropriate grade levels. It was also determined that reading passage could be altered in terms of sentence length and word choice to lower the readability of a passage so that it would become more appropriate for a given audience. Table 5 indicates Lorge's formula and an analysis of readability for Lincoln's *Gettysburg Address*.

Table 5
Formula for Estimating Grade Placement of Reading Material (Lorge, 1948).

Title of Article: Gettysburg Address	Date of publication: November 19, 1863
Name of author: Abraham Lincoln	R.I.=6.5

BASIC DATA

1. Number of words in the sample…………………………………………..269

2. Number of sentences in the sample…………………………………………..10

3. Number of prepositional phrases in the sample………………………………26

4. Number of hard words in the sample……………………………………………43

COMPUTATION

Item 6, average sentence length:	Divide 1 by 2 = 26.90 x .07 = 1.8830
Item 8, ratio of prepositional phrases:	Divide 3 by 1 = .0967 x 13.01 = 1.2581
Item 9, ratio of hard words:	Divide 4 by 1 = .1599 x 10.73 = 1.7151
	Constant = 1.6126
Add 6, 8 ,9 and C	Readability Index: 6.4694

The Dale-Chall Readability Formula

The Dale-Chall readability formula (1948) emerged after the publication of many formulas developed after 1928 as consistent and reliable with a correlation coefficient of .92 with comprehension as measured by reading tests. Most of the readability formulas

use a word variable and a sentence-length variable; however, the Dale-Chall readability

formula uses a list of 3,000 easy words and counting the number of "hard" words—those

words not on the list. Edgar Dale was a critic of the Thorndike vocabulary lists, claiming

that they failed to measure the familiarity of words accurately. He developed new lists

that were later used in readability formulas. In 1948 Dale published the formula he

developed with Jeanne Chall (Dale & Chall, 1948). Dale and Chall used a different

approach to count words; their word list was constructed by testing fourth-graders on

their knowledge of a list of approximately ten thousand words. The intent was to include

all words that a fourth-grader would encounter. A word was considered as known when

80 percent of fourth-graders knew it. This approach is different than previous methods of

word counting because the word familiarity is a component, and not just word

frequency. The work of Dale and Chall also confirmed Lorge's findings that a measure

of vocabulary load is the most important factor in reading difficulty.

The Dale-Chall Readability Formula (Dale & Chall, 1948) is as follows:

$$XC_{50} = .1579X_1 + .0496X_2 + 3.6365$$

When:

XC_{50} = reading-grade score of a pupil who could answer one-half of the

test questions correctly

X_1 = Dale score (relative number of words outside Dale list of 3,000

words)

X_2 = average sentence length

3.635 = constant

Two factors, vocabulary load (relative number of words outside the Dale list of 3,000 words) and sentence structure (average sentence length) gave a good prediction of readability and enabled the authors to create a useable means of placing materials within the comprehension of various grades. Table 6 illustrates the use of formula scores to predict comprehension. For example, a formula score of 5.2 should be within the comprehension of children who have fifth-to sixth-grade reading abilities and students will be able to answer approximately one-half to three-fourths of the questions.

Table 6
Use of Formula Scores to Predict Comprehension

Formula Score	Corrected Grade Levels
4.9 and below	Grade 4 and below
5.0 to 5.9	Grades 5-6
6.0 to 6.9	Grades 7-8
7.0 to 7.9	Grades 9-10
8.0 to 8.9	Grades 11-12
9.0 to 9.9	Grades 13-15 (college)
10 and above	Grades 16 and above (college graduate)

Perhaps the most ground-breaking aspect of this study is the acknowledgement of the reader's interest and background. Dale and Chall (1948) explain that the reader's purpose in reading and interest and background in the subject matter must also be considered by anyone using a readability formula.

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Reading Ease

The Flesch formula for predicting reading ease was fundamental in increasing readership of various publications by up to 60 percent (Flesch, 1948). His research proved that reading ease is an important factor in determining what people read. The first part of the formula, the Reading Ease Formula, used two variables: the number of syllables and the number of sentences for each 100-word sample. Reading ease is predicted based on a scale from 1 to 100, with 30 being "very difficult" and 70 being "easy." According to Flesch (1948), a score of 100 indicates reading material that is understood by readers who have completed the fourth grade. The second part of the formula predicts human interest by counting the number of personal words (such as pronouns and names) and personal sentences, such as quotes.

The formula for the Flesch Reading Ease score is as follows:

Score = 206.835 – (1.015 x ASL) – (84.6 x ASW)

Where:

Score = position on a scale of 0 (difficult) to 100 (easy), with 30 = very difficult and 70 = suitable for adult audiences.

ASL = average sentence length (the number of words divided by the number of sentences

ASW = average number of syllables per word (the number of syllables divided by the number of words)

As a consultant for the Associated Press, Flesch was able to predict which material that most Americans could read and comprehend. This approach deeply

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affected journalism and the way articles were written for an audience. Table 7 indicates

the reading scores of magazines popular during this time period (Flesch, 1948).

Table 7
Flesch Reading Ease Scores for Popular Publications in 1948

Average No. of Syll. Per 100 Words	Type of Magazine	Style	Flesch Reading Ease Score	Average Sentence Length in Words	Estimated School Grade Completed	Estimated Percent of U.S. Adults
123 or less	Comics	Very Easy	90 to 100	8 or less	4th grade	93
131	Pulp fiction	Easy	80 to 90	11	5th grade	91
139	Slick fiction	Fairly Easy	70 to 80	14	6th grade	88
147	Digests	Standard	60 to 70	17	7th or 8th grade	83
155	Quality	Fairly Difficult	50 to 60	21	Some high school	54
167	Academic	Difficult	30 to 50	25	High school or some college	33
192 or more	Scientific	Very Difficult	0 to 30	29 or more	College	4.5

Instructional Range

Interest in determining the text difficulty has continued since the initial formulas

were presented by the early researchers in this field. Since this time, researchers have

continued to seek valid and reliable measures to match students with texts and to predict

if the text is accessible to students and lies within students' instructional ranges. Betts' (1954) concept of instructional range had a profound effect on reading instruction. The instructional range, the optimal level of text a student should read in order to progress as a reader, is considered as well as the student's instructional level when providing instruction at each grade level. An instructional level is determined through an informal reading inventory. An informal reading inventory measures reading accuracy (percentage of words read correctly), reading comprehension, and reading fluency (reading rate) as students read passages of increasing difficulty. Betts emphasized the value of the IRI in assisting classroom teachers in the placement of children in groups for the purposes of reading instruction. Betts' (1946) work provided a framework for understanding and text complexity. The four levels in the framework determine the appropriateness of particular texts for readers in a leveling system: 1) the basal, or independent, level, which is "the highest reading level at which the individual can read with full understanding and freedom from mechanical difficulties"; 2) the instructional level, which is "the highest reading level at which systematic instruction can be initiated"; 3) the frustration level, which is the level at which a reader is "thwarted or baffled by the language,"; and 4) the probable capacity level, which is "the highest reading level at which the individual can comprehend." According to Betts (1946), students are reading at their independent level when they demonstrate at least 99% accuracy in their oral reading and 90% or higher comprehension. The standards for instructional-level are slightly lower, at between 95 and 99% oral accuracy and between 75 and 89% comprehension. A student's frustration level can be identified when either

his oral reading accuracy has dropped to 90% or less, or his comprehension is 50% or lower.

Betts' framework is significant because it continues to influence reading assessment and instruction. Many teachers use Betts' guidelines to help them determine students' reading levels and match students with appropriate texts. Since Betts' initial work in the area of IRIs, the instrument has found widespread acceptance in the field of reading, although critics state that administering an IRI requires extensive knowledge of reading development and is too time consuming for practical application, while other critics question the reliability of the instrument (Kress, 1988; Klesius & Homan, 1985). As formal assessments have become more important in high-stakes testing environments, the need for assessments that are easier to administer and interpret, as well as being reliable, has grown. A number of computer-based programs have become increasingly popular due to accessibility, ease of administration and interpretation, and their potential to match readers and texts along the same scale.

Reading Proficiency and Accountability

Many of the issues that have been of interest only within the psychometric community are more visible and targeted due to the high-stakes testing associated with *No Child Left Behind*. Some of the major provisions are directly associated with better and improved measurement, such as requiring every child to be on-grade level by the end of 2014, ensuring that every child can read, and ensuring that all children are making adequate yearly progress (AYP). In adhering to these provisions, consistency in measurement is mandatory, as stated in Section 111 of NCLB requiring multiple, up-to-

date measures of student academic achievement (Koretz, 2003). Presently, states are allowed to choose their own measurements in reading and mathematics; however, states have set proficiency levels using different definitions of proficiency. These standards are now being used to indicate proficient under answer to the charge in *No Child Left Behind*. Proficiency levels differ, and cut scores representing proficiency differ widely and to such a degree that there is potential for misinterpretation.

Developing a clear definition of proficiency is not easy as many factors are involved. States must make decisions regarding the definition of reading proficiency, how the standards are set, and the approaches that will be needed to achieve reading proficiency for all by 2014. Although the concept of proficiency itself — the minimum achievement a student must exhibit to be deemed proficient— is fairly constant among states; each state has complete autonomy in defining what that minimum achievement level is. There is variation among some states in the level of achievement and learning necessary to be proficient. A recent study by the Northwest Evaluation Association (Kingsbury et al., 2011) examined the levels of academic achievement used by 14 states to set proficiency levels for high-stakes testing in reading. The NWEA assessment instruments used in the study were designed to align with the content standards of each state, thus allowing the results from different states to be placed on a common measurement scale. In each state, at least 1,000 students in each grade took the mandated state test and an NWEA test. The results of this testing were used to establish a common basis for comparing state proficiency test results and the relative proficiency levels set for all states in the study. From the data collected, NWEA was able to provide

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calibration to determine the extent of variation of proficiency in reading among states.

Table 8 shows state proficiency levels after NWEA calibration. According to this table, "cut scores" are the state's proficiency levels equated and calibrated to the NWEA scale, RIT. Columns labeled "%ile" reflect the percentage of the total tested student population on that grade level who performed at or below the cut score. Table 8 represents proficient levels of performance on state reading assessments. For example, a 6th grade student with a cut score of 221 on the NWEA reading assessment instrument would exceed the proficiency levels set in all other states except South Carolina. To meet proficiency in South Carolina, that student would have to score one point higher (222 on the RIT scale) and thus finish better than 63 percent of the tested student population in 6th grade reading. Additionally, to meet proficiency in 6th grading reading in Texas, that student would have to finish better than 28 percent of the tested student population in 6th grade reading. This chart clearly illustrates the discrepancy in proficiency among states; some states have tests that are less rigorous, and proficiency is more attainable by more students, thus making the requirements in *No Child Left Behind* easier to achieve. Although states are federally mandated to create an assessment system that includes proficiency, the instrumentation they choose to use is at their discretion; therefore, without a common measurement tool applied for calibration (such as the one used by NWEA), a state's testing results could be misleading and inflated.

Table 8
Comparison of State Proficiency Levels with Cut Scores and Percentile of Students Performing at or below the Proficiency Level

Grade 5			Grade 6			Grade 7		
State	Cut Score	%ile	State	Cut Score	%ile	State	Cut Score	%ile
SC	220	73	SC	221	63	SC	227	70
CA	214	54	CA	216	46	WA	226	67
AZ	210	45	MT	211	35	CA	221	50
OR	209	42	ID	211	35	MT	218	43
IL	207	37	IN	210	32	IA	216	37
MT	206	35	IA	209	30	ID	215	35
ID	206	35	TX	208	28	TX	210	24
IA	205	32	CO	197	11	CO	206	18
MN	204	30						
TX	204	30						
CO	197	18						

Several states have already redefined their proficiency levels, typically by lowering their standards so that student performance "looks" better on paper. DeBray (2004) used Michigan as an example of states being reactive rather than proactive in their proficiency-setting strategies; Michigan went from 1,513 failing schools in one year to 216 the following year not by having more successful students but by redefining a proficient school.

Common Core Curriculum Standards and Lexile Measures

One of the key requirements of the Common Core Curriculum Standards is that all students must be able to comprehend texts of increasing complexity as they progress through school. By the time they complete the core, students should be able to read and comprehend independently and proficiently the kinds of complex text commonly found in college and careers (Common Core State Standards: Appendix A, 2012). ACT released a report (2006) called *Reading Between the Lines* that showed which skills differentiated students who equaled or exceeded the benchmark score (21 out of 36) in the reading section of the ACT college admissions test from those who did not. Prior ACT research had shown that students achieving the benchmark score or better in reading—which only about half (51 percent) of the roughly half million test takers in the 2004-2005 academic year had done—had a high probability (75 percent chance) of earning a C or better in an introductory, credit-bearing college course. What chiefly distinguished the performance of those students who had earned the benchmark score or better from those who had not was not their relative ability in making inferences while reading or answering questions related to a particular cognitive process, such as determining main idea or determining the meaning of words and phrases in context. Instead, the clearest differentiator was students' ability to answer questions associated with complex texts (ACT, 2006).

Research indicates that the demands that college and careers place on readers have held steady or increased over the past fifty years. The difficulty of college textbooks, as measured by Lexile scores, has not decreased in any block of time since

1962; it has, in fact, increased over that period (Stenner et al., 2009). Furthermore, students are expected to read complex texts with greater independence and less scaffolding by the teacher (Erickson & Strommer, 1991; Pritchard, Wilson, & Yamnitz, 2007). Students in college are far more likely to be held accountable for what they read independently (Heller & Greenleaf, 2007). Despite the growing reading demands in college and careers and the need for increased understanding of complex texts, K-12 reading texts have actually trended downward in difficulty in the last half century. Jeanne Chall and her colleagues (Chall, Conrad, & Harris, 1977), found a thirteen-year decrease from 1963-1975 in the difficulty of K-12 texts. Hayes, Wolfer, and Wolfe (1996) found declines in average sentence length and vocabulary levels in reading textbooks for a variety of K-12 grades. Williamson (2006) found a 350L (Lexile) gap between the difficulty of end-of-high school and college texts—a gap equivalent to 1.5 standard deviations and more than the Lexile difference between grade 4 and grade 8 texts on the National Assessment of Education Progress (NAEP).The relevance of these studies is in the demands of text given to students K-12 and the lack of preparation for college and careers.

The effect that low reading achievement has on students' readiness for college and careers is significant. The National Center for Education Statistics (Wirt et al., 2004) reports that the need for remedial reading appears to be the most serious barrier to degree completion. Furthermore, only 30 percent of 1992 high school seniors who went to enroll in postsecondary education between 1992 and 2000 and then took any remedial reading course went on to receive a degree or certificate (Wirt et al., 2004).

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Being able to read complex text independently and proficiently is essential for high school achievement in college and the workplace and important in numerous life tasks. As Adams (2009) suggests, there may one day be modes and methods of information delivery that are as efficient and powerful as text, but for now there is no contest. To grow, our students must read, and more specifically they must read 'complex' texts — texts that offer them new language, new knowledge, and new modes of thought. In order to increase text complexity in successive years of schooling, the approach used in the Common Core Curriculum Standards is a three-part model for measuring text complexity. The Standards model of text complexity consists of three equally important parts.

Dimensions of Text Complexity

- Qualitative dimensions of text complexity refer to those aspects of text complexity best measured or only measurable by an attentive human reader, such as levels of meaning or purpose, structure; language conventionality or clarity; and knowledge demands.

- Quantitative dimensions of text complexity refer to those aspects of text complexity, such as word length or frequency, sentence, length, and text cohesion, that are difficult if not impossible for a human reader to evaluate efficiently in long texts, and are thus today typically measured by computer software.

Reader and Task Considerations

- Reader and task considerations refer to variables that are specific to readers, such as motivation, knowledge and experience, and purpose of achieving the reading task.

Numerous formulas exist for measuring the readability of various types of text. Such formulas typically use word length and sentence length as proxies for semantic and syntactic complexity. The assumption behind these formulas is that longer words and longer sentences are more difficult to read than shorter ones; a text with many long words and/or sentences is thus rated by these formulas as harder to read than a text with many short words and/or sentences would be. Some formulas, such as the Dale-Chall Readability Formula (Chall & Dale, 1995), substitute word frequency for word length as a factor, the assumption being that less familiar words in a text, the harder the text is to read. Like Dale-Chall, the Lexile Framework for Reading, developed by MetaMetrics, Inc. uses word frequency and sentence length to produce a single measure, called a Lexile, which establishes a text's complexity (MetaMetrics, 2011). The most important difference between the Lexile system and traditional readability formula is that traditional formulas only assign a score to a text, whereas the Lexile Framework for Reading can place both readers and texts on the same scale.

Measures of text complexity must be aligned with college and career readiness expectations for all students. Qualitative scales of text complexity can clearly demonstrate the demands required in typical first-year credit-bearing college courses and in workforce training programs. Quantitative measures should identify the college- and

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career-ready reading levels as one endpoint of the scale. MetaMetrics realigned its Lexiles as shown in Table 9. Lexile ranges to match the Common Core Curriculum Standards' text complexity grade bands have adjusted upward its trajectory of reading comprehension development through the grades to indicate that all students should be reading at the college and career readiness level by no later than the end of high school.

Table 9
Text Complexity Grade Bands and Associated Lexile Ranges

Text Complexity Grade Band in the Standards	Standard Lexile Ranges	Lexile Ranges Aligned to College and Career Expectations (named Stretch Lexiles by MetaMetrics)
K-1	N/A	N/A
2-3	450-725	450-790
4-5	645-845	770-980
6-8	860-1010	955-1155
9-10	960-1115	1080-1305
11-College and Career Readiness	1070-1220	1215-1355

The International Center for Leadership in Education (Daggett, 2003) has done extensive work with several state departments of education to determine a common measuring tool that will analyze the readability of a whole text and measure characteristics such as sentence length (a highly reliable proxy for syntactic complexity),

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semantic difficulty (recognized vocabulary measured against high frequency word lists) — traditional and widely accepted characteristics that are highly related to overall reading comprehension — the Lexile Framework for Reading provides such a tool. Daggett (2012) also explains that the real world requires substantially higher levels of reading than most students possess; furthermore, states need to be sure that the reading proficiency levels they set under *No Child Left Behind* reflect not just traditional measures of reading competence, but also what individuals will need for employability and education after high school graduation. The Lexile measure of a reader is directly related to comprehension rates. Table 10 shows how the reader's ability to access classroom text can affect comprehension (Stenner et al., 2011).

Table 10
Comprehension Rates for Readers of Different Abilities with Texts of the Same Complexity to Show Comprehension Rate Under Constant Text Complexity

Reader Ability	Classroom Textbook	Comprehension Rates
500L	1000L	25%
750L	1000L	50%
1000L	1000L	75%
1250L	1000L	90%
1500L	1000L	96%

The following formula illustrates the equation, both conceptually and statistically, that allows the reader ability and text complexity to be measured on the same scale. This formula allows educators to predict the level of comprehension a reader is likely to experience with a particular text.

Conceptual:

Comprehension = Reader Ability (RA) - Text Complexity (TC)

Statistical:

$$\text{Raw Score} = \sum \frac{e^{(RA - TC_i)}}{1 + e^{(RA - TC_i)}}$$

The Southwest Regional Educational Laboratory (2010) completed a study to determine the proportion of grade 11 students whose scores on reading assessment indicate their readiness to read and comprehend textbooks used in entry-level English courses in the University of Texas system. The findings show that at the 75% comprehension level, 51% of students can read 95 percent of first-year English textbooks used in entry-level classes in the University of Texas system, 80 percent can read 50 percent of the textbooks, and 9 percent can read no more than 5 percent of the textbooks. The study proposed a methodology using the Lexile Framework for Reading to calculate the proportion of Texas public school students who are prepared to read and comprehend text beyond high school. Recent studies have begun to examine the use of the Lexile Framework to assess student readiness for reading postsecondary text (Williamson, 2008). The Lexile Framework for Reading has been used as a part of the

state assessment and reporting system in Texas since 1999. MetaMetrics, Inc. (the developer of the Lexile Framework) has been collaborating with the Texas Education Agency to evaluate the reading level required by Texas assessments. In a 2005 study, the Texas Education Agency linked TAKS English language arts and reading texts with Lexile measures; the outcome was a table that converts TAKS scores into Lexile measures and vice versa. Table 11 shows an example of the conversion for sixth grade reading TAKS.

Table 11
Raw Score Conversion Table – TAKS Reading, Grade 6, Spring 2010

Raw Score	Lexile Measure	Raw Score	Lexile Measure
0	435L	22	700L
1	435L	23	715L
2	435L	24	735L
3	435L	25	755L
4	435L	26	775L
5	435L	27	790L
6	435L	28	810L
7	435L	29	855L
8	460L	30	855L*
9	480L	31	880L
10	505L	32	900L
11	530L	33	925L
12	550L	34	955L
13	565L	35	985L
14	585L	36	1015L
15	605L	37	1050L
16	625L	38	1095L
17	645L	39	1200L**
18	660L	40	1225L
19	680L	41	1350L
20	680L	42	1350L
21	680L	* Met Standard level ** Commended Performance level	

The National Center for Educational Statistics (White & Clement, 2001) created a panel with the charge of providing NCES with informed judgment and theoretical underpinnings and construct validity of the Lexile Framework. Panel members were asked to address the Lexile Framework's basis in linguistic theory. The following questions framed the panel's work and deliberations:

1. Are word frequency and sentence length solid criteria to use in determining text difficulty?

2. Are those criteria sufficient to determine text difficulty? If not can they be improved or used for only a subset of reading passages?

3. Are the procedures used to determine the word frequency and sentence length adequate? If not, how can they be improved? Are there alternative procedures for assessing readability?

4. What is the relationship between the Lexile Framework and other measures of text difficulty?

Although the panel found a number of concerns and recommended further research, they also found potential areas of application for the Lexile Framework with regard to student assessments. The following recommendations summarize the panel's findings (White & Clement, 2001):

- Sentence length and word frequency are valuable overall measures of semantic and syntactic complexity.

- It seems possible to use the LF database of tens of thousands of Lexiled

  passages in thousands of books to select candidate passages that have a

  desired Lexile level and other desirable properties for test use.

- Prose passages for assessments can be Lexiled retroactively, through a

  use of a formula computation routinely used to determine Lexiles.

- The use of the Lexile analyzer can help determine appropriate passages

  for a given grade level.

- Assessment comparisons among assessment instruments could be

  achieved using consistent ranges of reading difficulty levels, as well as

  comparing assessments administered in different years.

In response to No Child Left Behind, and state-defined accountability models, state departments of education are required to assess annually students' proficiencies in reading. Most education departments employ customized tests to report student progress in NCLB grades, typically grades 3-8 and one or more years of high school. State departments of Education have linked their state tests with the Lexile Framework for Reading to fulfill federal and state mandates for student growth (Metametrics Consulting and Development, 2012). MetaMetrics conducts an analysis of state readings tests in order to construct a "theoretically parallel" (t-parallel) linking test for each grade level included in the study. 2,000 students per grade sampled are required for the linking study. Students in the sample complete the t-parallel linking test within a few weeks of taking the state assessment. Upon completion of the linking study, MetaMetrics provides

the state department of education with a technical report that details the study procedure and results. The report includes the conversion tables to translate each scale score from the state test at each grade level into a corresponding Lexile measure. Upon review and approval of the technical report, the education department can begin reporting Lexile measures from its assessment.

The Common Core State Standards: Appendix A (2012) articulates various criteria that are intended to provide teachers with effective tools for instruction. The criteria illustrate the shifts in the Common Core State Standards that better prepare students for college and careers. One criteria involves text complexity. The Common Core Standards require students to read increasingly complex texts with growing independence as they progress toward college and career readiness. The standards hinge on students encountering appropriately complex texts at each grade level to develop mature language skills and the conceptual knowledge they need for success in school and life (Common Core State Standards: Appendix A, 2012). Reading Standard 10 outlines the level of complexity at which students need to demonstrate comprehension in each grade level. As illustrated in Table 12, text complexity in the Standards is defined in grade bands: grades 2-3, 4-5, 6-8. 9-10, and 11-CCR. Students in the first year of the band are expected by the end of the year to read and comprehend proficiently within the band, with scaffolding needed at the high end of the range. Students in the last year of a band are expected by the end of the year to read and comprehend independently and proficiently within the band.

Table 12
The Progression of Reading Standard 10

Grade	Progression of Reading Standard Description
K	Actively engage in group reading activities with purpose and understanding.
1	With prompting and support, read prose and poetry [informational texts] in the grades 2-3 text complexity for grade 1.
2	By the end of the year, read and comprehend literature [informational texts] in the grades 2-3 text complexity band proficiently, with scaffolding as needed at the high end of the range.
3	By the end of the year, read and comprehend literature [informational texts] at the high end of the grades 2-3 text complexity band independently and proficiently.
4	By the end of the year, read and comprehend literature [informational texts] in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.
5	By the end of year, read and comprehend literature [informational texts] at the high end of the grades 4-5 text complexity band independently and proficiently.
6	By the end of the year, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
7	By the end of the year, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 6-8 text complexity band proficiently, with scaffolding needed at the high end of the range.
8	By the end of the year, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 6-8 text complexity band independently and proficiently.
9-10	By the end of grade 9, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 9-10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 9-10 text complexity band independently and proficiently.
11-12	By the end of grade 11, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature [informational texts, history/social studies texts, science/technical texts] at the high end of the grades 11-CCR text complexity band independently and proficiently.

Additionally, Appendix A in the Common Core Curriculum Standards outlines the reading complexity bands that overlap to a limited degree with previous bands. The Lexile ranges for the Common Core Curriculum Standards have been adjusted upward. Table 13 illustrates the text complexity bands associated with Lexiles ranges (in Lexiles) between the standard Lexile ranges and the new Lexiles ranges that are aligned to the college and career expectations and indicates the increased complexity requirements in the new bands, known as Stretch Lexiles for Reading (Common Core Curriculum Standards, 2012).

Table 13
Text Complexity Grade Bands and Associated Lexile Ranges with Complexity Increases (in Lexiles)

Text Complexity Grade Band in the Standards	Traditional Lexile Ranges	Stretch Lexile Ranges	Complexity Increase (in Lexiles)
K-1	N/A	N/A	N/A
2-3	450-725	450-790	+ 65
4-5	645-845	770-980	+ 135
6-8	860-1010	955-1155	+ 145
9-10	960-1115	1080-1305	+ 190
11-CCR	1070-1220	1215-1355	+ 135

Lexiles for Reading

The Lexile score not only allows teachers, parents, and students to understand complex text, the Lexile score also provides the students with a reader measure that can be matched with potential reading material so that the material remains within the instructional range, and not in the level of frustration. According to the Texas Education Agency (2004), the Lexile Framework is a scientific approach to reading and text measurement. This statement was in reference to Reading TAKS. Furthermore, information regarding the use of Lexiles was sent to administrators by the Texas Education Agency on March 1, 2004 (Texas Education Agency, 2004). Summarized bullet points are as follows:

- A new resource linking Texas Assessment of Knowledge and Skills scale scores to Lexile measures is now available at no cost to educators and parents.

- This resource is based on a recently completed study using 2003 TAKS data to link TAKS with the Lexile Framework.

- The Lexile Framework is an educational tool that helps schools and parents evaluate and monitor the development of students' ability to read and understand increasingly challenging texts.

- The student Lexile measure is based on the level of his or her reading performance.

- The text Lexile measure is based on the difficulty of the text with regard to certain characteristics, such as sentence length.

- By matching each student with written texts targeted to his or her reading level, the Lexile Framework helps ensure that a student is reading material that he or she can read independently without frustration.

- Lexile measures can be a positive contributor to students' reading improvement.

The use of Lexiles to determine a student's ability to comprehend text has been a key in understanding student assessment results in the *Confidential Student Report* provided by Texas Education Agency (2010d) for each student tested. This report, called *Confidential Student Report,* gives a Lexile measure for each student.

Stretch Lexiles for Reading

MetaMetrics (2012) established a clear set of K-12 standards that would align with the Common Core State Standards Initiative to ensure that all students would graduate from high school college and career ready. The following key points in the research of MetaMetrics lead to the development of Lexile bands with increased complexity, known as Stretch Lexiles.

- The text complexity of K-12 textbooks has become increasingly easier over the last 50 years. The Common Core Standards quote research showing steep declines in average sentence length and vocabulary level in reading textbooks.

- The text demands of college and careers have remained consistent over the same time period. College students are expected to read complex text with greater independence than high school students.

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- There is a significant gap between student's reading abilities and the text demands of postsecondary pursuits.

- Stretch Lexile bands are the basis for determining at what text complexity level students should be reading—
  and at which grades—to make sure that they are ultimately prepared for the reading demands of college and careers.

Policy Implications Regarding Accountability and Assessment Decisions

Recent studies show that large numbers of students graduate from high school without the skills to be successful in college and careers due to the inability to access complex text. One national study reported that 29 percent of students enrolled in four-year public universities needed remedial assistance (Strong American Schools, 2008). A Texas study found that 24 percent of college students require remediation (Terry, 2007). Additionally, studies examining workplace readiness also find that students are unprepared to meet the reading demands required by many jobs (Williamson, 2004). Legislators and policymakers at both national and state levels have focused attention and resources on preparing high school graduates for successful participation in either careers or colleges. Federal legislation (American Recovery and Reinvestment Act of 2009) established funding priorities for the development of college and career-readiness standards and programs to increase college success. Texas established a goal that all students from high school will be prepared for success in careers or college and invested

resources to boost graduation rates and increase the number of high school students who are college ready.

Summary of Literature Review

Increasing text complexity in Texas reading assessments can be achieved through more rigorous Lexile bands; however, Texas has chosen not to adhere to the Stretch Lexiles for Reading. These Lexiles associated with the Common Core Curriculum Standards provide continuity in the complexity and expectations for our students that will lead to college and career preparedness, regardless of what state assessment they take or their economic status. Common standards can improve educational opportunities by providing a high quality education consistently from school to school and state to state. When Congress reauthorized the Elementary and Secondary Education Act (ESEA), provisions were included to overhaul federal efforts to support elementary and secondary education in the United States.

Some of the major provisions included the following as efforts to improve reading education in America's schools:

- Accountability for results

- Expanded local control and flexibility

- Requiring every child to be on-grade level/proficient by the end of the 2013-2014 school year

- Ensuring every child can read

- Adequately yearly progress (AYP) standards

- Promoting English Proficiency

Readability formulas are good indicators of student performance on standardized testing. Proficiency demands mandated by NCLB and associated with college and careers will help students succeed by enabling them to access rigorous text. States need to be sure that the reading proficiency levels set under NCLB reflect not just traditional academic measures of reading competence, but also the larger picture of what they will need for employability and success in life after graduation (Daggett, 2012). Readability formulas, now disregarded and discarded by the Texas Education Agency, have survived over a century of intensive application, investigation, and controversy. The research on readability has made us aware of the factors affecting success in reading; the readability formulas, when used properly, help us increase the chances of that success (Dubay, 2004).

CHAPTER III

METHODOLOGY

Participants

This quantitative research design collected individual student data from the 2009-2010 administration of the TAKS reading assessments. The sample included students enrolled in grades six, seven, and eight in a large Texas school district on three middle school campuses. For the purpose of this study, three campuses were selected and will be referred to as Campus 1, Campus 2, and Campus 3. These campuses were selected based on their campus group assignment by the Texas Education Agency (2009). The Texas Education Agency assigns each campus in the state to a unique comparison group of 40 campuses with similar characteristics regarding the percentage of African American, Hispanic, White, economically disadvantaged, limited English proficient (LEP), and mobile students. Comparison groups are provided so that schools can compare their performance to that of other schools with whom they are demographically similar. In this study, the three selected schools are located within a large, urban school district.

The demographic characteristics used to construct the campus comparison groups include those defined in statute as well as others found to be statistically related to performance. They are:

the percent of African American students enrolled for 2009-10;

the percent of Hispanic students enrolled for 2009-10;

the percent of White students enrolled for 2009-10;

the percent of economically disadvantaged students enrolled for 2009-10;

the percent of limited English proficient (LEP) students enrolled for 2009-10; and

the percent of mobile students as determined from 2008-09 cumulative attendance.

All schools are first grouped by type (elementary, middle, secondary, or multi-level). Then the group is determined on the basis of the most predominant features at the target school.

In the performance section of a campus AEIS report, the value given in the Campus Group column is the median of the values from the 40-school group for that campus. (The median is defined as that point in the distribution of values, above and below which one-half of the values fall.) In the profile section of the report, the value given in the Campus Group column is the average value. If a report contains question marks (?) in the Campus Group column, this means there were too few schools in the comparison group (specifically, fewer than 25 schools) to have confidence in the median values. Such small numbers are considered too unstable to provide an adequate comparison group value (Texas Education Agency, 2009).

Table 14 shows the demographic data used by the Texas Education Agency that resulted in Campus 1, Campus 2, and Campus 3 being grouped together and thus selected for this study.

Table 14
Campus Demographic Data for Placement by Texas Education Agency in Campus Group

	Campus 1	Campus 2	Campus 3	Average of Campus Group (40 campuses)
Economically Disadvantaged*	68.1%	67.6%	67.7%	67.8%
Hispanic	49.7%	56.7%	56.5%	52.6%
African American	32.74%	25.5%	26.3%	19.6%
White	13.6%	12.3%	13.8%	24.1%

* Under Texas Education Agency (TEA) guidelines, students were identified as economically disadvantaged if they were eligible for free or reduced-price meals under the National School Lunch and Child Nutrition Program

Data Preparation

Procedures are detailed for the combination of the data and preparation of the spreadsheet used to import into the Statistical Package for the Social Sciences (SPSS) program for data analysis. The data analysis section used descriptive statistics for the variables used in contingency table analyses. The summary contains the interpretation of the findings based on the results of the contingency table analyses.

A request was made to the Department of Research, Accountability, and School Improvement at a school district in Texas. The request for research form consisted of

10 questions regarding the purpose and intent of the study. The study was approved by the Assistant Superintendent for School Improvement and Accountability with the following limitations: the study may use only 2009-2010 TAKS/Lexile/demographic data, no additional data may be collected, confidentiality must be practiced, random codes should be assigned to student data, and specific campus names should not be used.

The 2010 TAKS reading scores and Lexiles (i.e., pass or fail) were collected from COGNOS, a district data housing program that stores students' TAKS scores and demographic information; names of students were redacted from the data. Once the data were retained, they were transferred into an Excel spreadsheet, in preparation for analysis in SPSS. Each student score was assigned a unique number, and stored as a unique record (i.e., row) in Excel. The first column identified the campus (i.e., Campus 1, Campus 2, or Campus 3). The second column indicated whether or not the student score was passing for the 2010 TAKS reading assessment (i.e., 1=pass, 0=fail); the third column indicated whether or not the student score was passing with Stretch Lexiles replacing the standard Lexiles associated with TAKS (i.e., 1=pass, 0=fail); the fourth column indicated coding for economically disadvantaged (i.e., 1=yes, 0=no); the fifth column indicated ethnicity using codes already established by Texas Education Agency (i.e., 3=African American, 4=Hispanic, 5=White, 0=Other); and the sixth and final column indicated graded level (i.e., grade 6, grade 7, or grade 8).

The data from the Excel spreadsheet were imported into SPSS and each variable was defined and value labels created. Once the data were created in SPSS as a database,

descriptive statistics were computed for 2010 reading TAKS/Lexile scores and the new

Stretch Lexile measures. Frequency tables were run to establish the frequencies and

percentages for each categorical variable, including economic status and ethnicity. The

first step of data analysis was to simply examine the data, including the frequencies and

percentages of the categorical variables. Next, the relationship between TAKS/Lexile

scores and Stretch Lexile measures was examined overall. The next step was to examine

the relationship between TAKS/Lexile scores and economic status, followed by an

examination related to changes in distribution among ethnic groups included in the

accountability system.

Design

This study was conducted using the Chi-square Test for Independence. The Chi-

square statistic was used to test the relationship among two variables, distribution of

TAKS reading passing scores and distribution of Stretch Lexile reading passing scores

associated with the Common Core Curriculum Standards. The Chi-square Test for

Independence was based on the assumption that each observation was independent of the

other. The hypotheses in a Chi-square analysis do not follow a specific parameter or

make assumptions about the population chosen; they investigate whether a relationship

exists within the population (Gravetter & Wallnau, 2009). Once observed and expected

frequencies were obtained in Excel spreadsheet format, the Chi-square Test for

Independence was calculated to determine how well the data (observed frequencies) fits

the null hypothesis (expected frequencies) (Gravetter & Wallnau, 2009). In other words,

the Chi-square Test for Independence was used to determine if a significant relationship exists between the variables, thus rejecting the null hypothesis.

By definition, the Stretch Lexile reading standard is a higher passing standard than the traditional TAKS reading passing standard, thus the percent of students will change (i.e., be lower); however, depending on the distribution of TAKS scale scores on each campus, the distribution of passing scores among these three campuses may also change. In other words, a campus with the majority of its students narrowly passing using the traditional TAKS reading standard may have a sharp decrease in passing scores under the higher Stretch Lexile standard, while a campus with fewer of its students passing using the traditional TAKS reading standard, but passing with the maximum scores, may not see much of a drop in passing scores. The focus of the design is to test whether using the higher Stretch Lexile standard will result in a distribution of passing scores among these three campuses that is different from the distribution of passing scores among these three campuses using the traditional TAKS reading standard. Furthermore, the design will also test whether using the higher Stretch Lexile standard will result in a distribution of passing scores within student accountability groups on each campus (African American, Hispanic, White, and economically disadvantaged) that is different from the distribution of passing scores among the student accountability groups using the traditional TAKS reading standard. Furthermore, the results will be analyzed in terms of education policy implications.

Variables

There are four categorical variables involved in this design. Three of them will be used to identify the groups of interest, while the fourth will be used to calculate the frequencies of passing within the various groups. The first categorical variable is the campus where each student is enrolled (each campus will be assigned a number 1 through 3). The second categorical variable is the ethnicity indicator of each student ("0" for other—not African American, Hispanic, or White); "3" for African American; "4" for Hispanic; and "5" for White). Indicators 3-5 are the same as those used by Texas Education Agency to place students in ethnic groups. The third categorical variable is the economically disadvantaged status of each student ("1" for economically disadvantaged and "0" for not economically disadvantaged). The fourth and last categorical variable is the passing indicator of each student. The variable is dichotomous ("1" for passing and "0" for failing) and will be used to calculate frequencies of passing within student accountability groups.

Instrument

The instrument used for this study is the 2010 Texas Assessment of Knowledge and Skills (TAKS). The area of interest are the grade six, grade seven, and grade eight 2010 TAKS reading scores

Procedure

Individual grade 6, grade 7, and grade 8 student raw scores from the 2010 TAKS reading administration for Campus 1, Campus 2, and Campus 3 were collected. These scale scores were translated into Stretch Lexiles in Table 15.

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Table 15
Comparison of 2010 TAKS Lexile Failing Cut Score with Stretch Lexile Failing Cut Score

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	2010 Reading Met Standard Lexile Cut Score receiving a 0 (failing score)	Stretch Lexile Standard Lexile Cut Score receiving a 0 (failing score)
Grade 6	< than 855	< than 955
Grade 7	< than 915	< than 1015
Grade 8	< than 980	< than 1080

Using the higher standard associated with Stretch Lexiles, each student received a new passing indicator. This passing indicator was defined as "1" for passing and "0" for failing. By definition, all students not passing TAKS under the 2010 TAKS reading standard received a failing rating, and some of the students passing under the 2010 TAKS reading standard received a failing rating. The point of interest is whether the distribution of students passing among the campuses student groups changes under the higher Stretch Lexile reading passing standard.

The assessment data were imported into SPSS. The distribution of passing scores under the current TAKS standard was calculated. This calculation was made by dividing the number of students passing on a specific campus by the total number of students passing for the three campuses. Once the calculations were complete, there was a passing percentage associated with each of the three campuses (the expected value in the Chi-square Test for Independence). Adding these three percentages together equaled 100 percent. This procedure was used for five groups of students: All Students, Economically Disadvantaged Students, African American Students, Hispanic Students, and White Students.

The SPSS Chi-square code was run for all students by:

- selecting all students who passed using the higher Stretch Lexile standard

- using the campus code (i.e., 1, 2, and 3) as the grouping variable

- using the updated passing code under the higher Stretch Lexile standard to determine the frequency for each group (or campus) and thus the corresponding percentages for each group (or campus), and

- using the expected values calculated as described above using all students who passed using the traditional TAKS reading standard.

The SPSS Chi-Square code was run for economically disadvantaged students by:

- selecting all economically disadvantaged students who passed using the higher Stretch Lexile standard

- using the campus code (i.e., 1, 2, and 3) as the grouping variable

- using the updated passing code under the higher Stretch Lexile standard to determine the frequency for each group (or campus) and thus the corresponding percentages for each group (or campus), and

- using the expected values calculated as described above using all economically disadvantaged students who passed using the traditional TAKS reading standard.

The SPSS Chi-Square code was run for African American students by:

- selecting all African American students who passed using the higher Stretch Lexile standard

- using the campus code (i.e., 1, 2, and 3) as the grouping variable

- using the updated passing code under the higher Stretch Lexile standard to determine the frequency for each group (or campus) and thus the corresponding percentages for each group (or campus), and

- using the expected values calculated as described above using African American students who passed using the traditional TAKS reading standard.

The SPSS Chi-Square code was run for Hispanic students by:

- selecting all Hispanic students who passed using the higher Stretch Lexile standard

- using the campus code (i.e., 1, 2, and 3) as the grouping variable

- using the updated passing code under the higher Stretch Lexile standard to determine the frequency for each group (or campus) and thus the corresponding percentages for each group (or campus), and

- using the expected values calculated as described above using Hispanic students who passed using the traditional TAKS reading standard.

The SPSS Chi-Square code was run for White students by:

- selecting White students who passed using the higher Stretch Lexile standard

- using the campus code (i.e., 1, 2, and 3) as the grouping variable

- using the updated passing code under the higher Stretch Lexile standard to determine the frequency for each group (or campus) and thus the corresponding percentages for each group (or campus), and

- using the expected values calculated as described above using White students who passed using the traditional TAKS reading standard.

Chi-square Test for Independence

Nonparametric data are counted and put into groups or categories. For this study, the TAKS reading assessment scores are the number of passing test scores on the 2010 TAKS reading assessments with passing defined as having a Stretch Lexile measure of 955 or greater for grade 6, 1015 or higher for grade 7, and 1080 or higher for grade 8. This test was used to test for differences in distribution among the three campuses and

the identified accountability groups on these campuses. The Chi-square Test for Independence was used in this study to see if the distribution of passing scores under the higher Stretch Lexile standard was similar to the distribution of passing scores under the traditional TAKS passing standard.

TAKS reading scores and the Stretch Lexile scores associated with the Common Core Curriculum Standards were cross-tabulated in a contingency table so that when Chi-square procedures were applied to contingency tables, the aim was to determine if the two categorical variables were associated, resulting in a Chi-square Test for Independence.

Statistical Significance

Statistical significance for this research is defined as declared value of $p <= .05$. The computed Chi-square statistics for each test that results in a value of $p <= .05$ will accept the Null Hypothesis that cut scores for 2010 TAKS reading, when adjusted to cut scores with Stretch Lexiles, will not change the distribution of passing scores for students. Statistical significance indicators were found in the SPSS output file as probabilities for statistically significant differences.

Limitations

The study was limited to three middle schools representing grades 6, 7, and 8 in a large Texas school district. Each grade level's 2010 TAKS reading assessment scores were analyzed in this study. The instrumentation was limited to TAKS and Lexile data. The sample size at Campus 1 was 1,351 students, Campus 2 was 1,282 students, and Campus 3 was 1,231 students. Only students who took regular TAKS were included in

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the study. Students who took alternate forms of the assessment, such as special education

forms of the assessment, were not included in this study.

Summary of Methodology

The quantitative approach was used to identify the relationship between the 2010

TAKS reading Lexile standards and the Stretch Lexile standards found in the Common

Core Curriculum. The study was limited to sixth, seventh, and eighth grade students in a

large Texas school district who took 2010 TAKS reading assessments. The instrument

used was the 2010 TAKS reading assessment, the state-approved academic exam for

reading. Data analyses were conducted between variables in the Stretch Lexile measures

found in the Common Core curriculum and the Lexile measures found in 2010 TAKS

reading assessment. Results from the analyses are discussed in detail in Chapter IV.

Major results, implications, and recommendations for further study are discussed in

Chapter V.

CHAPTER IV

ANALYSIS AND EVALUATION

NCLB was designed to illuminate achievement gaps in reading and math, and federal mandates in the form of assessments were created to inform closing the gaps. Annual student assessments in reading linked to state standards were intended to identify schools that are failing to make adequate yearly progress, especially regarding demographic subsets of students that consist of ethnicity and socio-economic status. Adequate yearly progress targets compelled educators to focus on low achievers to score at proficient levels on state exams and meet specific cut scores at each grade level. Each campus's intent is to increase reading achievement for all students, but in question is whether lower expectations exacerbates the opportunity gap created by differing standards for some demographic student groups, thus leading to wider achievement gaps. Adhering to the lower standards provides less opportunity for students to achieve at higher levels, thus creating opportunity gaps. The overall purpose of this study was to analyze the relationship between the Lexile standards used for cut off scores and reading achievement among three middle schools. The research involved a comparison of reading achievement scores of middle school students (grades 6-8) using two different Lexile designs as cut scores, Standard Lexile measures and Stretch Lexile measures associated with the Common Core Curriculum Standards. More specifically, it focused on to what extent the impact of higher standards using Stretch Lexile measures cut scores have on academic achievement measured through mandatory state testing by

analyzing changes in distribution of passing and/or failing cut scores on reading assessments; furthermore, there was a focus on the extent that the higher standards have on demographic subsets of students that comprise configurations for campus ratings in the federal accountability system. An analysis of the data related to how the higher-stakes testing standards associated with the Common Core Curriculum Standards and Stretch Lexile measures affect schools can provide a contribution to researchers, policymakers, and practitioners on the impact and implications associated with moving to higher expectations on federally mandated middle school reading assessments. Districts will have information needed to balance the decision to use Standard Lexile measures in their curriculum standards as they prepare students for standardized testing or to choose Stretch Lexile measures associated with the Common Core Curriculum in their curriculum standards, which are aligned with college and career readiness expectations. Curriculum alignment and expectation gaps among states can lead to opportunity inequities for students that lead to achievement gaps, but districts will have to make decisions about adherence to lower standards aligned with current state reading assessments. Chapter IV will reveal the effects on three campuses after imposing higher Stretch Lexile Standards by examining any changes in the distribution of cut scores when the higher standards found in the Common Core Curriculum are used.

The purpose of this study was threefold:

1. To determine if the distribution of passing rates for students taking the Texas reading assessments will change if cut scores associated with the Common

Core Curriculum Standards (Stretch Lexile measures) are used as a standard for the Texas reading assessments.

2. To determine if the distribution of passing rates for student groups identified in the accountability system will change if cut scores associated with the Common Core Curriculum Standards (Stretch Lexile measures) are used as a standard for the Texas reading assessments.

3. To determine the policy implications that may result from changes in the distribution of passing scores on Texas reading assessments after higher cut scores associated with the Common Core Curriculum Standards (Stretch Lexile measures) are used to determine passing rates.

This chapter includes demographic information regarding the population, cross-tabulations of score comparisons, findings, and analyses. The findings are specific to the research questions.

Research Questions

To fulfill the purpose of the study, three research questions were explored:

1. What, if any, are the changes in distribution of passing rates among students taking the Texas reading assessments on three middle school campuses in a large Texas school district if cut scores associated with the Common Core Curriculum reading assessments are used as a standard for the Texas reading assessments?

2. What, if any, are changes in distribution of passing rates among student groups identified in the accountability system on three middle school campuses in a large Texas school district if cut scores associated with the Common Core

Curriculum reading assessments are used as a standard for the Texas reading
assessments?

3. What are potential policy implications that may result from changes in the
    distribution of student TAKS reading scores on three middle school campuses in
    a large Texas school district if higher cut scores are used to determine passing
    rates?

Demographic Variables

Archival data from the 2010 TAKS reading assessment were gathered from three
schools within the large, Texas school district used for this study. All students present
for the 2010 TAKS reading assessment administration in grades 6, 7, and 8 had scores
configured in the data for this study; however, scores for students taking modified
assessments were not included in this study. For a student group to be included as a
subset for accountability, the following conditions had to apply:

1. There were ≥ 50 students tested in a specific group for the tested subject
   (e.g., reading) and the group comprised 10% of all test-takers, or
2. there were ≥ 200 students in the specific group that were tested.

For this study, the subsets meeting the minimum size requirements to be included in
the accountability configurations were: African American, White, Hispanic, and
Economically Disadvantaged. Because students included in the "Other" category did
not meet the minimum size requirements to be included in the accountability
configuration as a subset, they were only included in the ALL STUDENTS category in

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this study. Table 16 shows the demographic data for student ethnicity on Campuses 1,

2, and 3 for the subsets that were a part of this study. Campus 1 had 1,351 students;

Campus 2 had 1, 282 students; and Campus 3 had 1, 231 students. The ethnicity

percentages in Table 16 include both special education and LEP students, whose

scores, depending on their individual education plans, might not be included in the

accountability process.

Table 16
Ethnicity Percentages and Numbers by Accountability
Groups for Campuses 1, 2, and 3

Ethnicity	Campus 1	Campus 2	Campus 3
African American Students	28% (N=378)	24% (N=308)	26% (N=320)
Hispanic Students	61% (N=824)	59% (N=756)	60% (N=739)
White Students	9% (N=122)	11% (N=141)	11% (N=135)
Other Students	2% (N=27)	6% (N=77)	3% (N=37)

Table 16 provides an overall account of the specific subsets included in the study

regarding ethnicity on Campuses 1, 2, and 3. It also reveals how demographically

similar the campuses are to one another regarding ethnicity.

Economically Disadvantaged Students

Campus demographic data also include percentages of students who are economically disadvantaged. Economically disadvantaged is defined in guidelines by the Texas Education Agency as those students who were eligible for free or reduced-price meals under the *National School Lunch and Child Nutrition Program*. Table 17 indicates the percentages of students on Campuses 1, 2, 3 who met the guidelines for economically disadvantaged status; the economically disadvantaged percentages in Table 16 also includes both special education and LEP students, whose scores, depending on their individual education plans, might not be included in the final accountability calculations. Table 17 provides an overall account of the specific subsets included in the study regarding economically disadvantaged students on Campuses 1, 2, and 3. It also reveals how demographically similar the campuses are to one another.

Table 17
Percentages and Numbers of Students Meeting Guidelines
for Economically Disadvantaged on Campuses 1, 2, and 3

	Campus 1	Campus 2	Campus 3
Percentages and Numbers of Economically Disadvantaged Students	74% (N=1,000)	71% (N=910)	70% (N=862)
Percentages and Numbers of Non-Economically Disadvantaged Students	26% (N=351)	29% (N=372)	30% (N=369)

Students Meeting 2010 TAKS Reading Cut Scores/Lexile Measures

Table 18 indicates percentages and numbers of students passing the 2010 TAKS

reading assessments using cut scores based on Standard Lexile measures on Campuses

1, 2, and 3 by grade level. These percentages and numbers include all students on each

campus who took the regular education test in reading.

Table 18
**Combined Percentages and Numbers of African American,
Hispanic, and White Students Passing 2010 TAKS Reading
Assessments Using Cut Scores Based on Standard Lexile Measures
on Campuses 1, 2, and 3 by Grade Level**

Grade	Campus 1	Campus 2	Campus 3	Total
Sixth Grade	94%	97%	98%	95%
	n=392	n=392	n=407	n=1,191
	N=418	N=406	N=426	N=1,250
Seventh Grade	75%	83%	88%	88%
	n=385	n=373	n=364	n=1,122
	N=516	N=449	N=413	N=1,278
Eighth Grade	86%	87%	88%	83%
	n=357	n=370	n=344	n=1,071
	N=417	N=427	N=392	N=1,290
Total Passing Percentages and Numbers for Students in Grades 6, 7, 8	84%	89%	91%	89%
	n=1,134	n=1,135	n=1,115	n=3,384
	N=1,351	N=1,282	N=1,231	N=3,818

Distribution of Percentage of Students Passing 2010 TAKS Reading

Table 19 shows the percentages of students in each accountability group subset used in this study passing the 2010 TAKS reading assessment based on cut scores associated with Standard Lexile measures. These percentages and numbers do not include students who took modified 2010 TAKS reading assessments. The Texas Education Agency does not align text Lexile measures associated with student text measures for modified reading assessments.

Table 19
**Distribution of Percentages and Numbers of African American,
Hispanic, and White Students Passing 2010 TAKS Reading
Assessments Based on Cut Scores Associated with Standard Lexile
Measures on Campuses 1, 2, and 3 for All Grade Levels**

Ethnicity	Campus 1	Campus 2	Campus 3	Total
African American Students	87% n=325 N=374	86% n=267 N=310	90% n=290 N=321	88% n=882 N=1,005
Hispanic Students	81% n=663 N=818	88% n=673 N=762	90% n=666 N=743	86% n=2,002 N=2,323
White Students	92% n=120 N=131	93% n=131 N=141	94% n=132 N=140	93% n=383 N=412
Total Passing Percentages and Numbers for Students in Grades 6, 7, 8	84% n=1,108 N=1,323	88% n=1,071 N=1,213	90% n=1,088 N=1,204	87% n=3,267 N=3,740

Tables 16-19 establish the demographic similarities for Campuses 1, 2, and 3. Variables, including economic status, ethnicity, and passing percentages by grade levels, are similar on each campus; these campuses have been grouped by Texas Education Agency together due to these demographic similarities.

Null Hypothesis for Research Question One

The Null Hypothesis is that the distribution of passing cut scores using 2010 TAKS reading standards will not change when instead using cut scores associated with the Common Core Curriculum Standards and Stretch Lexile measures for all students on Campuses 1, 2, and 3.

Results for Research Question One

Research Question One investigated the distribution of passing cut scores among students on all campuses to determine to what extent they were affected when the Stretch Lexile measures associated with the Common Core Curriculum Standards were used instead of the Standard Lexile measures. As the new standards increased, it was expected that the passing cut scores would decrease; however, it was not known to what extent they would decrease or how the change would affect specific campuses. In this study, there were trends associated with the percent of change after applying the Stretch Lexile measures. With Stretch Lexiles, grade bands, as referenced in *Chapter II, Table 9*, have been adjusted and expanded to increase the reading demands for students in order to better prepare them for postsecondary education and career pursuits. The text complexity increases reflected in Lexile measures as shown in Figure 1 indicate the increasing demands as students move up in grade levels. The end point for the Stretch

Lexile measure ends at 1385L to align with college and career readiness, whereas the current, Standard Lexile measure ends at 1220L. The Common Core Curriculum Standards focus on students' attainment of college and career readiness; expanding the text complexity bands to better address the rigor of more complicated text and building instructional targets around the end goal will better prepare students for life after high school.

	Grade 3	Grade 5	Grade 8	Grade 10	Grade 12
Standard Lexiles	725	845	1010	1115	1220
Stretch Lexiles	820	1010	1185	1335	1385
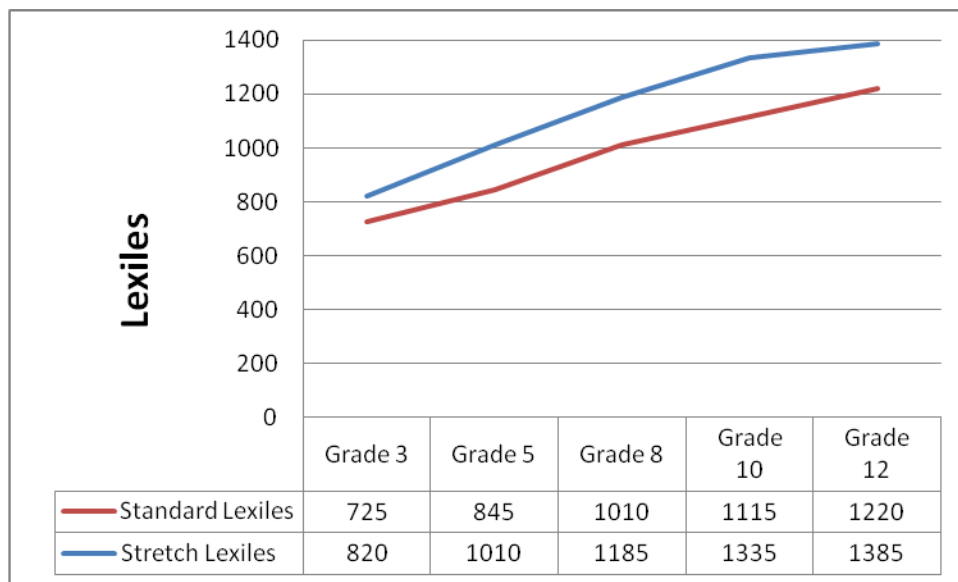
Figure 1. **Increase in Text Complexity throughout Grade Levels for the Stretch and Standard Lexile Measures.**

Figure 2 indicates the percent of change in cut scores for all students taking regular education 2010 TAKS reading assessments on Campuses 1, 2, and 3 and the same student scores after the Stretch Lexile measure cut scores were applied. The percent of change indicates how the distribution shifted as the standards increased throughout grades 3-12.

	% Change Grade Bands 2-3	% Change Grade Bands 4-5	% Change Grade Bands 6-8	% Change Grade Bands 9-10	% Change Grade Bands 11-12	Total % Shift
■ Campus 1	3	14	-4	0	-13	34
■ Campus 2	2	15	-1	-5	-11	34
■ Campus 3	2	16	-1	-6	-11	36
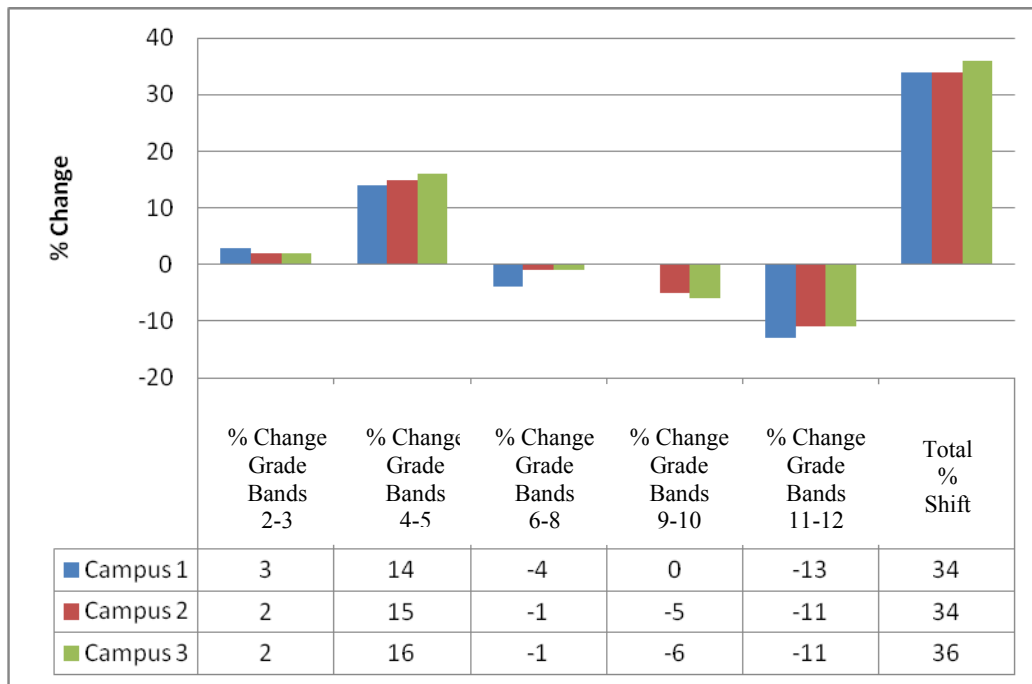
Figure 2. **Percent Change between Standard and Stretch Lexile Bands for All Students on Campuses 1, 2, and 3.**

Students tested were in grades 6-8 and cut scores should place students in the 6-8 band; however, after the Stretch Lexile measures were applied, there was a trend established that increased percent changes in grade bands 4-5 and decreased percent changes in grade bands for grades 9-10 and 11-12. Grade bands can be assigned to students in any grade level, and they correlate to student Lexile measures that are assigned to the text cut score on the 2010 TAKS reading assessments. Grade bands assist educators in understanding how far above or below grade level students fall according to their Lexile reader measure. Figure 2 indicates that as the standards increased, the percent change for the lower grade bands increased, and the distributions in the upper

grade bands decreased as the percent changes in the lower bands increased. This means

that more students are reading at the lower grade levels and fewer students are reading at

the higher levels after the application of Stretch Lexile measures. Figure 2 depicts the

shift downward within upper grade bands when the Stretch Lexile measures are applied.

These shifts in distribution mean that after Stretch Lexile measures are applied, more

students will be reading within lower grade bands. These percentages were calculated

after determining the number of student scores in each grade band for the Standard

Lexile grade bands and the Stretch Lexile grade bands and then dividing these numbers

by the total number of students to determine a percentage for each grade band; these

percentages were then either added or subtracted to calculate percent of change between

the Standard Lexile measures and the Stretch Lexile measures.

On Campus 1, 34% of students shifted into at least one lower grade band; on

Campus 2, 34% of students shifted into at least one lower grade band; and on Campus 3,

36% of students shifted into at least one lower grade band. These shifts in distribution

mean that after Stretch Lexile measures are applied, one in three students will reading at

lower grade level Lexile measures. As students shift into lower grade bands, the ability

to meet with the Lexile targets for college and career readiness becomes further out of

reach. In order to end with the college and career Lexile measure, students must have

more rigorous Lexile expectations associated with stronger instructional support

throughout the lower grade levels. As students shift into lower grade bands, their ability

to access and master more complex text decreases. If students use Standard Lexile

measures as a starting point, the ending target is well below that needed for students to

be successful after high school. The percent of change provides a clear illustration of the shifting distribution of student scores after the higher standards were applied.

Figure 3 provides a graphic display of the difference in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures. Figure 3 provides numbers of students passing to illustrate changes in distribution of passing cut scores using Standard Lexile measures and Stretch Lexile measures. Campus 1 had 1,134 students passing under the Standard Lexile measures; there were 640 students passing under the Stretch Lexile measures for a difference of 494 fewer students passing. Campus 2 had 1,135 students passing under the Standard Lexile measures; there were 768 students passing under the Stretch Lexile measures for a difference of 367 fewer students passing. Campus 3 had 1,115 students passing under the Standard Lexile measures; there were 607 students passing under the Stretch Lexile measures for a difference of 508 fewer students passing. With Stretch Lexile measures in place, 37% fewer students would pass the state reading assessment on Campus 1, 29% fewer students would pass the state reading assessment on Campus 2, and 42% fewer students would pass the state reading assessment on Campus 3. On the three campuses, between 29% and 47% more students would fail the state reading assessment if the Stretch Lexile cut scores had been in place.
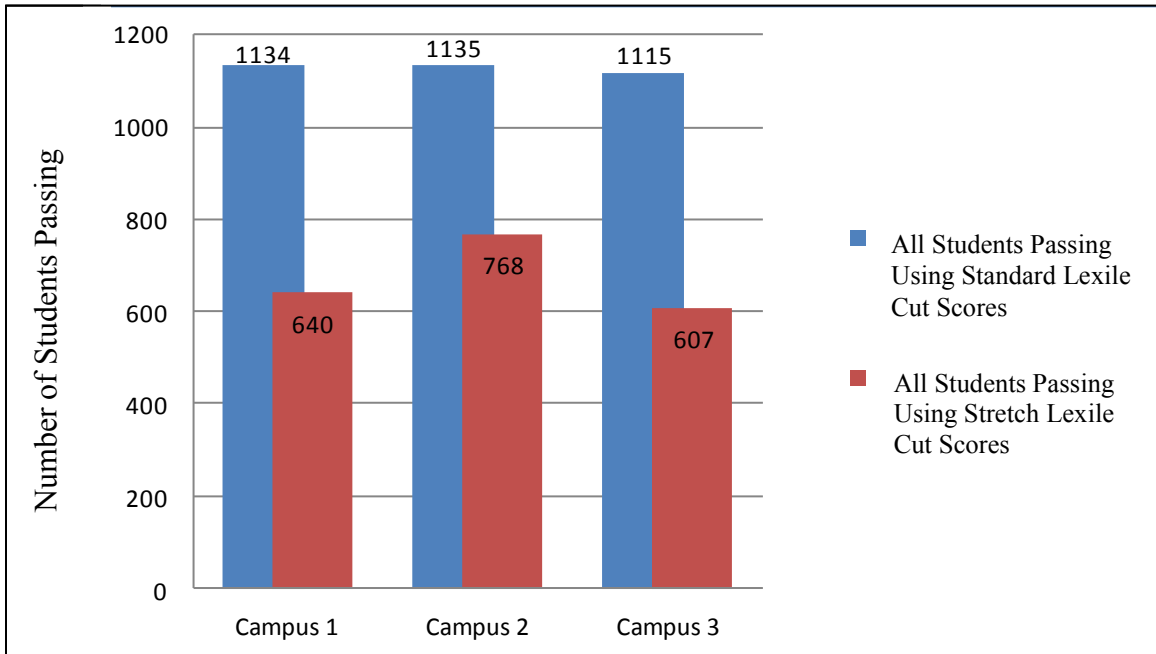
Figure 3. **Comparison of Number of Students Passing Based on Standard Lexile Cut Scores and Stretch Lexile Cut Scores for All Students on Campuses 1, 2, and 3.**

Figure 4 indicates percentage of students passing comparisons between Standard Lexile cut scores and Stretch Lexile cut scores for all students on Campuses 1, 2, and 3. Campus 1 tested 1,351 students; 1,134 students had passing cut scores based on Standard Lexile measures for all grade levels combined for an overall passing rate of 84% (1,134 ÷ 1,351 = .83938, rounded to 84%); under the Stretch Lexile cut scores, 640 students had passing cut scores for all grade levels combined, resulting in an overall passing rate of 47% (640 ÷ 1,351 = .47372, rounded to 47%). The percentage difference in passing cut scores for Campus 1 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores was -37% (84% - 47% = 37%). The -37% change was calculated by dividing the number of additional students failing after applying Stretch Lexile measures

(494 students) by total number of students tested (1,351 students) for an approximation of .36566, rounded to 37%).

Campus 2 tested 1,282 students; 1,135 students had passing cut scores based on Standard Lexile measures for all grade levels combined for an overall passing rate of 89% (1,135 ÷ 1,282 = .88534, rounded to 89%); under the Stretch Lexile cut scores, 768 students had passing cut scores for all grade levels combined, resulting in an overall passing rate of 60% (768 ÷ 1,282 = .59906, rounded to 60%). The percentage difference in passing cut scores for Campus 2 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores was -29% (89% - 60% = 29%). The -29% change was calculated by dividing the number of additional students failing after applying Stretch Lexile measures (367 students) by total number of students tested (1,282 students) for an approximation of .28627, rounded to 29%).

Campus 3 tested 1,231 students; 1,115 students had passing cut scores based on Standard Lexile measures for all grade levels combined for an overall passing rate of 91% (1,115 ÷ 1,231 = .90577, rounded to 91%); under the Stretch Lexile cut scores, 607 students had passing cut scores for combined grade levels, resulting in an overall passing rate of 49% (607 ÷ 1,231 = .4931, rounded to 49%). The percentage difference in passing cut scores for Campus 3 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores was -42% (91% - 49% = 42%). The -42% change was calculated by dividing number of additional students failing after applying Stretch Lexile measures (508 students) by total number of students tested (1,231 students) for an approximation of .41267, rounded to 42%. Figure 4 indicates that the percentage

85

differences between Standard Lexile cut scores and Stretch Lexile cut scores were similar on Campuses 1 (-37) and 3 (-42); however, Campus 2 (-29) had a percentage difference less than that of Campuses 1 and 3 after using Stretch Lexile measures for cut scores; furthermore, Figure 4 indicates that on each campus, the percent change in passing scores is almost one third or above on each campus.
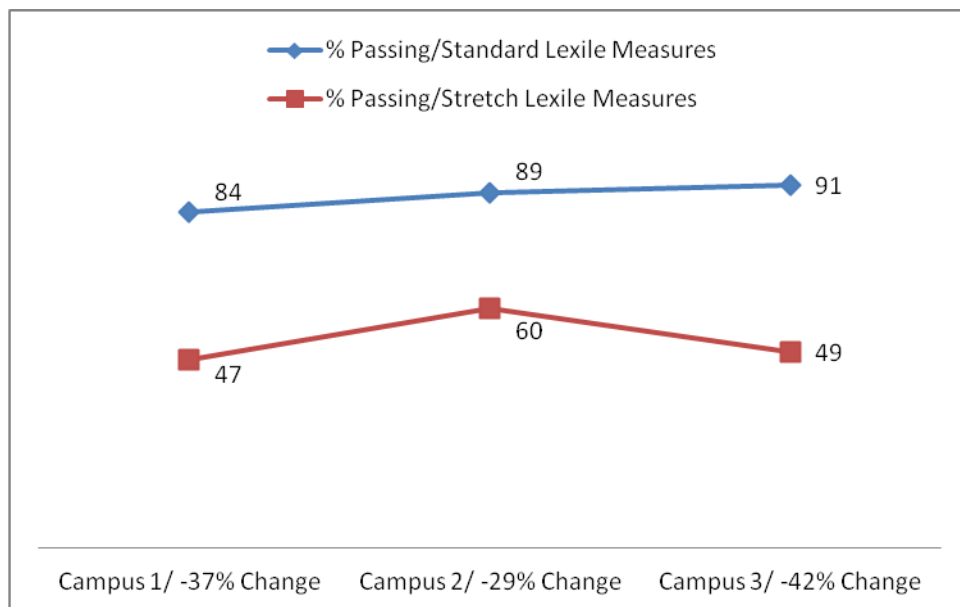
Figure 4. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for All Students on Campuses 1, 2, and 3.**

Campus 1 had 418 test-takers in sixth grade; 392 students passed using Standard Lexile cut scores, representing 94% passing; 210 students passed using Stretch Lexile cut scores, representing 50% passing. The percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for sixth graders on Campus 1 is -44%, an increase of 182 students failing; furthermore, if Stretch Lexile cut scores were

used, a total of 208 students would have failed the state reading assessment. Campus 1 had 516 test-takers in seventh grade; 385 students passed using Standard Lexile cut scores, representing 75% passing; 201 students passed using Stretch Lexile cut scores, representing 39% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for seventh graders on Campus 1 was -36%, an increase of 184 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 315 students would have failed the state reading assessment. Campus 1 had 419 test-takers in eighth grade; 357 students passed using Standard Lexile cut scores, representing 85% passing; 229 students passed using Stretch Lexile cut scores, representing 54% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for eighth graders on Campus 1 was -31%, an increase of 128 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 190 students would have failed the state reading assessment.

Figure 5 indicates passing percentage comparisons between cut scores based on Standard Lexile measures and .cut scores based on Stretch Lexile measures for all students on Campus 1 in grades 6, 7, and 8.
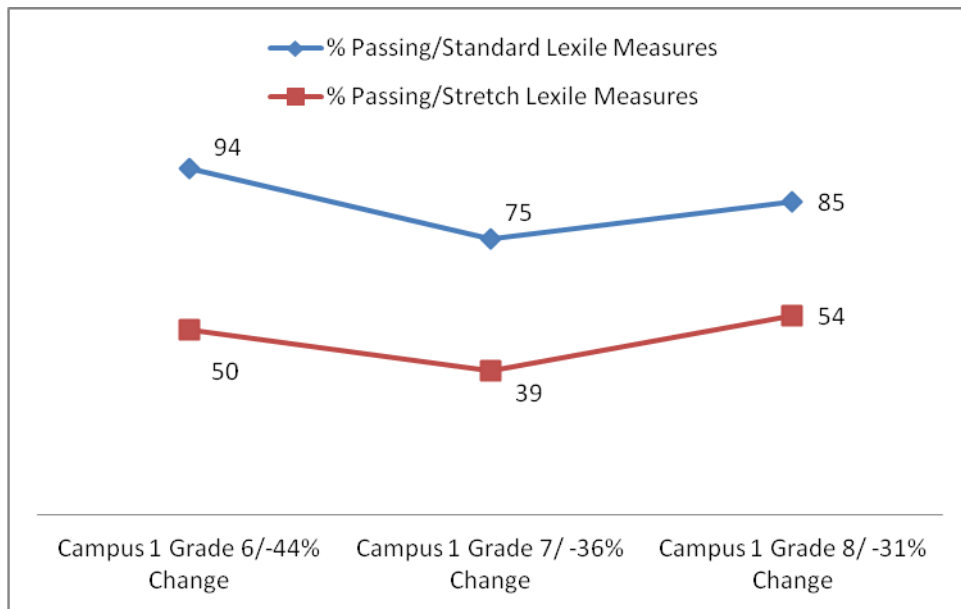
Figure 5. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for All Students on Campus 1 in Grades 6, 7, and 8.**

Campus 2 had 406 test-takers in sixth grade; 392 students passed using Standard Lexile cut scores, representing 97% passing; 213 students passed using Stretch Lexile cut scores, representing 53% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for sixth graders on Campus 2 was -44%, an increase of 179 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 193 students would have failed the state reading assessment. Campus 2 had 449 test-takers in seventh grade; 373 students passed using Standard Lexile cut scores, representing 83% passing; 233 students passed using Stretch Lexile cut scores, representing 52% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for seventh graders on Campus 2 was -31%, an increase of 140 students failing; furthermore, if Stretch Lexile cut scores

were used, a total of 216 students would have failed the state reading assessment. Campus 2 had 427 test-takers in eighth grade; 370 students passed using Standard Lexile cut scores, representing 87% passing; 322 students passed using Stretch Lexile cut scores, representing 75% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for eighth graders on Campus 2 was -12%, an increase of 48 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 105 students would have failed the state reading assessment.

Figure 6 indicates passing percentage comparisons between cut scores based on Standard Lexile measures and cut scores based on Stretch Lexile measures for all students on Campus 2 in grades 6, 7, and 8.
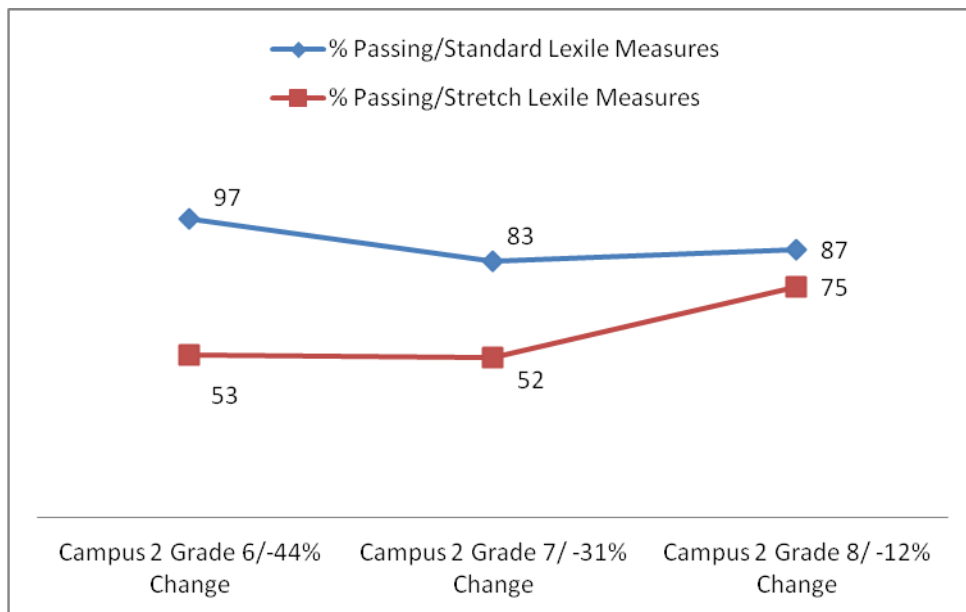
Figure 6. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for All Students on Campus 2 in Grades 6, 7, and 8.**

Campus 3 had 426 test-takers in sixth grade; 407 students passed using Standard Lexile cut scores, representing 96% passing; 217 students passed using Stretch Lexile cut scores, representing 51% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for sixth graders on Campus 3 was -45%, an increase of 190 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 209 students would have failed the state reading assessment. Campus 3 had 413 test-takers in seventh grade; 364 students passed using Standard Lexile cut scores, representing 88% passing; 204 students passed using Stretch Lexile cut scores, representing 49% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for seventh graders on Campus 3 was -39%, an increase of 160 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 209 students would have failed the state reading assessment. Campus 3 had 392 test-takers in eighth grade; 344 students passed using Standard Lexile cut scores, representing 88% passing; 186 students passed using Stretch Lexile cut scores, representing 47% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for eighth graders on Campus 3 was -41%, an increase of 158 students failing; furthermore, if Stretch Lexile measures were used, a total of 206 students would have failed the state reading assessment.

Figure 7 indicates passing percentage comparisons between cut scores based on Standard Lexile measures and cut scores based on Stretch Lexile measures for all students on Campus 3 in grades 6, 7, and 8.
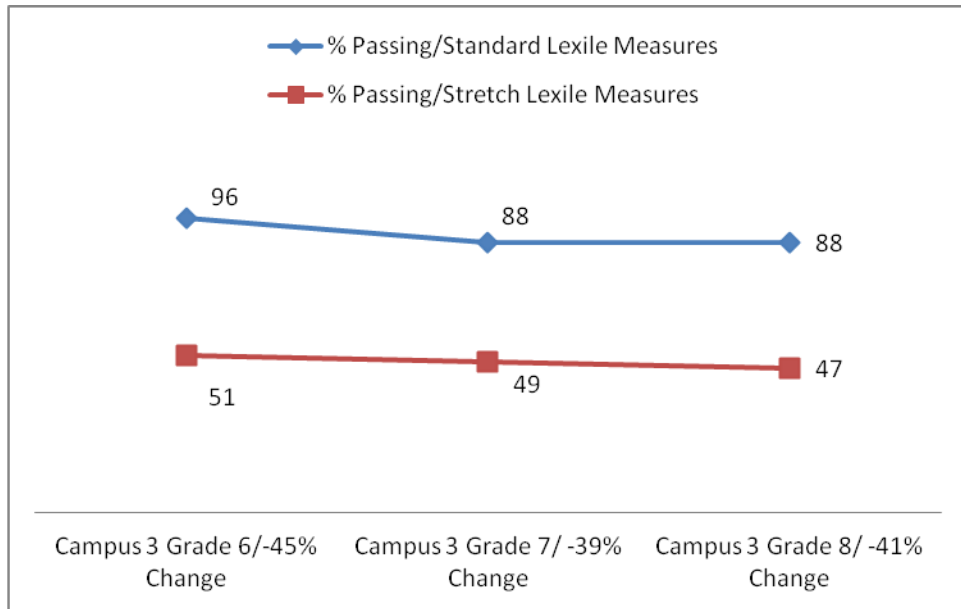
Figure 7. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for All Students on Campus 3 in Grades 6, 7, and 8.**

Figure 8 establishes the increases in numbers of failing students and percent change in passing percentages between the Standard Lexile cut scores and the Stretch Lexile cut scores for grades 6, 7, and 8 on Campuses 1, 2, and 3. These calculations were made by first determining the total number of test-takers at each grade level and dividing percentage by the students passing with Standard Lexile cut scores at each grade level to establish passing percentages for Standard Lexile cut score standards and the percentage of students passing with the Stretch Lexile cut score standards at each grade level on

91

each campus. The resulting percentages were subtracted to determine a percentage difference in passing cut scores at each grade level. The purpose of this calculation was to illustrate percent change differences after applying the Stretch Lexile cut scores. Figure 8 indicates that percent changes were similar on Campuses 1 and 3. The percent change was equal to or less in each grade level on Campus 2.

	Grade Six Cut Scores n/ %Change	Grade Seven Cut Scores n/ %Change	Grade Eight Cut Scores n/ %Change
Campus 1	182/-44	184/-36	128/-31
Campus 2	179/-44	140/-31	48/-12
Campus 3	190/-45	160/-39	158/-41
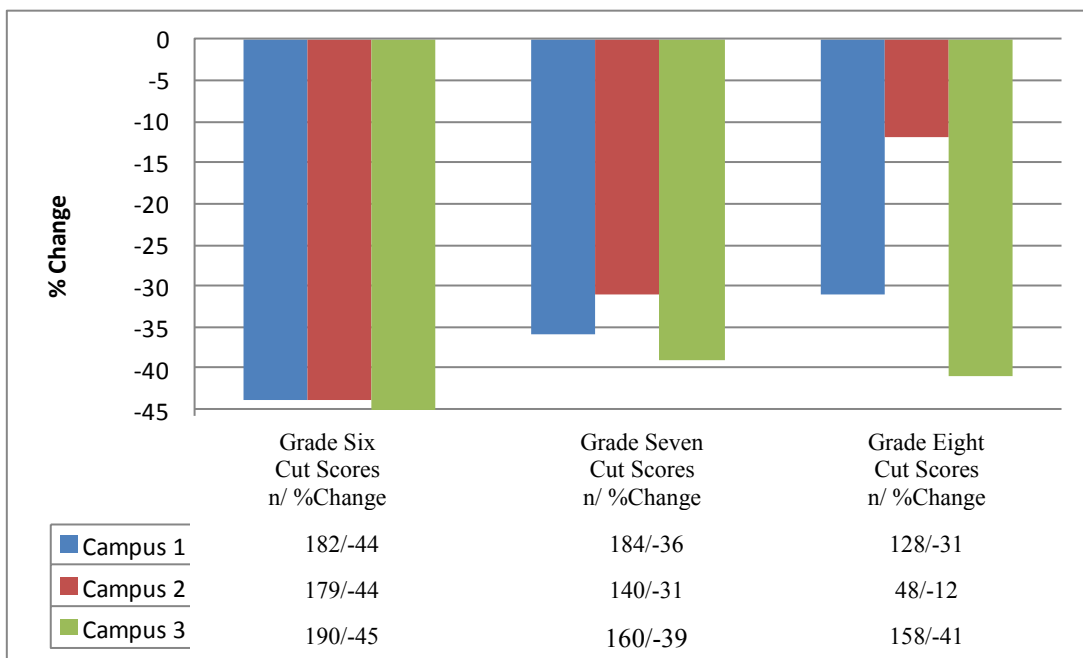
Figure 8. **Increases in Number of Failing Students Using Stretch Lexile Measures and Percent Change between Passing Standard Lexile Cut Scores and Stretch Lexile Cut Scores for All Students on Campuses 1, 2, and 3 by Grade Level.**

Table 20 indicates the frequencies (numbers of students passing under the Standard Lexile measures) and percentages (percent of students passing at each campus from the total number of test-takers on Campuses 1, 2, and 3). Campus 1 had 1,351 test-

92

takers and 1,134 students passing; Campus 2 had 1,282 test-takers and 1,135 students

passing; Campus 3 had 1,231 test-takers and 1,115 students passing. The total number of

test-takers for Campuses 1, 2, and 3 was 3,864 with a total of 3,384 students passing on

all campuses. Table 20 further indicates that 33.5% of students passing were from

Campus 1; 33.5% of students passing were from Campus 2; 32.9% of students passing

were from Campus 3.

Table 20
Frequencies and Percentages for All Students Meeting Standard
Lexile Cut Scores on Campuses 1, 2, and 3

Campus	Frequency (numbers of students passing)	Percent (% passing at each campus)	Cumulative Percent
Campus 1	1134	33.5	33.5
Campus 2	1135	33.5	67.1
Campus 3	1115	32.9	100.0
Total	3384	100.0	

Table 21 indicates the observed and expected numbers of all passing students

after replacing the Standard Lexile cut scores with Stretch Lexile cut scores. The

purpose of the Chi-square Test for Independence is to determine if a similar distribution

in passing scores would exist if a different standard were used. The Null Hypothesis

anticipates a similar distribution in Expected N; a difference in Observed N and

Expected N would indicate a statistically significant relationship between the variables

exists, indicating that the variables are related and not independent of one another.

Table 21
**Observed Passing Cut Scores Using Stretch Lexile Cut Score Standards
and Expected Numbers with Residuals for All Students**

Campus	Observed N (Actual numbers of students passing using Stretch Lexile cut score standards)	Expected N (Expected number of students who will pass using Stretch Lexile cut score standards)	Residual (Difference in observed numbers and expected numbers)
Campus 1	640	675.7	-35.7
Campus 2	768	675.7	92.3
Campus 3	607	663.6	-56.6
Total	2015		

The Expected N for Campus 1 was 675.7. This number was determined after first

dividing the number of all students passing with Standard Lexile cut scores on Campus 1

(1134) with the total number of students passing with Standard Lexile cut scores on

Campuses 1, 2, and 3 (3,384) for a percentage of 33.5%. This percentage (33.5%) was

multiplied by the Observed N total for Campuses 1, 2, and 3 (2,015) for an Expected N

of 675.7. On Campus 1, 675.7 students were expected to pass under the new standards,

contributing a passing percentage of 33.5% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 640. The residual difference between the Expected N and the Observed N was -35.7. The residual number of -35.7 was squared and then divided by the Expected N of 675.7 for a sum of 1.

The Expected N for Campus 2 was 675.7. This number was determined after first dividing the number of all students passing with Standard Lexile cut scores on Campus 2 (1135) with the total number students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (3,384) for a percentage of 33.5%. This percentage (33.5%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (2,015) for an Expected N of 675.7. On Campus 2, 675.7 students were expected to pass under the new standards, contributing a passing percentage of 33.5% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 768. The residual difference between the Expected N and the Observed N was 92.3. The residual number of 92.3was squared and then divided by the Expected N of 675.7 for a sum of 12.6.

The Expected N for Campus 3 was 663.6. This number was determined after first dividing the number of economically disadvantaged students passing with Standard Lexile cut scores on Campus 3 (1,115) with the total number of economically disadvantaged students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (3,384) for a percentage of 32.9%. This percentage (32.9%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (2,015) for an Expected N of 663.6. On

Campus 3, 663.6 students were expected to pass under the new standards, contributing a passing percentage of 32.9% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 607. The residual difference between the Expected N and the Observed N was -56.6. The residual number of -56.6 was squared and then divided by the Expected N of 663.6 for a sum of 4.8.

The total sum produced after squaring each residual and dividing it by the expected value was19.3 (1.9 + 12.6 + 4.8). To determine the degrees of freedom, 1 was subtracted from the number of rows (Campus 1, Campus 2, and Campus 3) and then 1 was subtracted from the number of columns (Observed N and Expected N). Then these results were multiplied:

3 - 1 =2; 2 - 1 = 1; 2 x 1 = 2.

Table 22 indicates the sum of the Chi-Square (19.321). Using a Chi-Square distribution table, the value of p = .05 for 2 degrees of freedom is 5.99. The result of the Chi-square Test for Independence is greater than 5.99, indicating a statistically significant relationship among Campus 1, 2, and 3 and distributions using the two Lexile measures; furthermore, significance of .0001 indicates that a statistically significant relationship exists. The distribution of passing rates among for all students changes significantly with the new Stretch Lexile measures at varying degrees on each of the three campuses, resulting in a significant increase in students failing: 37% (n=494) for Campus 1, 29% (n=367) for Campus 2, and 40% (n=508) for Campus 3. The Null Hypothesis is rejected for Research Question 1 for all students.

Table 22
SPSS Output Table of Chi-square Test for Independence Statistics with Significance for All Students

Test Statistics	
Chi-Square	19.321
df	2
Sig.	.0001*

*Significant at the .05 level.

Null Hypothesis for Research Question Two

The Null Hypothesis is that the distribution of passing cut scores using 2010 TAKS reading standards will not change when instead using cut scores associated with the Common Core Curriculum Standards and Stretch Lexile measures for all students on Campuses 1, 2, and 3 for the following student accountability groups: economically disadvantaged, African American, Hispanic, and White.

Results for Research Question Two: *Economically Disadvantaged Students*

Research Question Two investigated the distribution of passing cut scores among students accountability groups on all campuses to determine to what extent they were affected when the Stretch Lexile measures associated with the Common Core Curriculum Standards were used instead of the traditional Lexile measures. As the new standards increased, it was expected that the passing cut scores would decrease; however, it was not known to what extent they would decrease or how the change would affect student accountability groups on specific campuses. Figure 9 indicates the percent

of change in cut scores for economically disadvantaged students taking regular education 2010 TAKS reading assessments on Campuses 1, 2, and 3 and the same student scores after the Stretch Lexile measure cut scores are applied. The percent of change indicates how the distribution shifted as the standards increased.

	% Change Grade Bands 2-3	% Change Grade Bands 4-5	% Change Grade Bands 6-8	% Change Grade Bands 9-10	% Change Grade Bands 11-12	Total % Shift
Campus 1	4	14	-4	0	-14	36
Campus 2	3	16	-3	-6	-10	38
Campus 3	3	18	-3	-8	-10	42

Figure 9. **Percent Change between Standard and Stretch Lexile Bands for Economically Disadvantaged Students on Campus 1, 2, and 3.**

Students tested were in grades 6-8 and cut scores should place students in this band; however, after the Stretch Lexile measures were applied, there was an increase in the number of students reading in grade bands 4-5 and a decrease in the number of students reading in grade bands for grades 9-10 and 11-12. Grade bands can be assigned to students in any grade level and correlate to student Lexile measures that are assigned

to the text cut score on the 2010 TAKS reading assessments. Grade bands assist educators in understanding how far above or below grade level students fall according to their Lexile reader measure. Figure 9 depicts the shift downward within grade bands when the Stretch Lexile measures are applied. These percentages were calculated after determining the number of student scores in each grade band for the Standard Lexile grade bands and the Stretch Lexile grade bands and then dividing these numbers by the total number of students to determine a percentage for each grade band; these percentages were then either added or subtracted to calculate percent of change between the Standard Lexile measures and the Stretch Lexile measures. On Campus 1, 36% of students shifted into at least one lower grade band; on Campus 2, 38% of students shifted into at least one lower grade band; and on Campus 3, 42% of students shifted into at least one lower grade band. As students shift into lower grade bands, the ability to meet the Lexile targets for college and career readiness becomes further out of reach. The percent of change provides a clear illustration of the shifting distribution of student scores after the higher standards were applied for economically disadvantaged students on Campuses 1, 2, and 3.

Figure 10 provides a graphic display of the difference in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for economically disadvantaged students. Figure 10 also illustrates changes in distribution of passing cut scores using Standard Lexile measures and Stretch Lexile measures. For economically disadvantaged students, Campus 1 had 818 students passing under the Standard Lexile measures and 440 students passing under the Stretch Lexile measures for a difference of

378 fewer students passing; Campus 2 had 779 students passing under the Standard

Lexile measures and 487 students passing under the Stretch Lexile measures for a

difference of 292 fewer students passing; Campus 3 had 766 students passing under the

Standard Lexile measures and 382 students passing under the Stretch Lexile measures

for a difference of 384 fewer students passing. With Stretch Lexile measures in place,

38% fewer students would pass the reading assessment on Campus 1; 32% fewer

students would pass the reading assessment on Campus 2; and 45% fewer students

would pass the reading assessment on Campus 3. On all three campuses, almost an

additional third or more of all students would have failed the state reading assessment if

the Stretch Lexile cut scores had been in place.
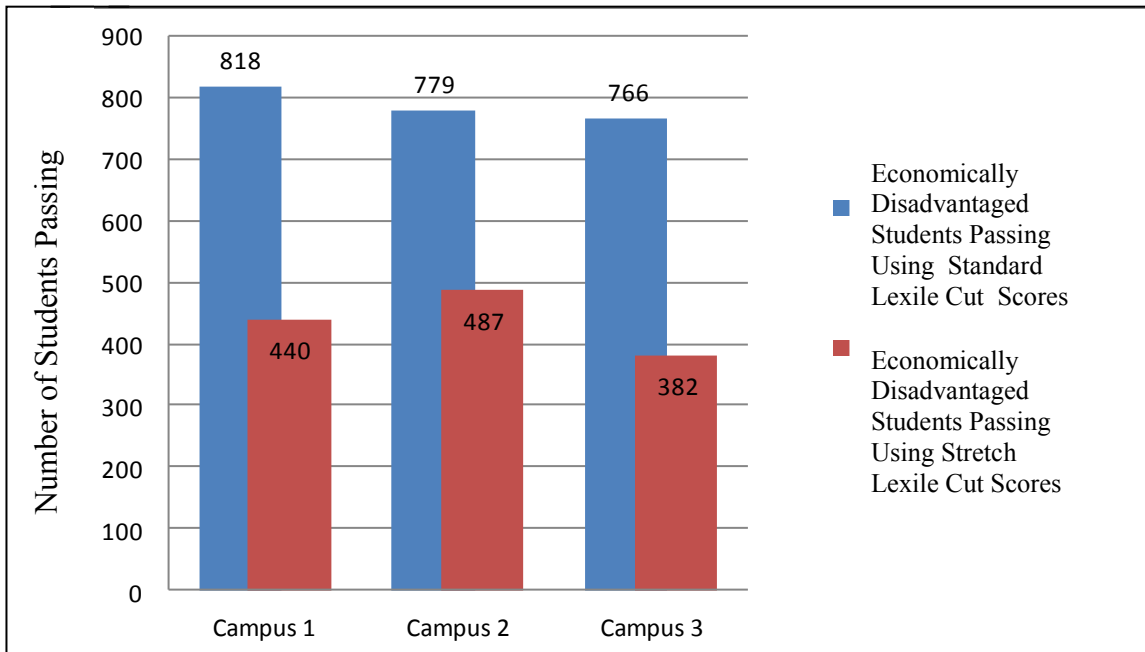
Figure 10. **Comparison of Number of Students Passing Based on Standard Lexile Cut Scores and Stretch Lexile Cut Scores for Economically Disadvantaged Students on Campuses 1, 2, and 3.**

Figure 11 indicates percentage comparisons between Standard Lexile cut scores and Stretch Lexile cut scores for economically disadvantaged students on Campuses 1, 2, 3.
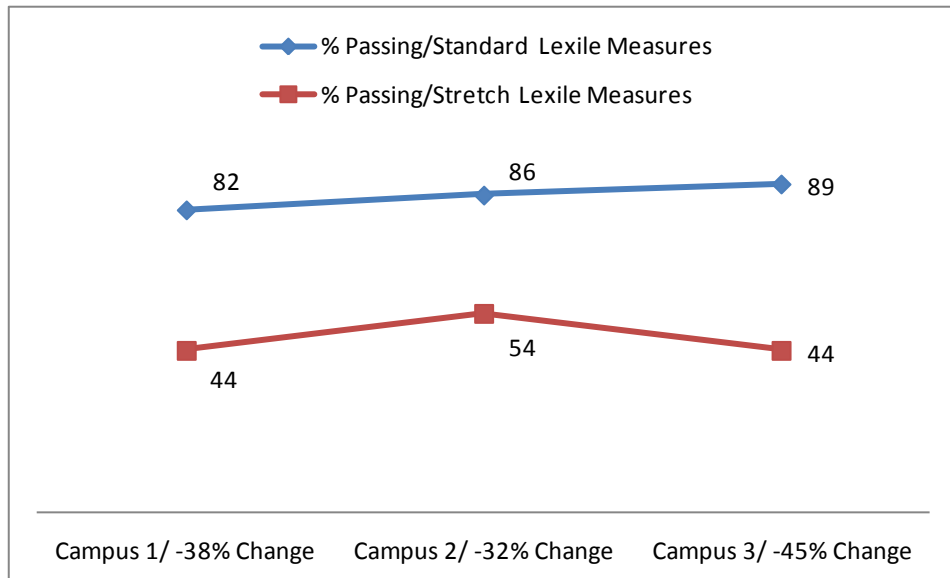
Figure 11. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for Economically Disadvantaged Students on Campuses 1, 2, and 3.**

Campus 1 tested 1,000 economically disadvantaged students; 818 students met the passing cut scores for all grade levels combined for an overall percent passing rate of 82%; under the Stretch Lexile cut scores, 440 economically disadvantaged students met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 44%. The percentage differences in passing cut score rates for Campus 1 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for economically disadvantaged students was -38%, an increase of 378 failing students;

furthermore, if Stretch Lexiles were used, a total of 560 students would have failed the state reading assessment. Campus 2 tested 909 economically disadvantaged students; 779 students met the passing cut scores for all grade levels combined for an overall percent passing rate of 86%; under the Stretch Lexile cut scores, 487 economically disadvantaged student met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 54%. The percentage difference in passing cut score rates for Campus 2 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for economically disadvantaged students was -32 percent, an increase of 292 students failing; furthermore, if Stretch Lexiles were used, a total of 422 students would have failed the state reading assessment. Campus 3 tested 857 economically disadvantaged students; 766 students met the passing cut scores for combined grade levels for an overall percent score passing rate of 89%; under the Stretch Lexile cut scores, 382 economically disadvantaged students met the passing cut scores for combined grade levels, resulting in an overall percent passing rate of 44%. The percentage differences in passing cut score rates for Campus 3 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for economically disadvantaged students was -45%, an increase of 384 students failing; furthermore, if Stretch Lexiles were used, a total of 475 students would have failed the state reading assessment. Figure 11 indicates that the percentage differences between Standard Lexile cut scores and Stretch Lexile cut scores were higher on Campuses 1 (difference of -38%) and 3 (difference of -45%) than the percent difference on Campus 2 (-32%). Figure 11

indicates that on each campus, the percent change in passing scores is at least one third of all students.

Figure 12 provides a graphic display of the difference in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for economically disadvantaged students in each subset included in the accountability system for Campus 1. Figure 12 provides numbers of passing cut scores to illustrate changes in distribution of passing cut scores using Standard Lexile measures and Stretch Lexile measures for economically disadvantaged students in each subset: African American, Hispanic, and White students on Campus 1. It is important to note the changes in the distributions of students who are in the ethnicity accountability groups, as well as those who are also economically disadvantaged, as these students are included in the ALL STUDENT accountability category, in the economically disadvantaged category, and in their ethnicity category; each accountability group must meet the passing standard, and in some cases, students' scores fall into at least three of the accountability categories.

African American economically disadvantaged students on Campus 1 had 232 students passing under the Standard Lexile measures; there were 120 students passing under the Stretch Lexile measures for a difference of 112 fewer students passing; the passing percentage difference was 52%. Cut scores for Hispanic economically disadvantaged students had 518 students passing under the Standard Lexile measures; there were 276 students passing under the Stretch Lexile measures for a difference of 242 fewer students passing; the passing percentage difference was 53%. Cut scores for White students had 52 students passing under the Standard Lexile measures; there were

32 students passing under the Stretch Lexile measures for a difference of 20 fewer

students passing; the passing percentage difference was 62%. Figure 12 indicates the

impact of changing cut scores on three ethnicity groups included in the accountability

system. Figure 12 shows that the impact varies among the ethnicity groups, and some

groups will be impacted more than others. With Stretch Lexile measures in place, 41%

fewer African American economically disadvantaged students would pass the reading

assessment on Campus 1; 37% fewer Hispanic economically disadvantaged students

would pass the reading assessment on Campus 1; and 34% fewer White economically

disadvantaged students would pass the reading assessment on Campus 1. On Campus 1,

at least one third more students in ethnicity accountability groups would have failed the

state reading assessment if the Stretch Lexile cut scores had been in place. The increase

in numbers of failing students could potentially affect accountability ratings at the

campus level, which can also affect accountability ratings at the district level. -
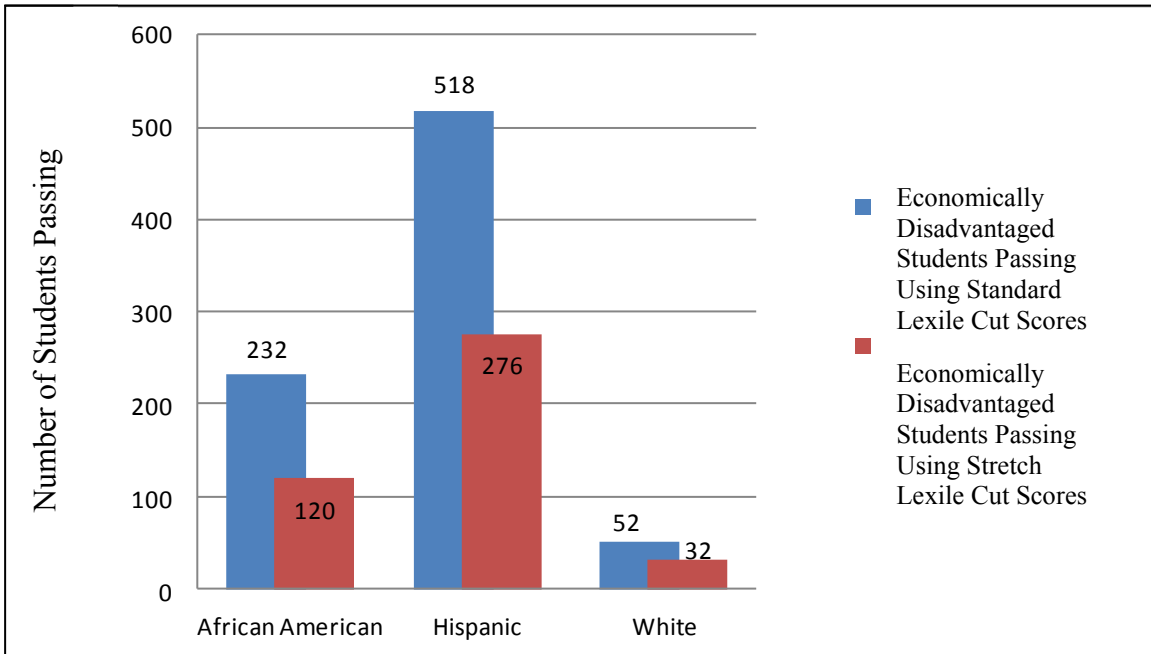
Figure 12. **Comparison of Number of Students Passing Based on Standard Lexile Cut Scores and Stretch Lexile Cut Scores for Economically Disadvantaged Students by Ethnicity on Campus 1.**

Figure 13 indicates percentage comparisons between Standard Lexile cut scores and Stretch Lexile cut scores for African American, Hispanic, and White economically disadvantaged students on Campus 1.
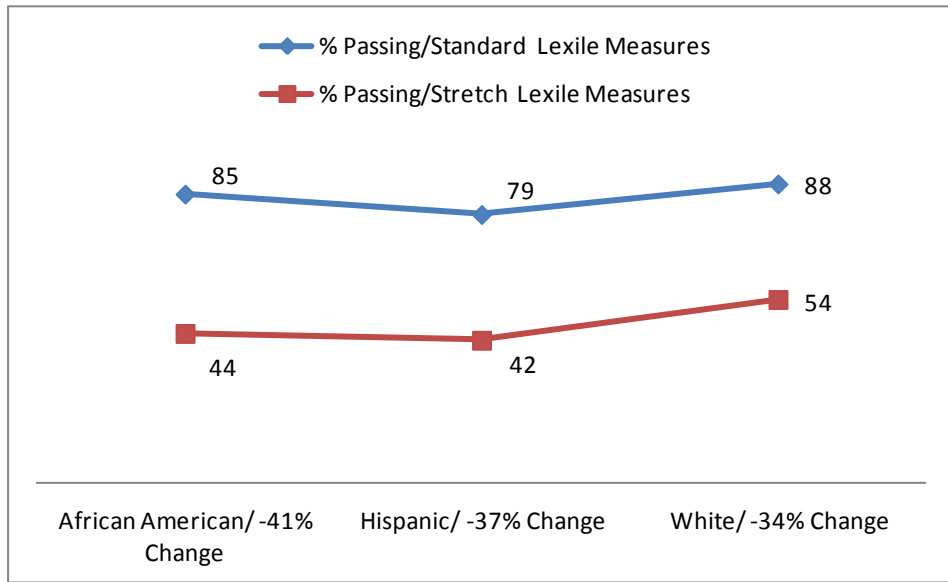
Figure 13. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores by Ethnicity for Economically Disadvantaged Students on Campus 1.**

Campus 1 tested 272 African American economically disadvantaged students; 232 students met the passing cut scores for all grade levels combined for an overall percent passing rate of 85%; under the Stretch Lexile cut scores, 120 African American economically disadvantaged students met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 44%. The percentage differences in passing cut score rates on Campus 1 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for African American economically disadvantaged students was -41%, an increase of 112 students failing; furthermore, if Stretch Lexiles were used, a total of 152 students would have failed the state reading assessment. Campus 1 tested 653 Hispanic economically disadvantaged students; 518 students met the passing cut scores for all grade levels combined for an overall percent

passing rate of 79%; under the Stretch Lexile cut scores, 276 Hispanic economically disadvantaged students met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 42%. The percentage differences in passing cut score rates on Campus 1 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for Hispanic economically disadvantaged students was -37%, an increase of 242 students failing; furthermore, if Stretch Lexile were used, a total of 377 would have failed the state reading assessment. Campus 1 tested 59 White economically disadvantaged students; 52 students met the passing cut scores for combined grade levels for an overall percent passing rate of 88%; under the Stretch Lexile cut scores, 32 White economically disadvantaged students met the passing cut scores for combined grade levels, resulting in an overall percent passing rate of 54%. The percentage differences in passing cut score rates on Campus 1 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for White economically disadvantaged students was -34%, an increase of 20 students failing; furthermore, if Stretch Lexiles were used, a total of 27 additional students would have failed the state reading assessment. Figure 13 indicates that on Campus 1, the percentage differences between Standard Lexile cut scores and Stretch Lexile cut scores for African American economically disadvantaged students (-41) was higher than the percentage differences for Hispanic economically disadvantaged students (-37), and the percentage difference for Hispanic economically disadvantaged students was higher than the percentage difference for White economically disadvantaged students (-34).

Figure 14 provides a graphic display of the difference in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for economically disadvantaged students in each subset included in the accountability system for Campus 2. Figure 14 provides numbers of passing cut scores to illustrate changes in distribution of passing cut scores using Standard Lexile measures and Stretch Lexile measures for economically disadvantaged students in each subset: African American, Hispanic, and White. African American economically disadvantaged students on Campus 2 had 176 students passing under the Standard Lexile measures; there were 110 students passing under the Stretch Lexile measures for a difference of 66 fewer students passing; there were 515 Hispanic economically disadvantaged students passing cut under the Standard Lexile measures; there were 318 students passing under the Stretch Lexile measures for a difference of 197 fewer students passing. There were 45 White economically disadvantaged students passing under the Standard Lexile measures; there were 32 students passing under the Stretch Lexile measures for a difference of 11 fewer students passing. With Stretch Lexile measures in place on Campus 2, 31% fewer African American economically disadvantaged students would pass the reading assessment; 33% fewer Hispanic economically disadvantaged students would pass the reading assessment; and 22% fewer White economically disadvantaged students would pass the reading assessment. On Campus 2, economically disadvantaged students in accountability ethnicity groups would be impacted by higher cut scores. These students' scores are counted in the ALL STUDENTS category, in the economically disadvantaged category,

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and in ethnicity categories; therefore, the increase in failing scores for these students could affect accountability status.
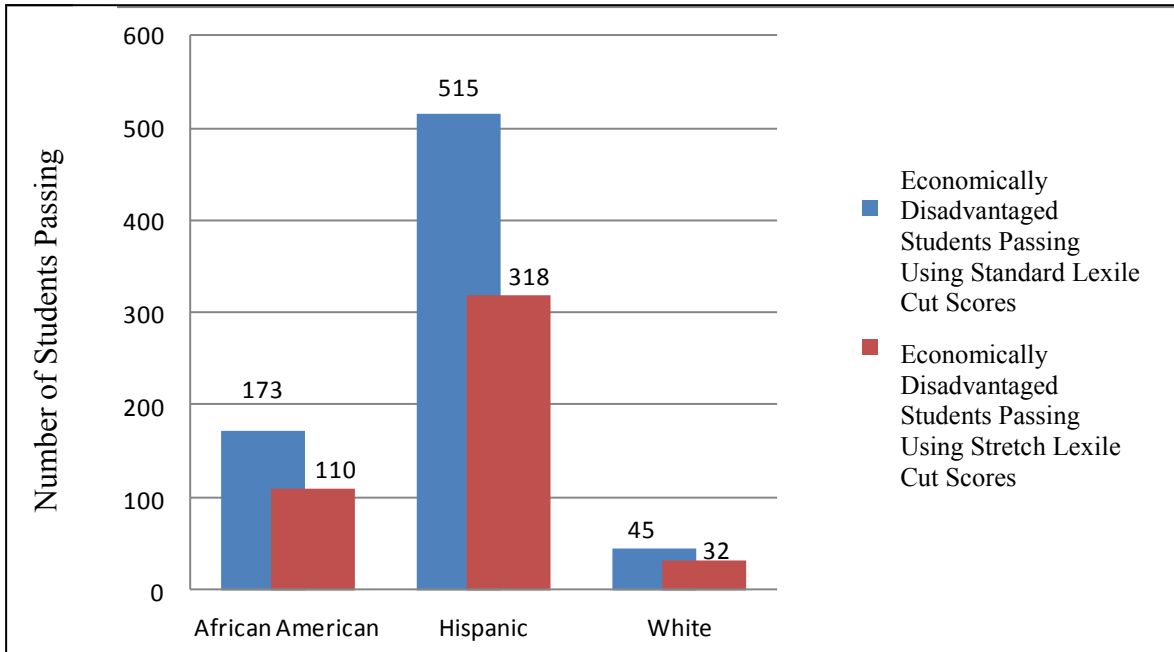
Figure 14. **Comparison of Number of Students Passing Based on Standard Lexile Cut Scores and Stretch Lexile Cut Scores for Economically Disadvantaged Students by Ethnicity on Campus 2.**

Figure 15 indicates percentage comparisons between Standard Lexile cut scores and Stretch Lexile cut scores for African American, Hispanic, and White economically disadvantaged students on Campuses 2.
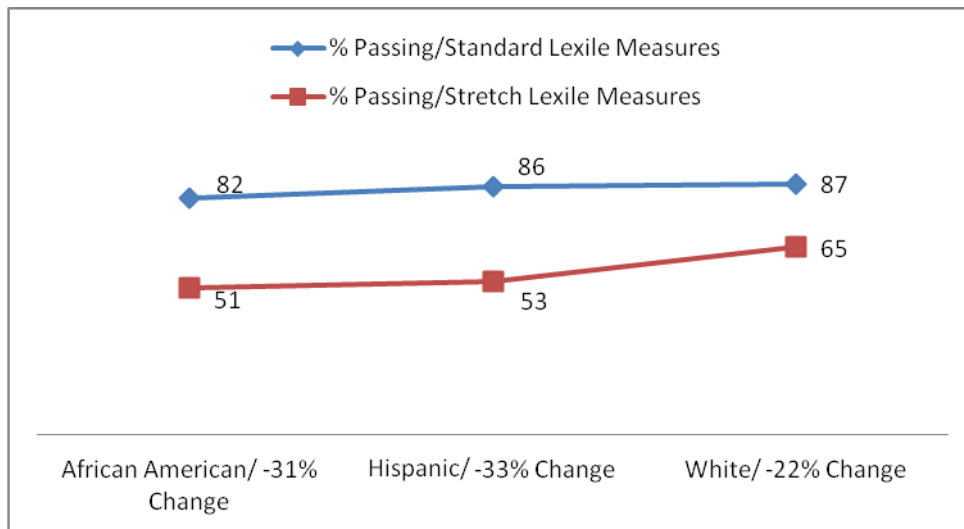
Figure 15. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores by Ethnicity for Economically Disadvantaged Students on Campus 2.**

Campus 2 tested 215 African American economically disadvantaged students; 176 students met the passing cut scores for all grade levels combined for an overall percent score passing rate of 82%; under the Stretch Lexile cut scores, 110 African American economically disadvantaged students met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 51%. The percentage differences in passing cut score rates on Campus 2 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for African American economically disadvantaged students was -31%, an increase of 66 students failing; furthermore, if Stretch Lexile were used, a total of 105 students would have failed the state reading assessment. Campus 2 tested 596 Hispanic economically disadvantaged students; 515 students met the passing cut scores for all grade levels combined for an overall percent score passing rate of 86%; under the Stretch Lexile cut scores, 318 Hispanic

economically disadvantaged student met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 53%. The percentage difference in passing cut score rates on Campus 2 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for Hispanic economically disadvantaged students was -33% percent, an increase of 197 failing students; furthermore, if Stretch Lexiles were used, a total of 278 students would have failed the state reading assessment. Campus 2 tested 52 White economically disadvantaged students; 45 students met the passing cut scores for combined grade levels for an overall percent passing rate of 87%; under the Stretch Lexile cut scores, 34 White economically disadvantaged students met the passing cut scores for combined grade levels, resulting in an overall percent passing rate of 65%. The percentage difference in passing cut score rates on Campus 2 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for White economically disadvantaged students was -22%, an increase of 11 students failing; furthermore, if Stretch Lexiles were used, a total of 18 students would have failed the state reading assessment. Figure 15 indicates that the percentage differences between Standard Lexile cut scores and Stretch Lexile cut scores for African American economically disadvantaged students (-31%) was slightly lower than the percentage difference for Hispanic economically disadvantaged students (-33), and the percentage difference for Hispanic and African American economically disadvantaged students were higher than the percentage difference for White economically disadvantaged students (-22%).

Figure 16 provides a graphic display of the difference in students passing between the Standard Lexile measure and the Stretch Lexile measures for economically

disadvantaged students in each subset included in the accountability system for Campus

3. Figure 16 provides numbers of students passing to illustrate changes in distribution of

passing cut scores using Standard Lexile measures and Stretch Lexile measures for

economically disadvantaged students in each subset: African American, Hispanic, and

White. African American economically disadvantaged students on Campus 3 had 207

students passing under the Standard Lexile measures; there were 97 students passing cut

scores under the Stretch Lexile measures for a difference of 110 fewer students passing.

There were 503 Hispanic economically disadvantaged students passing under the

Standard Lexile measures; there were 249 students passing under the Stretch Lexile

measures, for a difference of 254 fewer students passing. There were 44 White students

passing under the Standard Lexile measures; there were 27 students passing under the

Stretch Lexile measures, for a difference of 17 fewer students passing. With Stretch

Lexile measures in place, 47% fewer African American economically disadvantaged

students would pass the reading assessment on Campus 3; 45% fewer Hispanic

economically disadvantaged students would pass the reading assessment on Campus 3;

and 36% fewer White economically disadvantaged students would pass the reading

assessment on Campus 3. On Campus 3, one third or more of all students would fail the

state reading assessment if the Stretch Lexile cut scores were in place.
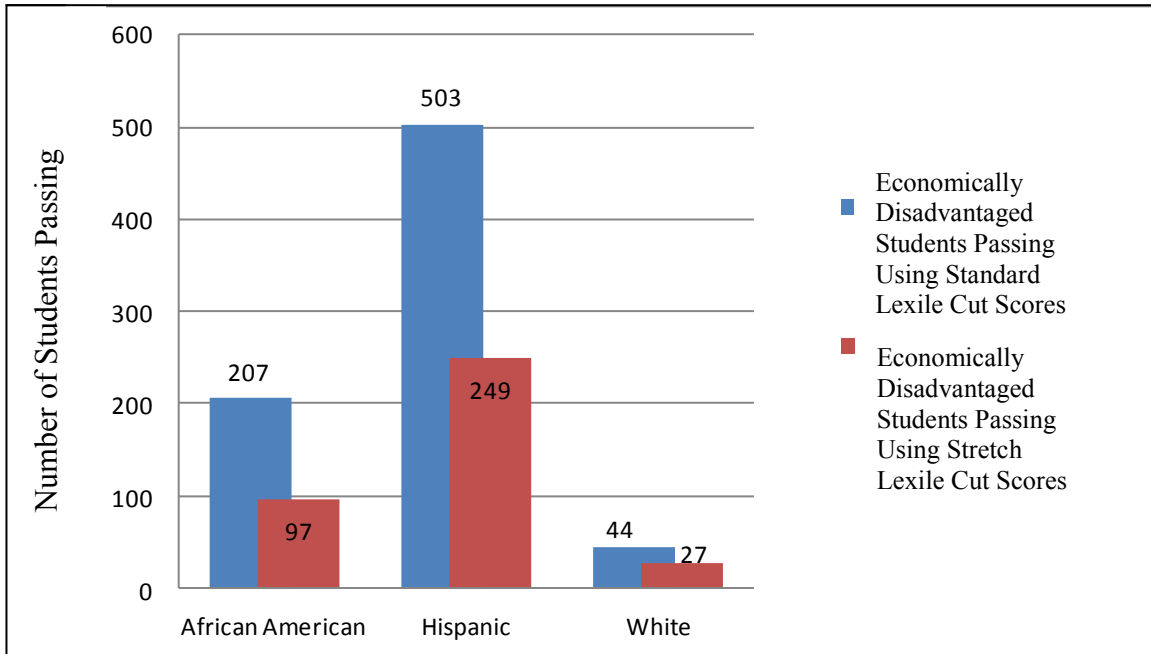
Figure 16. **Comparison of Number of Students Passing Based on Standard Lexile Cut Scores and Stretch Lexile Cut Scores for Economically Disadvantaged Students by Ethnicity on Campus 3.**

Campus 3 tested 233 African American economically disadvantaged students; 207 students met the passing cut scores for all grade levels combined for an overall percent score passing rate of 89%; under the Stretch Lexile cut scores, 97 African American economically disadvantaged student met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 47%. The percentage differences in passing cut score rates on Campus 3 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for African American economically disadvantaged students was -42%, an increase of 110 students failing; furthermore, if Stretch Lexiles were used, a total of 136 students would have failed the state reading assessment. Campus 3 tested 564 Hispanic economically disadvantaged students; 503

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students met the passing cut scores for all grade levels combined for an overall percent passing rate of 89%; under the Stretch Lexile cut scores, 249 economically disadvantaged student met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 44%. The percentage differences in passing cut score rates on Campus 3 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for Hispanic economically disadvantaged students was -45 percent, an increase of 254 students failing; furthermore, if Stretch Lexiles were used, a total of 315 students would have failed the state reading assessment. Campus 3 tested 48 White economically disadvantaged students and 44 students met the passing cut scores for combined grade levels for an overall percent score passing rate of 92%; under the Stretch Lexile cut scores, 27 White economically disadvantaged student met the passing cut scores for combined grade levels, resulting in an overall percent passing rate of 56%. The percentage differences in passing cut score rates on Campus 3 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for White economically disadvantaged students was-36%, an increase of 17 students failing; furthermore, if Stretch Lexiles were used, a total of 21 students would have failed the state reading assessment.

Figure 17 provides comparisons between Standard Lexile cut scores and Stretch Lexile cut scores for African American, Hispanic, and White economically disadvantaged students on Campus 3.
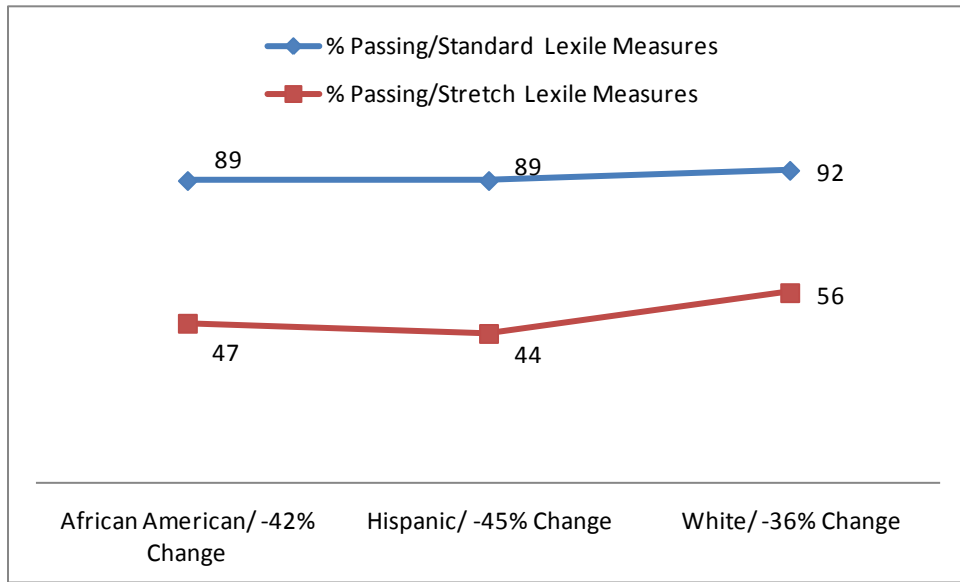
Figure 17. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores by Ethnicity for Economically Disadvantaged Students on Campus 3.**

Figure 17 indicates that the percentage differences on Campus 3 between Standard Lexile cut scores and Stretch Lexile cut scores for Hispanic economically disadvantaged students (-45) was slightly higher than the percentage difference for African American economically disadvantaged students (-42%), and the percentage difference for African American economically disadvantaged students was higher than the percentage difference for White economically disadvantaged students (-36%).

Cut score standard requirements increase in each grade level. Students identified as economically disadvantaged are an accountability group in both state and federal accountability systems, so the impact of cut scores for this subset can affect a campus and school district's rating. Since the Lexile measures associated with cut scores increase at each grade level, it is important to note which grade levels are impacted the most by

the higher cut scores; seventh grade students must also take a writing test, and therefore must be prepared for two assessments.

Figure 18 establishes the increases in numbers of failing students and percent change in passing percentages between the Standard Lexile cut scores and the Stretch Lexile cut scores for economically disadvantaged students in grades 6, 7, and 8 on Campuses 1, 2, and 3.

	Grade Six Cut Scores n/ % Change	Grade Seven Cut Scores n/ % Change	Grade Eight Cut Scores n/ % Change
Campus 1	133/-41	146/-37	99/-44
Campus 2	159/-51	175/-35	88/-11
Campus 3	166/-49	117/-42	177/-40
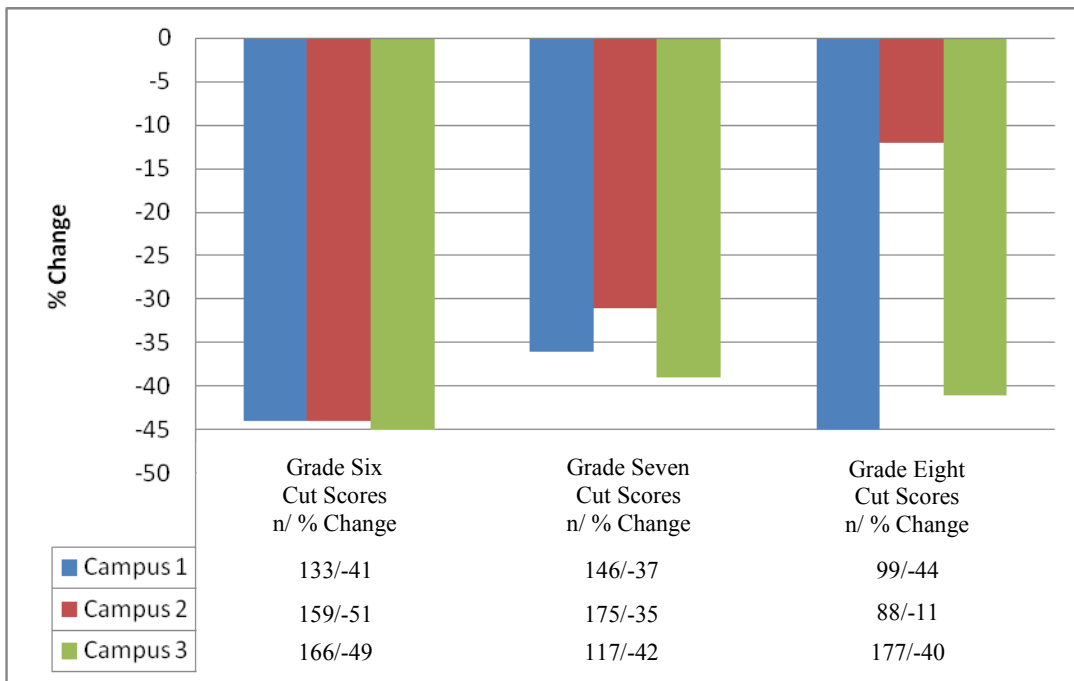
Figure 18. **Increase in Number of Failing Students Using Stretch Lexile Measures and Percent Change between Passing Standard Lexile Cut Scores and Stretch Lexile Cut Scores for Economically Disadvantaged Students on Campuses 1, 2, and 3 by Grade Level.**

These calculations were made by first determining the total number economically disadvantaged test-takers at each grade level and dividing by the passing cut scores for

economically disadvantaged students at each grade level to establish passing percentages for Standard Lexile cut score standards and Stretch Lexile cut score standards at each grade level on each campus for economically disadvantaged students. The resulting percentages were then either subtracted to determine a percentage difference in passing cut scores at each grade level. The purpose of this calculation was to determine if campuses would have similar outcomes in their percent change for economically disadvantaged student scores after applying the Stretch Lexile cut scores. The Null Hypothesis implies that there will be similar ratios with comparable results when replacing the Standard Lexile measures with Stretch Lexiles measures that are used in the Common Core Curriculum Standards. If a campus had dissimilar results, further investigation could provide insight into why this occurred. Campus 1 had 318 economically disadvantaged test-takers in sixth grade; 297 students passed using Standard Lexile cut scores, representing 93% passing; 164 students passed using Stretch Lexile cut scores, representing 52% passing. The percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for sixth graders on Campus 1 is -41%, an increase of 133 students failing; furthermore, if Stretch Lexiles were used, a total of 154 students would have failed the state reading assessment. Campus 1 had 391 economically disadvantaged test-takers in seventh grade; 277 students passed using Standard Lexile cut scores, representing 71% passing; 131 students passed using Stretch Lexile cut scores, representing 34% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores was for seventh graders on Campus 1 was -37%, an increase of 146 students

failing; furthermore, if Stretch Lexile were used, a total of 260 students would have failed the state reading assessment. Campus 1 had 291economically disadvantaged test-takers in eighth grade; 244 students passed using Standard Lexile cut scores, representing 94% passing; 145 students passed using Stretch Lexile cut scores, representing 50% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for eighth graders on Campus 1 was -44%, an increase in 99 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 146 students would have failed the state reading assessment. Campus 2 had 298 economically disadvantaged test-takers in sixth grade; 285 students passed using Standard Lexile cut scores, representing 98% passing; 139 students passed using Stretch Lexile cut scores, representing 47% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for sixth graders on Campus 2 was -51%, an increase of 146 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 159 students would have failed the state reading assessment. Campus 2 had 316 economically disadvantaged test-takers in seventh grade; 250 students passed using Standard Lexile cut scores, representing 79% passing; 141 students passed using Stretch Lexile cut scores, representing 44% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for seventh graders on Campus 2 was -35%, an increase of 109 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 175 students would have failed the state reading assessment. Campus 2 had 295 economically disadvantaged test-takers in eighth grade; 240 students passed using Standard Lexile cut scores,

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representing 81% passing; 207 students passed using Stretch Lexile cut scores, representing 70% passing; the percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for eighth graders on Campus 2 was -11%, an increase of 33 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 88 students would have failed the state reading assessment. Campus 3 had 304 economically disadvantaged test-takers in sixth grade; 287 students passed using Standard Lexile cut scores, representing 94% passing; 138 students passed using Stretch Lexile cut scores, representing 45% passing; The percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for sixth graders on Campus 3 was -49%, an increase of 149 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 166 students would have failed the state reading assessment. Campus 3 had 280 economically disadvantaged test-takers in seventh grade; 245 students passed using Standard Lexile cut scores, representing 88% passing; 128 students passed using Stretch Lexile cut scores, representing 46% passing; The percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for seventh graders on Campus 3 was -42%, an increase of 117 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 152 students would have failed the state reading assessment. Campus 3 had 293 test-takers in eighth grade; 234 students passed using Standard Lexile cut scores, representing 80% passing; 116 students passed using Stretch Lexile cut scores, representing 40% passing. The percent difference in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores for eighth graders on Campus 3 was -40%, an increase of 118 students failing;

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furthermore, if Stretch Lexile cut scores were used, a total of 177 students would have failed the state reading assessment. Figure 18 indicates that percent changes were similar on Campuses 1 (-41), 2 (-51) and 3 (-49) for economically disadvantaged students in sixth grade; percent changes were similar on Campuses 1 (-37) and 3 (-42) for seventh grade, but Campus 2 (-35) had less of a percent change; Campus 3 (-44) had less of a percent change in eighth grade than Campus 1 (-46), and Campus 2 (-11) had the least percent change for eighth graders.

Table 23 indicates the frequencies (numbers of economically disadvantaged students passing under the Standard Lexile measures) and percentages (percent of economically disadvantaged students passing at each campus from the total number of test-takers on Campuses 1, 2, and 3). Campus 1 had 1,000 economically disadvantaged test-takers and 818 students passing; Campus 2 had 909 economically disadvantaged test-takers and 779 students passing; Campus 3 had 857 economically disadvantaged test-takers and 766 students passing. The total number of economically disadvantaged test-takers for Campuses 1, 2, and 3 was 2,766 with a total of 2,363 economically disadvantaged students passing on all campuses. Table 23 further indicates that 34.6% of students passing were from Campus 1; 33% of students passing were from Campus 2; 32.4% of students passing were from Campus 3.

Table 23
Frequencies and Percentages for Economically Disadvantaged Students Meeting
Standard Lexile Cut Scores on Campuses 1, 2, and 3

Campus	Frequency (numbers of students passing)	Percent (% passing at each campus)	Cumulative Percent
Campus 1	818	34.6	34.6
Campus 2	779	33.0	67.6
Campus 3	766	32.4	100.0
Total	2363	100.0	

Table 24 indicates the observed and expected numbers of passing economically

disadvantaged students on Campuses 1, 2, and 3.

Table 24
SPSS Output Table of Observed and Expected Numbers with Residuals
for Economically Disadvantaged Students

Campus	Observed N	Expected N	Residual
1	440	452.9	-12.9
2	487	432.0	55.0
3	382	424.1	-42.1
Total	1309		

The Expected N for Campus 1 was 452.9. This number was determined after first dividing the number of economically disadvantaged students passing with Standard Lexile cut scores on Campus 1 (818) with the total number of economically disadvantaged students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (2,363) for a percentage of 34.6%. This percentage (34.6%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (1,309) for an expected value of 452.9. On Campus 1, 452.9 students were expected to pass under the new standards, contributing a passing percentage of 34.6% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 440. The residual difference between the Expected N and the Observed N was -12.9. The residual number of -12.9 was squared and then divided by the expected value of 452.9 for a sum of .37.

The Expected N for Campus 2 was 432 This number was determined after first dividing the number of economically disadvantaged students passing with Standard Lexile cut scores on Campus 2 (779) with the total number of economically disadvantaged students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (2,363) for a percentage of 33%. This percentage (33%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (1,309) for an expected value of 432. On Campus 2, 432 students were expected to pass under the new standards, contributing a passing percentage of 33% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 487. The residual difference between the Expected N and the Observed N was 55. The residual number of 55 was squared and then divided by the expected value of 432 for a sum of 7.

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The Expected N for Campus 3 was 424.1. This number was determined after first dividing the number of economically disadvantaged students passing with Standard Lexile cut scores on Campus 3 (766) with the total number of economically disadvantaged students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (2,363) for a percentage of 32.4%. This percentage (32.4%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (1,309) for an expected value of 424.1. On Campus 3, 424.1 students were expected to pass under the new standards, contributing a passing percentage of 32.4% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 382. The residual difference between the Expected N and the Observed N was -42.1. The residual number of -42.1 was squared and then divided by the expected value of 424.1 for a sum of 4.18.

The total sum produced after squaring each residual and dividing it by the expected value is 11.56 (.37 + 7 + 4.18). To determine the degrees of freedom, 1 was subtracted from the number of rows (Campus 1, Campus 2, and Campus 3) and then 1 was subtracted from the number of columns (Observed N and Expected N). Then these results were multiplied:

3 - 1 = 2; 2 - 1 = 1; 2 x 1 = 2.

Table 25 indicates the sum of the Chi-square (11.56). Using a Chi-Square distribution table, the value of p = .05 for 2 degrees of freedom is 5.99. Because the result of the Chi-square Test for Independence is greater than 5.99, the significance of less than .05 indicates a relationship of dependence exists between the variables. The distribution of cut scores for economically disadvantaged students changes with the new

Stretch Lexile measures at varying degrees on each of the three campuses, indicating

that there is a significant difference in the total number among Campuses 1, 2, and 3 of

economically disadvantaged students failing under the Standard Lexile measures (N =

423) and the number of economically disadvantaged students failing under the Stretch

Lexile measures (N = 1,477). The Null Hypothesis is rejected for Research Question 2

for economically disadvantaged students.

Table 25
Chi Square Test Statistics with Significance for Economically
Disadvantaged Students

Test Statistics	
Chi-Square	11.561
df	2
Sig.	.003*

*Significant at the .05 level.

Results for Research Question Two: African American Students

African American students also provide a subset for student accountability on

Campuses 1, 2, and 3. Figure 15 indicates the percent of change in cut scores for African

American students taking regular education 2010 TAKS reading assessments on

Campuses 1, 2, and 3 and the same student scores after the Stretch Lexile measure cut

scores are applied. The percent of change indicates how the distribution shifted as the

standards increased.

	% Change/ Grade Bands 2-3	% Change/ Grade Bands 4-5	% Change/ Grade Bands 6-8	% Change/ Grade Bands 9-10	% Change/ Grade Bands 11-12	Total % Shift
■ Campus 1	3	19	-4	-1	-17	44
■ Campus 2	3	13	0	-4	-12	32
■ Campus 3	3	14	2	-6	-13	38
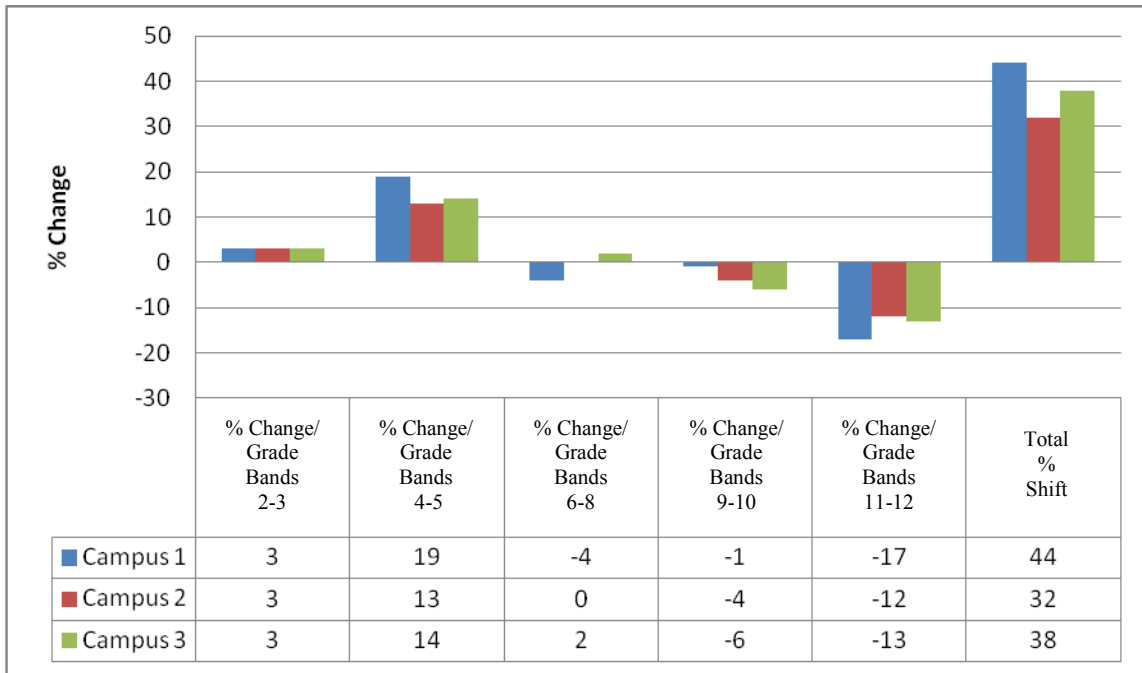
Figure 19. **Percent Change between Standard and Stretch Lexile Bands for African American Students on Campuses 1, 2, and 3.**

Students tested were in grades 6-8 and cut scores should place students in this grade band; however, after the Stretch Lexile measures were applied, there was a trend established that increased student scores falling into grade bands 4-5 and decreased student scores falling into grade bands for grades 9-10 and 11-12. Grade bands can be assigned to students in any grade level and correlate to student Lexile measures that are assigned to the text cut score on the 2010 TAKS reading assessments. Grade bands assist educators in understanding how far above or below grade level students fall according to their Lexile reader measure. Figure 19 indicates that as the standards increased the percent change for the lower grade bands increased, and the distributions in the upper grade bands decreased as the percent changes in the lower bands increased. Figure 19 depicts the shift downward within grade bands when the Stretch Lexile measures are

applied. This means that more students are reading at the lower grade levels and fewer

students are reading at the higher grade levels after application of the Stretch Lexile

measures. These percentages were calculated after determining the number of student

scores in each grade band for the Standard Lexile grade bands and the Stretch Lexile

grade bands and then dividing these numbers by the total number of students to

determine a percentage for each grade band; these percentages were then either added or

subtracted to calculate percent of change between the Standard Lexile measures and the

Stretch Lexile measures. On Campus 1, 44% of students shifted into at least one lower

grade band; on Campus 2, 32% of students shifted into at least one lower grade band;

and on Campus 3, 38% of students shifted into at least one lower grade band. As

students shift into lower grade bands, the ability to meet with the Lexile targets for

college and career readiness become further out of reach. The percent of change

provides a clear illustration of the shifting distribution of student scores after the higher

standards were applied for African American students on Campuses 1, 2, and 3.

Figure 20 provides a graphic display of the difference in passing cut scores

between the Standard Lexile measure and the Stretch Lexile measures for African

American students on Campuses 1, 2, and 3. Figure 20 provides numbers of passing cut

scores to illustrate changes in distribution of passing cut scores using Standard Lexile

measures and Stretch Lexile measures for African American students. Campus 1 had 325

African American students passing under the Standard Lexile measures: there were 181

students passing under the Stretch Lexile measures for a difference of 144 fewer students

passing; Campus 2 had 267 students passing under the Standard Lexile measures; there

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were 176 students passing under the Stretch Lexile measures for a difference of 91 fewer

students passing. Campus 3 had 290 students passing under the Standard Lexile

measures; there were 151 students passing under the Stretch Lexile measures for a

difference of 139 fewer students passing. With Stretch Lexile measures in place, 39%

fewer African American students would pass the state reading assessment on Campus 1;

29% fewer students would pass the state reading assessment on Campus 2; and 43%

fewer students would pass the state reading assessment on Campus 3.
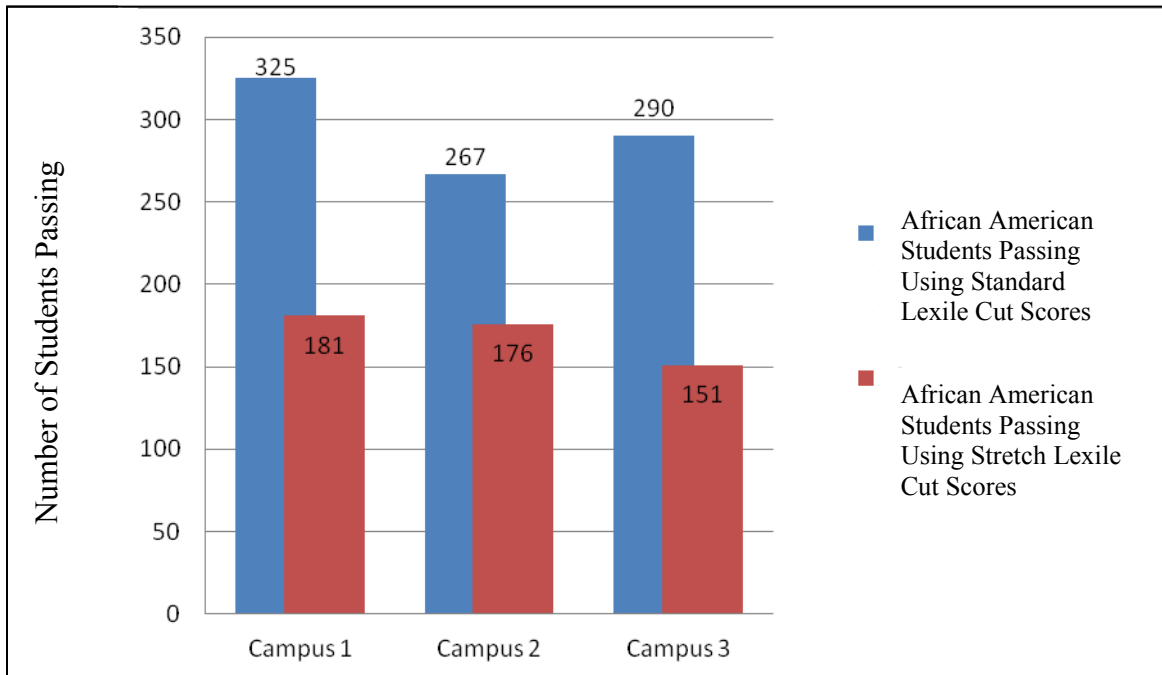
Figure 20. **Comparison of Number of Students Passing Based on Standard Lexile Cut Scores and Stretch Lexile Cut Scores for African American Students on Campuses 1, 2, and 3.**

Figure 21 indicates that the percentage differences between Standard Lexile cut scores and Stretch Lexile cut scores were higher on Campuses 3 (difference of -43%) than scores on Campus 1 (difference of -39), and comparable scores on Campus 1 were higher than Campus 2 (-29%).
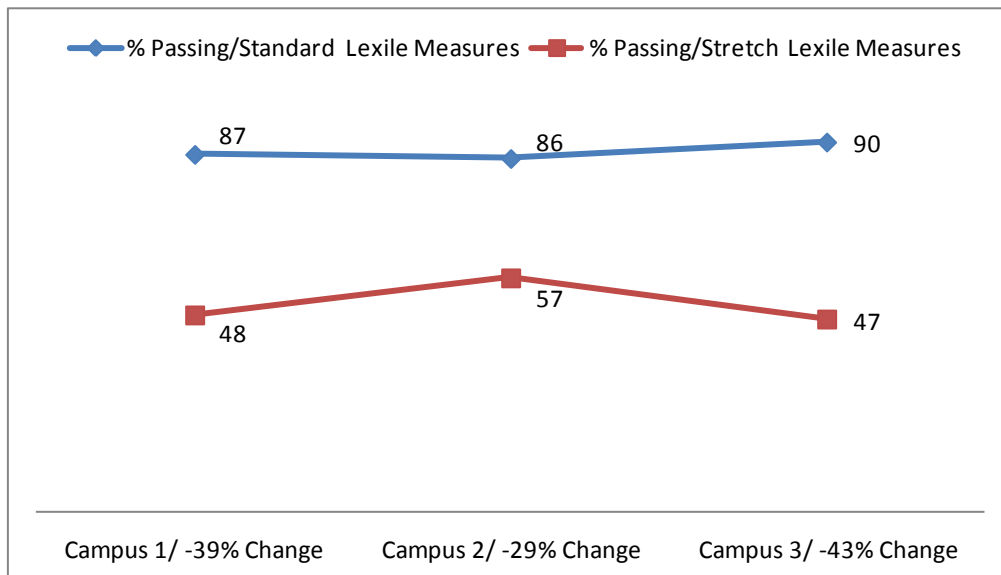
Figure 21. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for African American Students on Campuses 1, 2, and 3.**

Campus 1 tested 374 African American students; 325 students met the passing cut scores for all grade levels combined for an overall percent passing rate of 87%; under the Stretch Lexile cut scores, 181 African American students met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 48%. The percentage differences in passing cut score rates for Campus 1 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for African American students

was -39%, an increase of 144 students failing; furthermore, if Stretch Lexiles were used, a total of 193 African American students would have failed the state reading assessment on Campus 1. Campus 2 tested 310 African American students; 267 students met the passing cut scores for all grade levels combined for an overall percent score passing rate of 86%; under the Stretch Lexile cut scores, 176 African American students met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 57%. The percentage differences in passing cut score rates for Campus 2 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for African American students was a -29%, an increase of 91 students failing; furthermore, if Stretch Lexiles were used, a total of 134 African American students would have failed the state reading assessment on Campus 2. Campus 3 tested 321 African American students; 290 students met the passing cut scores for combined grade levels for an overall percent score passing rate of 90%; under the Stretch Lexile cut scores, 151 African American students met the passing cut scores for combined grade levels, resulting in an overall percent passing rate of 47%. The percentage differences in passing cut score rates for Campus 3 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for African American students was -43%, an increase of 139 students failing; furthermore, if Stretch Lexiles were used, a total of 170 African American students would have failed the reading assessment on Campus 3.

Figure 22 provides a graphic display of the differences in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for African American students at each grade on Campus 1. It is important to note the changes in the

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distributions of students who are in specific ethnicity accountability groups as each

accountability group must meet the passing standards; furthermore, it is important to

note student achievement at each grade level.

Figure 22. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for African American Students on Campus 1 by Grade Level.**

Figure 22 provides African American passing percentages for Campus 1.

Campus 1 tested 374 African American students; there were 325 students passing under

the Standard Lexile measure cut scores and 181 African American students passing

using the Stretch Lexile measure cut scores. Campus 1 tested 117 African American

sixth graders; 111 met the Standard Lexile measure cut score, for a passing percentage of

95%; 63 students met the Stretch Lexile measure cut score for sixth grade, for a passing

percentage of 54%; the percent change in passing scores was -41% for African American

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sixth graders on Campus 1, an increase of 48 students failing; furthermore, is Stretch Lexiles were used, a total of 54 students would fail the state reading assessment. There were 154 African American seventh graders tested; 125 met the Standard Lexile measure cut score, for a passing percentage of 81%; 62 students met the Stretch Lexile measure cut score for seventh grade, for a passing percentage of 40%; the percent change in passing scores was -41% for African American seventh graders on Campus 1, an increase of 63 students failing; furthermore, if Stretch Lexiles were used, a total of 92 students would have failed the state reading assessment. There were 103 African American eighth graders tested and 89 met the Standard Lexile measure cut score, for a passing percentage of 86%; 56 students met the Stretch Lexile measure cut score for eighth grade, for a passing percentage of 54%; the percent change in passing scores was -39% for African American eighth graders on Campus 1, an increase of 29 students failing; furthermore, if Stretch Lexiles were used, a total of 47 students would have failed the state reading assessment. On campus 1, African American sixth graders were most impacted by adherence to higher cut scores, followed by African American eighth graders; the least affected group was African American seventh graders on Campus 1.

Figure 23 provides a graphic display of the differences in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for African American students at each grade on Campus 2.
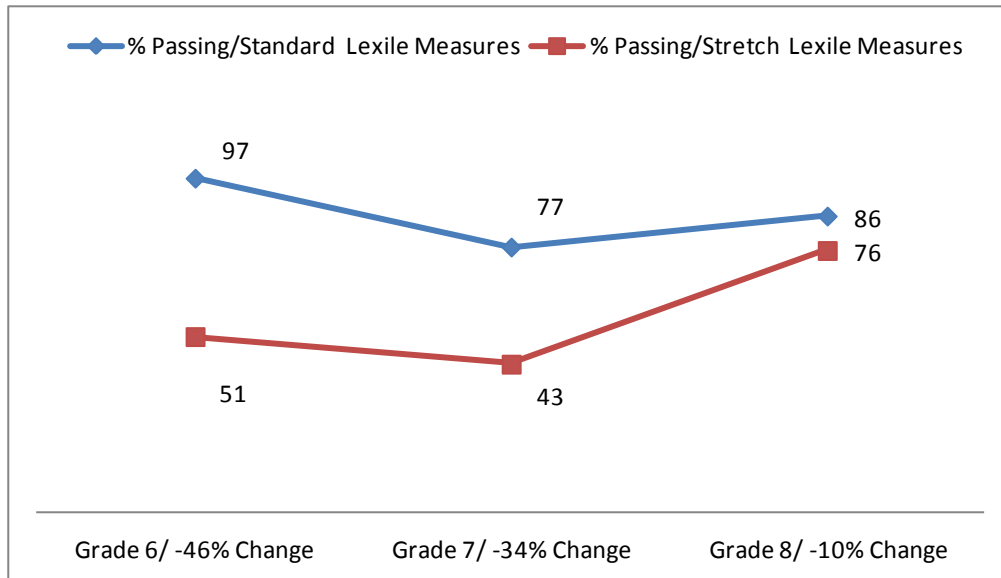
Figure 23. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for African American Students on Campus 2 by Grade Level.**

Figure 23 provides African American passing percentages for Campus 2. Campus 2 tested 310 African American students; there were 267 students passing under the Standard Lexile measure cut scores and 176 African American students passing using the Stretch Lexile measure cut scores. Campus 2 tested 95 African American sixth graders and 92 met the Standard Lexile cut scores, for a passing percentage of 97%; 48 students met the Stretch Lexile cut scores for sixth grade, for a passing percentage of 51%; the percent change in passing scores was -46% for African American sixth graders on Campus 2, an increase of 44 students failing; furthermore, if Stretch Lexiles were used, a total of 47 students would have failed the state reading assessment. There were 109 African American seventh graders tested and 84 met the Standard Lexile measure cut score, for a passing percentage of 77%; 47 students met the Stretch Lexile measure

cut score for seventh grade, for a passing percentage of 43%; the percent change in passing scores was -34% for African American seventh graders on Campus 2, an increase of 37 students failing; furthermore, if Stretch Lexiles were used, a total of 62 students would have failed the state reading assessment. There were 106 African American eighth graders tested and 91 met the Standard Lexile measure cut score, for a passing percentage of 86%; 81 students met the Stretch Lexile measure cut score for eighth grade, for a passing percentage of 76%; the percent change in passing scores was -10% for African American eighth graders on Campus 2, an increase of 10 failing students; furthermore, if Stretch Lexiles were used, a total of 25 students would have failed the state reading assessment. The percent passing decreases by grade level on Campus 2, indicating a narrowing of the achievement gap for African American students from grades six through eight on Campus 2.

Figure 24 provides a graphic display of the differences in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for African American students at each grade on Campus 3.
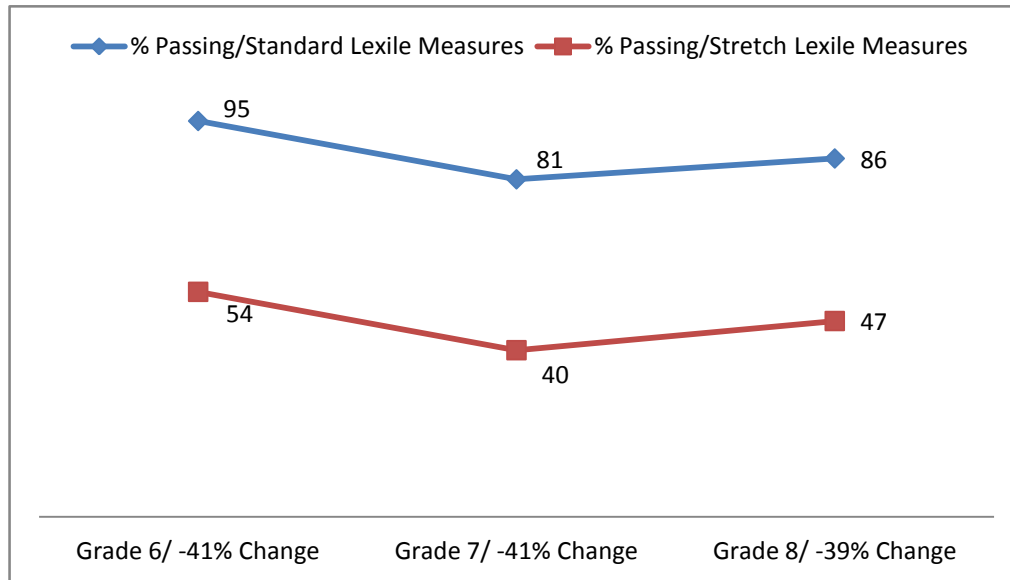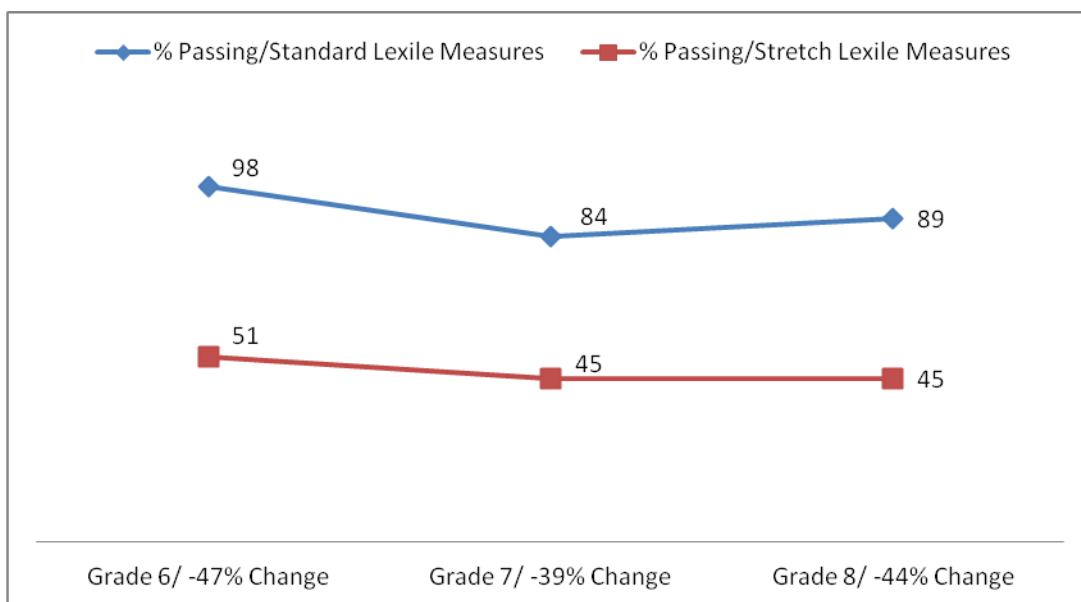
Figure 24. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for African American Students on Campus 3 by Grade Level.**

Campus 3 tested 321 African American students; there were 290 students passing under the Standard Lexile measure cut scores and 151 African American students passing using the Stretch Lexile measure cut scores. Campus 2 tested 110 African American sixth graders and 108 met the Standard Lexile measure cut score, for a passing percentage of 98%; 56 students met the Stretch Lexile measure cut score for sixth grade, for a passing percentage of 51%; the percent change in passing scores was -43% for African American sixth graders on Campus 3, an increase of 52 students failing; furthermore, if Stretch Lexiles were used, a total of 54 students would have failed the state reading assessment. There were 103 African American seventh graders tested and 86 met the Standard Lexile measure cut score, for a passing percentage of 84%; 46 students met the Stretch Lexile measure cut score for seventh grade, for a passing

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percentage of 45%; the percent change in passing scores was -39% for African American seventh graders on Campus 3, an increase of 40 failing students; furthermore, if Stretch Lexiles were used, a total of 57 students would have failed the state reading assessment. There were 108 African American eighth graders tested and 96 met the Standard Lexile measure cut score, for a passing percentage of 89%; 49 students met the Stretch Lexile measure cut score for eighth grade, for a passing percentage of 45%; the percent change in passing scores was -44% for African American eighth graders on Campus 3, an increase in 47 students failing; furthermore, if Stretch Lexiles were used, a total of 59 students would have failed the state reading assessment. On Campus 3, the African American percent change between Standard and Stretch Lexile cut scores varies only 8 percent from sixth grade to eighth grade, implying that scores were initially well below the Standard Lexile cut scores, and applying the Stretch Lexile cut scores did not severely impact additional failures.

Figure 25 depicts the percent changes for African American students between Standard Lexile cut scores and Stretch Lexile cut scores at each grade level on Campuses 1, 2, and 3.

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	Grade Six Cut Scores n/ % Change	Grade Seven Cut Scores n/ % Change	Grade Eight Cut Scores n/ % Change
Campus 1	48/-41	63/-41	29/-39
Campus 2	44/-46	37/-34	10/-10
Campus 3	52/-43	40/-39	47/-44
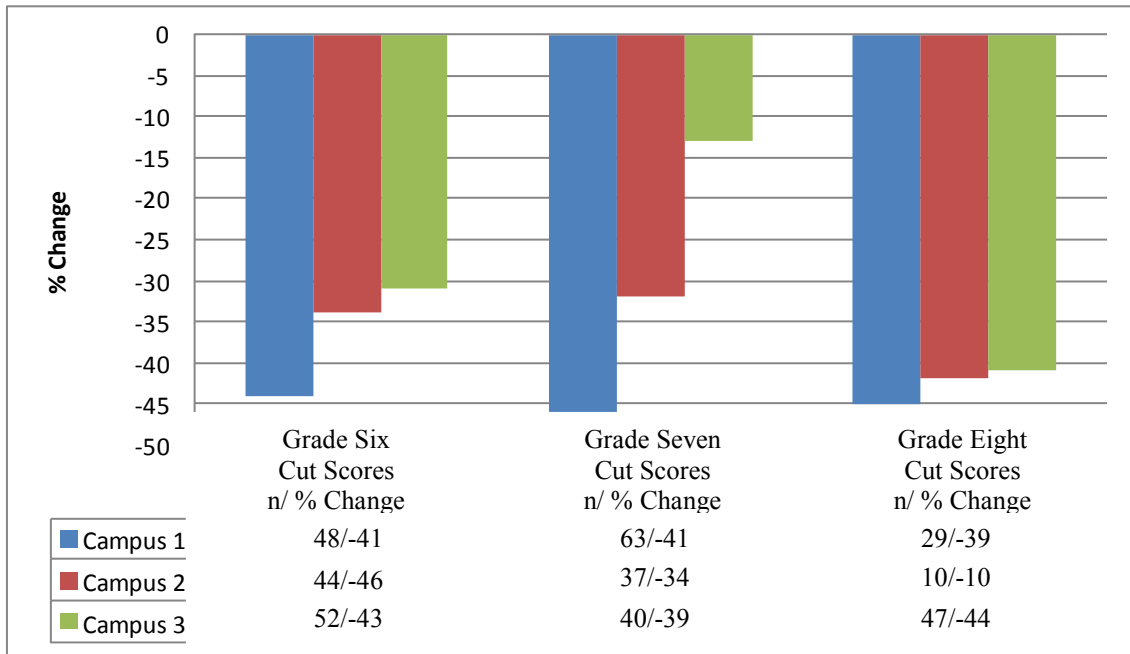
Figure 25. **Increase in Numbers of Failing Students and Percent Change between Passing Standard Lexile Cut Scores and Stretch Lexile Cut Scores for African American Students on Campuses 1, 2, and 3 by Grade Level.**

These calculations were made by first determining the total number of African American test-takers at each grade level and dividing by the passing cut scores for African American students at each grade level to establish passing percentages for Standard Lexile cut score standards and Stretch Lexile cut score standards at each grade level on each campus for African American students. The resulting percentages were then either added or subtracted to determine a percentage difference in passing cut scores at each grade level. The purpose of this calculation was to determine if campuses would have similar outcomes in their percent changes for African American student scores after applying the Stretch Lexile cut scores. The Null Hypothesis implies that there will be similar ratios with comparable results when replacing the Standard Lexile measures with

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Stretch Lexiles measures that are used in the Common Core Curriculum Standards. If a campus had dissimilar results, further investigation could provide insight into why changes occurred. Figure 25 indicates that percent changes were similar in sixth grade for African American students; percent changes were similar in seventh grade for African American students; however, the percent changes varied in eighth grade: percent change on Campus 1 was -39, percent change on Campus 2 was -10, and percent change on Campus 3 was -44.

Table 26 indicates the frequencies (numbers of African American students passing under the Standard Lexile measures) and percentages (percent of African American students passing at each campus from the total number of test-takers on Campuses 1, 2, and 3). Campus 1 had 374 African American test-takers and 325 students passing; Campus 2 had 310 African American test-takers and 267 students passing; Campus 3 had 321 African American test-takers and 290 students passing. The total number of African American test-takers for Campuses 1, 2, and 3 was 1,005 with a total of 882 students passing on all campuses. Table 26 further indicates that 36.8% of students passing were from Campus 1; 30.3% of students passing were from Campus 2; 32.9% of students passing were from Campus 3.

Table 26
Frequencies and Percentages for African American Students Meeting Standard
Lexile Cut Scores on Campuses 1, 2, and 3

Campus	Frequency (numbers of students passing)	Percent (% passing at each campus)	Cumulative Percent
Campus 1	325	36.8	36.8
Campus 2	267	30.3	67.1
Campus 3	290	32.9	100.0
Total	882	100.0	

Table 27 indicates the observed and expected numbers of African American

students passing using Stretch Lexile measures on Campuses 1, 2, and 3.

Table 27
Observed and Expected Numbers with Residuals for African American
Students

Campus	Observed N	Expected N	Residual
1	181	186.9	-5.9
2	176	153.9	22.1
3	151	167.1	-16.1
Total	508		

The Expected N for Campus 1 was 186.9. This number was determined after first dividing the number of African American students passing with Standard Lexile cut scores on Campus 1 (325) with the total number of African American students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (882) for a percentage of 36.8%. This percentage (36.8%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (508) for an expected value of 186.9. On Campus 1, 186.9 students were expected to pass under the new standards, contributing a passing percentage of 36.8% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 181. The residual difference between the Expected N and the Observed N was -5.9. The residual number of -5.9 was squared and then divided by the expected value of 186.9 for a sum of .186.

The Expected N for Campus 2 was 153.9. This number was determined after first dividing the number of African American students passing with Standard Lexile cut scores on Campus 2 (267) with the total number of African American students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (882) for a percentage of 30.3%. This percentage (30.3%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (508) for an expected value of 153.9. On Campus 2, 153.9 students were expected to pass under the new standards, contributing a passing percentage of 30.3% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 176. The residual difference between the

Expected N and the Observed N was 22.1. The residual number of 22.1 was squared and then divided by the expected value of 153.9 for a sum of 3.17.

The Expected N for Campus 3 was 167.1. This number was determined after first dividing the number of economically disadvantaged students passing with Standard Lexile cut scores on Campus 3 (290) with the total number of economically disadvantaged students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (882) for a percentage of 32.9%. This percentage (32.9%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (508) for an expected value of 167.1. On Campus 3, 167.1 students were expected to pass under the new standards, contributing a passing percentage of 32.9% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 151. The residual difference between the Expected N and the Observed N was -16.1. The residual number of -16.1 was squared and then divided by the expected value of 167.1 for a sum of 1.55.

The total sum produced after squaring each residual and dividing it by the expected value is 4.192 (.186 + 3.17 + 1.55). To determine the degrees of freedom, 1 was subtracted from the number of rows (Campus 1, Campus 2, and Campus 3) and then 1 was subtracted from the number of columns (Observed N and Expected N). Then these results were multiplied:

3 - 1 = 2; 2 - 1 = 1; 2 x 1 = 2.

Table 28 indicates the sum of the Chi-square (4.912). Using a Chi-Square distribution table, the value of p = .05 for 2 degrees of freedom is 5.99. The Chi-square Test for Independence compares the observed data to a model that distributes the

data according to the expectation that the variables are independent. The Chi-square Test for Independence revealed that observed data fits the model, indicating there is likelihood that the variables are independent, thus proving the Null Hypothesis correct. Because the result of the Chi-square Test for Independence is less than 5.99, a significant relationship is not indicated. An independent relationship exists between variables, resulting in acceptance of the Null Hypothesis for Research Question 2 for African American students. These results may imply that scores were initially well below the Standard Lexile cut scores so applying the Stretch Lexile cut scores did not significantly impact the distribution or increase the number of students failing.

Table 28
Chi-square Test for Independence Statistics with Significance for African American Students

Test Statistics	
Chi-Square	4.912
df	2
Sig.	.086*

*Significant at the .05 level.

Results for Research Question Two: Hispanic Students

Hispanic students also provide a subset for student accountability on Campuses 1, 2, and 3. Figure 26 indicates the percent of change in cut scores for Hispanic students taking regular education 2010 TAKS reading assessments on Campuses 1, 2, and 3 and the same student scores after the Stretch Lexile measure cut scores are applied. The percent of change indicates how the distribution shifted as the standards increased.

	% Change Grade Bands 2-3	% Change Grade Bands 4-5	% Change Grade Bands 6-8	% Change Grade Bands 9-10	% Change Grade Bands 11-12	Total % Shift
Campus 1	4	11	-1	-1	-13	30
Campus 2	2	17	-2	-8	-9	38
Campus 3	2	18	-2	-6	-10	38
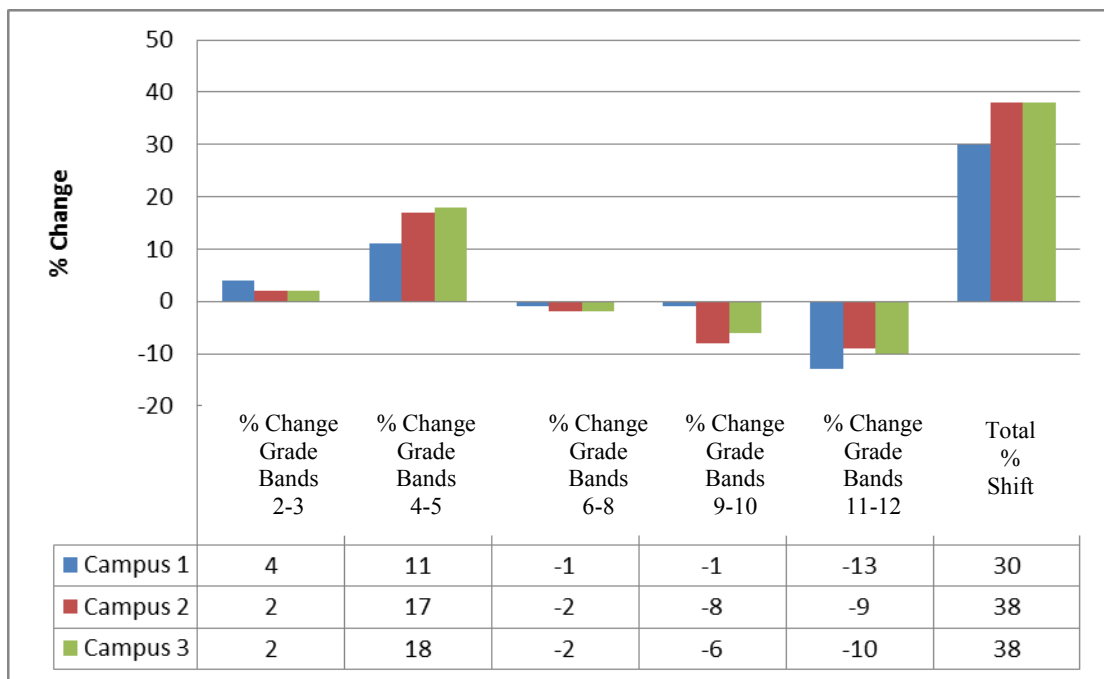
Figure 26. **Percent Change between Standard and Stretch Lexile Bands for Hispanic Students on Campuses 1, 2, and 3.**

Students tested were in grades 6-8 and cut scores should place students in this grade band; however, after the Stretch Lexile measures were applied, more students shifted into the 4-5 grade band from upper grade bands. Other shifts occurred from

grades 11-12 to 9-10. Figure 26 indicates that as the standards increased the percent change for the lower grade bands increased, and the distributions in the upper grade bands decreased as the percent changes in the lower bands increased. Figure 26 depicts the shift downward within grade bands when the Stretch Lexile measures are applied. This means that as the text complexity increased, more students shifted into grade bands that do not represent their actual grades in school. Some students were unable to perform successfully at their grade levels when Stretch Lexile measures are used as the measurement for each band instead of Standard Lexile measures. These percentages were calculated after determining the number of student scores in each grade band for the Standard Lexile grade bands and the Stretch Lexile grade bands and then dividing these numbers by the total number of students to determine a percentage for each grade band; these percentages were then either added or subtracted to calculate percent of change between the Standard Lexile measures and the Stretch Lexile measures. On Campus 1, 30% of Hispanic students shifted into at least one lower grade band; on Campus 2, 38% of Hispanic students shifted into at least one lower grade band; and on Campus 3, 38% of Hispanic students shifted into at least one lower grade band. As students shift into lower grade bands, the ability to meet with the Lexile targets for college and career readiness becomes further out of reach. In order to end with the college and career Lexile measure, students must have more rigorous Lexile expectations throughout the lower grade levels. The percent of change provides a clear illustration of the shifting distribution of student scores after the higher standards were applied for Hispanic students on Campuses 1, 2, and 3.

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Figure 27 provides a graphic display of the difference in students passing between the Standard Lexile measure and the Stretch Lexile measures for Hispanic students on Campuses 1, 2, and 3. Figure 27 provides numbers of students passing to illustrate changes in distribution of students passing using Standard Lexile measures and Stretch Lexile measures for Hispanic students. For Hispanic students, Campus 1 had 663 students passing under the Standard Lexile measures and 363 students passing under the Stretch Lexile measures for a difference of 300 fewer students passing; Campus 2 had 673 students passing under the Standard Lexile measures and 440 students passing under the Stretch Lexile measures for a difference of 233 fewer passing students. Campus 3 had 666 students passing under the Standard Lexile measures and 583 students passing under the Stretch Lexile measures for a difference of 83 fewer students passing. The increase in failing students could potentially affect accountability status for each campus, as well as at the district level. Furthermore, students can be included in several accountability groups, thus potentially affecting the campus on several accountability indicators.
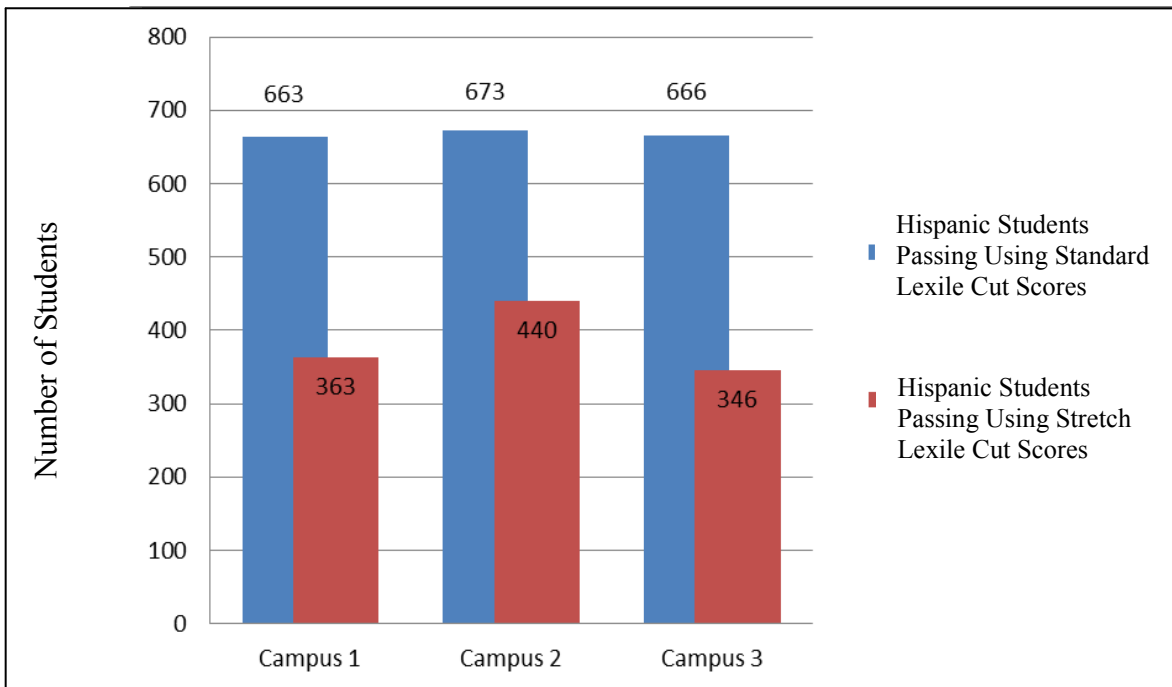
Figure 27. **Comparison of Number of Students Passing Based on Standard Lexile Cut Scores and Stretch Lexile Scores for Hispanic Students on Campuses 1, 2, and 3.**

Figure 28 indicates percentage comparisons between Standard Lexile cut scores and Stretch Lexile cut scores for Hispanic students on Campuses 1, 2, and 3.
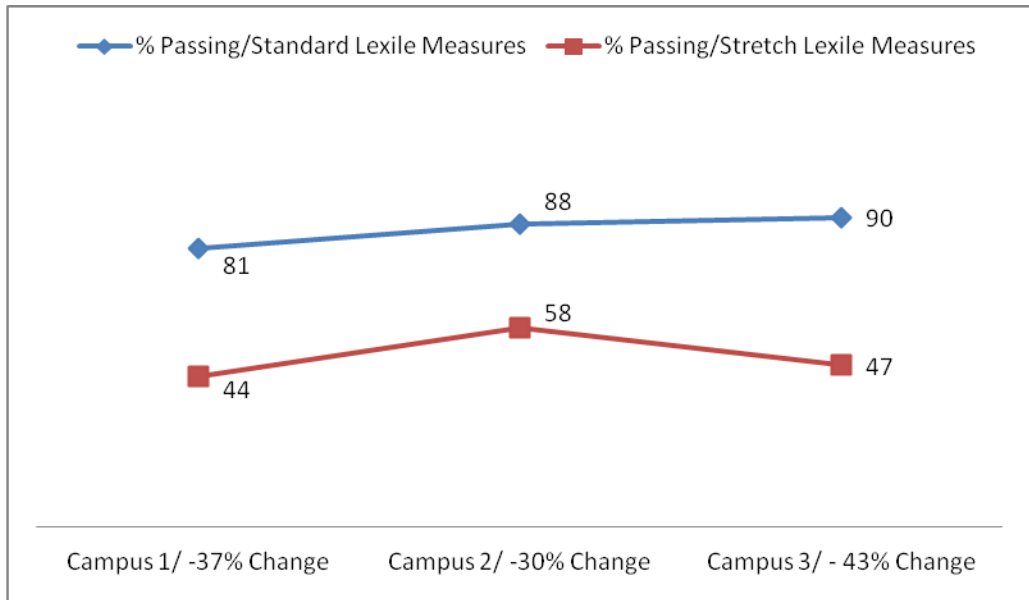
Figure 28. **Passing Percentage Comparisons between Standard and Stretch Lexiles for Hispanic Students on Campuses 1, 2, and 3.**

With Stretch Lexile measures in place, 37% fewer African American students would pass the state reading assessment on Campus 1; 30% fewer students would pass the state reading assessment on Campus 2; and -43% fewer students would pass the state reading assessment on Campus 3.

Campus 1 tested 818 Hispanic students and 663 students met the passing cut scores for all grade levels combined for an overall percent score passing rate of 81%; under the Stretch Lexile cut scores, 363 Hispanic students met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 44%. The percentage differences in passing cut score rates for Campus 1 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for Hispanic students was -37%, an increase of 300 students failing; furthermore, if Stretch Lexiles were used, a total of 455 students would have failed the state reading assessment. Campus 2 tested 762

Hispanic students and 673 students met the passing cut scores for all grade levels combined for an overall percent score passing rate of 88%; under the Stretch Lexile cut scores, 440 Hispanic students met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 58%. The percentage differences in passing cut score rates for Campus 2 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for Hispanic students was a -30%, an increase of 233 students failing; furthermore, if Stretch Lexiles were used, a total of 322 students would have failed the state reading assessment. Campus 3 tested 743 Hispanic students and 666 students met the passing cut scores for combined grade levels for an overall percent score passing rate of 90%; under the Stretch Lexile cut scores, 346 Hispanic students met the passing cut scores for combined grade levels, resulting in an overall percent passing rate of 47%. The percentage differences in passing cut score rates for Campus 3 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for Hispanic students was -43%, an increase of 320 students failing; furthermore, if Stretch Lexiles were used, a total of 397 students would have failed the state reading assessment. Figure 28 indicates that the percentage differences between Standard Lexile cut scores and Stretch Lexile cut scores were higher on Campuses 3 (difference of -43%) than scores on Campus 1 (difference of -37), and the percentage difference on Campus 2 (-30%) was less than Campus 1 or Campus 3.

Figure 29 provides a graphic display of the differences in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for Hispanic students at each grade level on Campus 1. It is important to note the changes in the

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distributions of students who are in the ethnicity accountability groups as each accountability group must meet the passing standards; furthermore, it is important to note student achievement at each grade level.
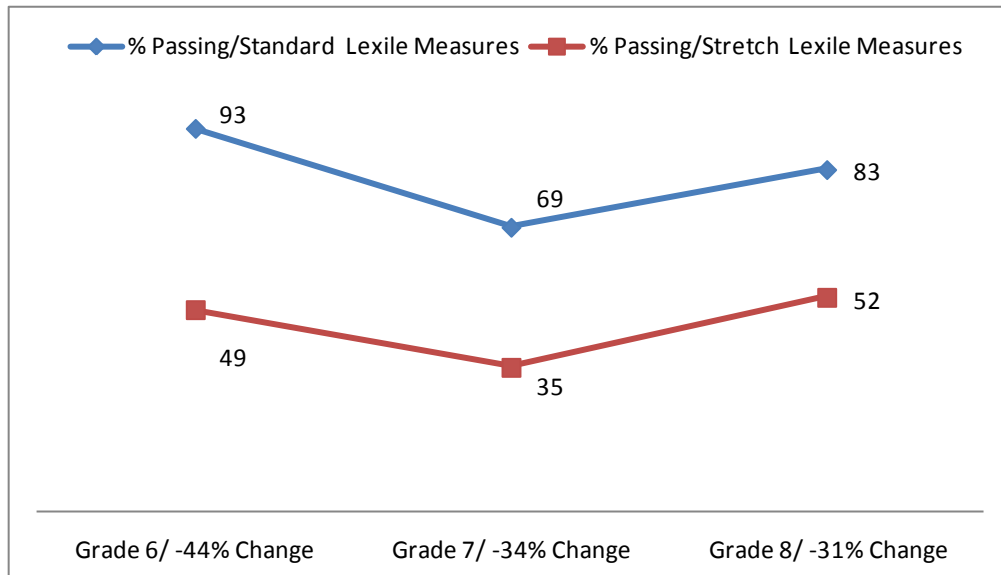
Figure 29. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for Hispanic Students on Campus 1 by Grade Level.**

Figure 29 provides Hispanic passing percentages for Campus 1. Campus 1 tested 818 Hispanic students; there were 663 students passing under the Standard Lexile measure cut scores; 363 Hispanic students passing using the Stretch Lexile measure cut scores. Campus 1 tested 253 sixth graders; 236 students met the Standard Lexile measure cut score, for a passing percentage of 93%; 123 students met the Stretch Lexile measure cut score for sixth grade, for a passing percentage of 49%. The percent change in cut scores for Hispanic sixth graders on Campus 1 was -44%, an increase of 113

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students failing; furthermore, if Stretch Lexiles were used, a total of 130 students would have failed the state reading assessment. There were 317 Hispanic seventh graders tested; 220 students met the Standard Lexile measure cut score, for a passing percentage of 69%; 111 students met the Stretch Lexile measure cut score for seventh grade, for a passing percentage of 35%. The percent change in cut scores for Hispanic seventh graders on Campus 1 was -34%, an increase of 109 students failing; furthermore, if Stretch Lexiles were used, a total of 206 students would have failed the state reading assessment. There were 248 Hispanic eighth graders tested; 207 students met the Standard Lexile measure cut score, for a passing percentage of 83%; 129 students met the Stretch Lexile measure cut score for eighth grade, for a passing percentage of 52%; the percent change in passing scores for Hispanic eighth graders on Campus 1 was -31% an increase of 78 students failing; furthermore, if Stretch Lexiles were used, a total of 119 students would have failed the state reading assessment.

Figure 30 provides a graphic display of the differences in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for Hispanic students at each grade level on Campus 2. It is important to note the changes in the distributions of students who are in the ethnicity accountability groups as each accountability group must meet the passing standards.
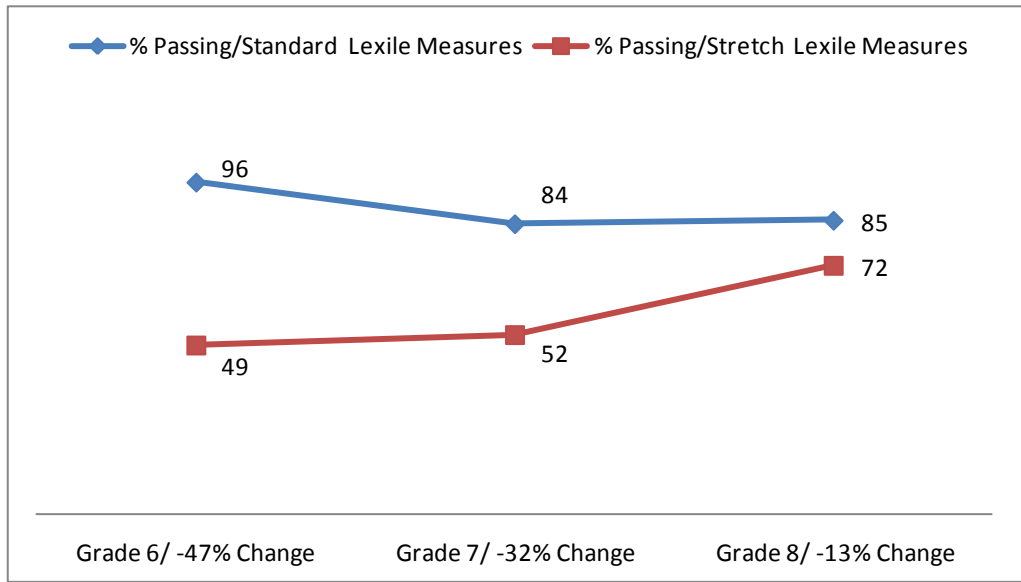
Figure 30. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for Hispanic Students on Campus 2 by Grade Level.**

Figure 30 provides Hispanic passing percentages for Campus 2. Campus 2 tested 762 students; there were 673 students passing under the Standard Lexile measure cut scores and 440 Hispanic students passing using the Stretch Lexile measure cut scores. Campus 2 tested 243 sixth graders; 234 met the Standard Lexile measure cut score, for a passing percentage of 96%; 119 students met the Stretch Lexile measure cut score for sixth grade, for a passing percentage of 49%; the percent change in passing cut scores for Hispanic sixth graders on Campus 2 was -47%, an increase of 115 students failing; furthermore, if Stretch Lexile measures were used, a total of 124 students would have failed the state reading assessment. There were 265 Hispanic seventh graders tested; 223 met the Standard Lexile measure cut score, for a passing percentage of 84%; 138 students met the Stretch Lexile measure cut score for seventh grade, for a passing

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percentage of 52%; the percent change in passing cut scores for Hispanic seventh graders on Campus 2 was -32%, an increase of 85 students failing; furthermore, if Stretch Lexile measures were used, a total of 127 students would have failed the state reading assessment. There were 254 eighth graders tested; 216 met the Standard Lexile measure cut score, for a passing percentage of 85%; 183 students met the Stretch Lexile measure cut score for eighth grade, for a passing percentage of 72%; the percent change in passing cut scores for Hispanic eighth graders on Campus 2 was -13%, an increase of 33 students failing; furthermore, if Stretch Lexiles were used, 71 students would have failed the state reading assessment. Percent changes on Campus 2 decreased as students progressed through the grade levels, indicating a closure in the achievement gaps of Hispanic students on Campus 2.

Figure 31 provides a graphic display of the differences in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for Hispanic students at each grade on Campus 3. It is important to note the changes in the distributions of students who are in the ethnicity accountability groups as each accountability group must meet the passing standards.
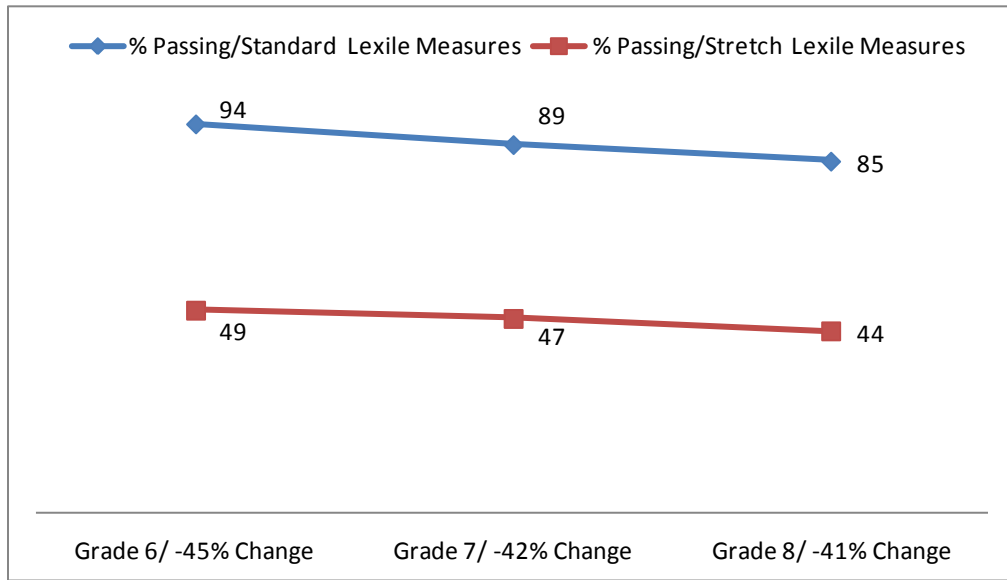
Figure 31. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for Hispanic Students on Campus 3 by Grade Level.**

Figure 31 provides Hispanic passing percentages for Campus 3. Campus 3 tested 743 students; there were 666 students passing under the Standard Lexile measure cut scores and 346 Hispanic students passing using the Stretch Lexile measure cut scores. Campus 3 tested 271 sixth graders; 256 met the Standard Lexile measure cut score, for a passing percentage of 94%; 133 students met the Stretch Lexile measure cut score for sixth grade, for a passing percentage of 49%. The percent change in passing cut scores for Hispanic sixth graders on Campus 3 was -45%, an increase of 123 students failing; furthermore, if Stretch Lexiles were used, a total of 138 students would have failed the state reading assessment. There were 247 Hispanic seventh graders tested; 219 met the Standard Lexile measure cut score, for a passing percentage of 89%; 115 students met the Stretch Lexile measure cut score for seventh grade, for a passing

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percentage of 47%. The percent change in passing cut scores for Hispanic seventh

graders on Campus 3 was -42%, an increase of 104 students failing; furthermore, if

Stretch Lexile measures were used, a total of 132 students would have failed the state

reading assessment. There were 225 Hispanic eighth graders tested; 191 met the

Standard Lexile measure cut score, for a passing percentage of 85%; 98 students met the

Stretch Lexile measure cut score for eighth grade, for a passing percentage of 44%. The

percent change in passing cut scores for Hispanic eighth graders on Campus 3 was -41%,

an increase of 93 students failing; furthermore, if Stretch Lexiles were used, a total of

127 students would have failed the state reading assessment. Figure 31 indicates that

there is very little percent change from grade level to grade level for Hispanic students

on Campus 3.

Figure 32 depicts the percent changes for Hispanic students between Standard

Lexile cut scores and Stretch Lexile cut scores at each grade level on Campuses 1, 2, and

3.

	Grade Six Cut Scores n/ % Change	Grade Seven Cut Scores n/ % Change	Grade Eight Cut Scores n/ % Change
■ Campus 1	111/-44	109/-34	78/-31
■ Campus 2	115/-47	85/-32	33/-13
■ Campus 3	123/-45	104/-42	93/-41
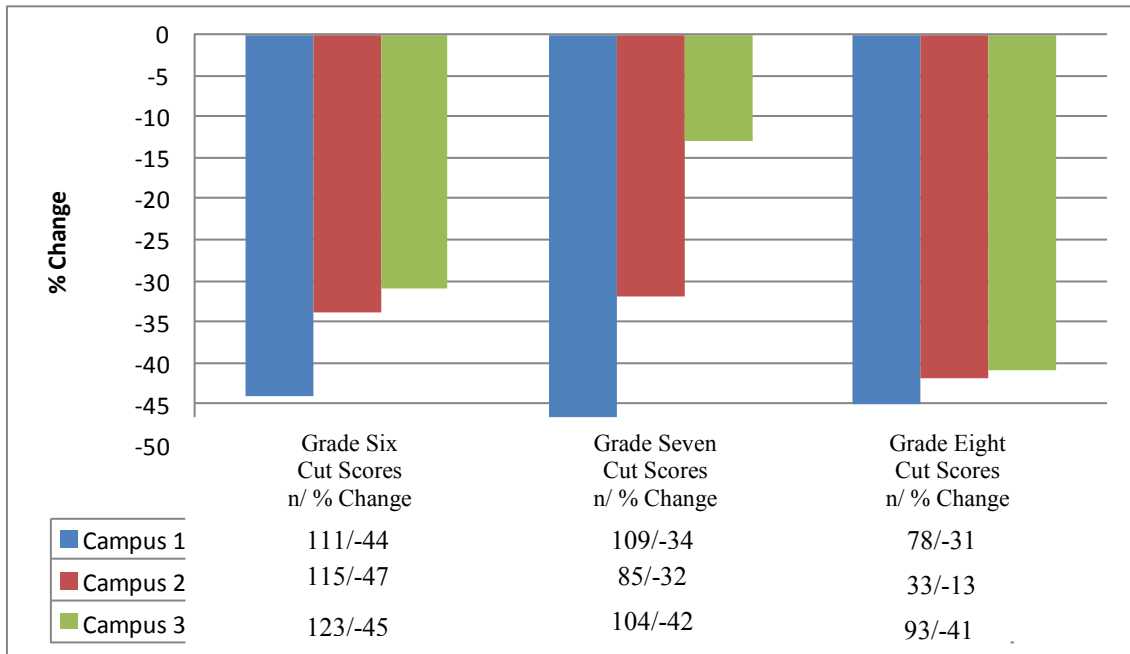
Figure 32. **Increase in Number of Failing Students and Percent Change between Standard and Stretch Lexile Cut Scores for Hispanic Students on Campuses 1, 2, and 3.**

These calculations were made by first determining the total number Hispanic test-takers at each grade level and dividing by the total passing cut scores for Hispanic students at each grade level to establish passing percentages for Standard Lexile cut score standards and Stretch Lexile cut score standards at each grade level on each campus for Hispanic students. The resulting percentages were then subtracted to determine a percentage difference in passing cut scores at each grade level. The purpose of these calculations was to determine if campuses would have similar outcomes in their percent changes for Hispanic student scores after applying the Stretch Lexile cut scores. The Null Hypothesis implies that there will be similar ratios with comparable results when replacing the Standard Lexile measures with Stretch Lexiles measures that are

used in the Common Core Curriculum Standards. If a campus had dissimilar results,

further investigation could provide insight into why changes occurred. Figure 32

indicates that percent changes were similar in sixth grade for Hispanic students; percent

changes were similar in seventh grade for similar on Campuses 1 (-34) and 2 (-32) for

Hispanic students, but the percentage difference increased on Campus 3 (-42) for

Hispanic students; however, eighth percentage differences varied by campus.

Percentages difference for Campus 1 Hispanic eighth graders was -31%, Campus 2 was

 -13%, and Campus 3 was -41%.

Table 29 indicates the frequencies (numbers of Hispanic students passing under

the Standard Lexile measures) and percentages (percent of Hispanic students passing at

each campus from the total number of test-takers on Campuses 1, 2, and 3). Campus 1

had 818 Hispanic test-takers and 663 students passing; Campus 2 had 762 Hispanic test-

takers and 673 students passing; Campus 3 had 762 Hispanic test-takers and 666

students passing. The total number of African American test-takers for Campuses 1, 2,

and 3 was 2,323 with a total of 2,002 students passing on all campuses. Table 29 further

indicates that 33.1% of students passing were from Campus 1; 33.6% of students passing

were from Campus 2; 33.3% of students passing were from Campus 3.

Table 29
Frequencies and Percentages for Hispanic Students Meeting Standard Lexile Cut Scores on Campuses 1, 2, and 3

Campus	Frequency (numbers of students passing)	Percent (% passing at each campus)	Cumulative Percent
Campus 1	663	33.1	33.1
Campus 2	673	33.6	66.7
Campus 3	666	33.3	100.0
Total	2,002	100.0	

Table 30 indicates the observed and expected passing numbers for Hispanic students on Campuses 1, 2, and 3.

Table 30
Observed and Expected Numbers with Residuals for Hispanic Students

Campus	Observed N	Expected N	Residual
1	363	380.3	-17.3
2	440	386.1	53.9
3	346	382.6	-36.6
Total	1,149		

The Expected N for Campus 1 was 380.3. This number was determined after first dividing the number of Hispanic students passing with Standard Lexile cut scores on Campus 1 (663) with the total number of Hispanic students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (2,002) for a percentage of 33.1%. This percentage (33.1%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (1,149) for an expected value of 380.3. On Campus 1, 380.3 students were expected to pass under the new standards, contributing a passing percentage of 33.1% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 363. The residual difference between the Expected N and the Observed N was -17.3. The residual number of -17.3 was squared and then divided by the Expected N of 380.3 for a sum of .799.

The Expected N for Campus 2 was 380.3. This number was determined after first dividing the number of Hispanic students passing with Standard Lexile cut scores on Campus 2 (673) with the total number of African American students passing with

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Standard Lexile cut scores on Campuses 1, 2, and 3 (2,002) for a percentage of 33.6%. This percentage (33.6%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (1149) for an Expected N of 386.1. On Campus 2, 386.1 students were expected to pass under the new standards, contributing a passing percentage of 33.3% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 440. The residual difference between the Expected N and the Observed N was 53.9. The residual number of 53.9 was squared and then divided by the Expected N of 386.1 for a sum of 7.524.

The Expected N for Campus 3 was 382.6. This number was determined after first dividing the number of Hispanic students passing with Standard Lexile cut scores on Campus 3 (666) with the total number of Hispanic students passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (2,002) for a percentage of 33.3%. This percentage (33.3%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (1,149) for an Expected N of 382.6. On Campus 3, 382.6 students were expected to pass under the new standards, contributing a passing percentage of 33.3% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 346. The residual difference between the Expected N and the Observed N was -36.6. The residual number of -36.6 was squared and then divided by the Expected N of 382.6 for a sum of 3.50.

The total sum of the residuals is 11.82 (.799 + 7.524 + 3.5). To determine the degrees of freedom, 1 was subtracted from the number of rows (Campus 1, Campus 2,

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and Campus 3) and then 1 was subtracted from the number of columns (Observed N and Expected N). Then these results were multiplied:

3 - 1 =2; 2 - 1 = 1; 2 x 1 = 2.

Table 31 indicates the sum of the Chi-square (11.828). Using a Chi-Square distribution table, the value of p = .05 for 2 degrees of freedom is 5.99. The result of the Chi-square Test for Independence is greater than 5.99, indicating a statistically significant relationship for Hispanic students among Campus 1, 2, and 3 and distributions using the two Lexile measures; furthermore, significance (.0001) indicates that a statistically significant relationship exists. The distribution of passing rates among for all students changes significantly with the new Stretch Lexile measures at varying degrees on each of the three campuses, resulting in a significant increase in students failing: 37% (n=494) for Campus 1, 29% (n=367) for Campus 2, and 40% (n=508) for Campus 3. The Null Hypothesis is rejected for Research Question 1 for all students.

Table 31
Chi-square Test for Independence Statistics with Significance for Hispanic Students

Test Statistics	
Chi-Square	11.828
df	2
Sig.	.003*

*Significant at the .05 level.

Results for Research Question Two: White Students

White students also provide a subset for student accountability on Campuses 1, 2, and 3. Figure 33 indicates the percent of change in cut scores for White students taking regular education 2010 TAKS reading assessments on Campuses 1, 2, and 3 and the same student scores after the Stretch Lexile measure cut scores are applied. The percent of change indicates how the distribution shifted as the standards increased.

	% Change Grade Bands 2-3	% Change Grade Bands 4-5	% Change Grade Bands 6-8	% Change Grade Bands 9-10	% Change Grade Bands 11-12	Total % Shift
Campus 1	1	10	-4	4	-11	30
Campus 2	0	9	8	5	-22	44
Campus 3	3	8	2	-1	-12	26
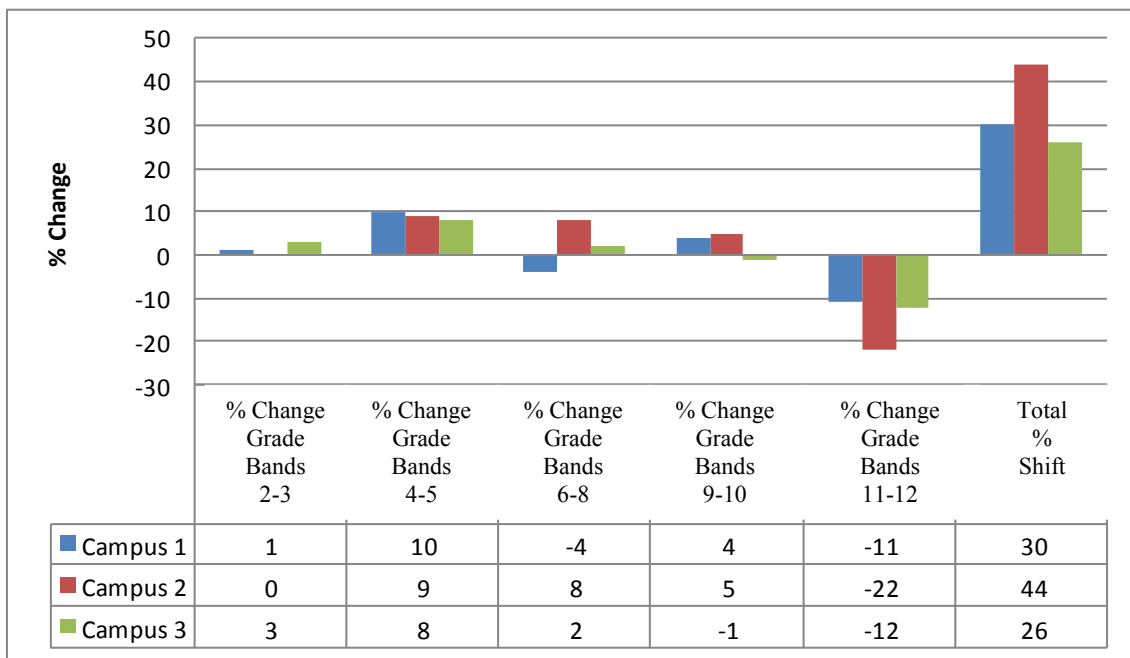
Figure 33. **Percent Change between Standard and Stretch Lexile Bands for White Students on Campuses 1, 2, and 3.**

Students tested were in grades 6-8 and cut scores should place students in this grade band; however, after the Stretch Lexile measures were applied, there was a trend established that increased student scores falling into grade bands 4-5 and decreased student scores falling into grade bands for grades 11-12. Grade bands can be assigned to

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students in any grade level and correlate to student Lexile measures that are assigned to the text cut score on the 2010 TAKS reading assessments. Grade bands assist educators in understanding how far above or below grade level students fall according to their Lexile reader measure. Figure 33 indicates that as the standards increased the percent change for the lower grade bands increased, and the distributions in the upper grade band decreased as the percent changes in the lower bands increased. Figure 33 depicts the shift downward within grade bands when the Stretch Lexile measures are applied. These percentages were calculated after determining the number of student scores in each grade band for the Standard Lexile grade bands and the Stretch Lexile grade bands and then dividing these numbers by the total number of students to determine a percentage for each grade band; these percentages were then either added or subtracted to calculate percent of change between the Standard Lexile measures and the Stretch Lexile measures. On Campus 1, 30% of White students shifted into at least one lower grade band; on Campus 2, 44% of White students shifted into at least one lower grade band; and on Campus 3, 26% of White students shifted into at least one lower grade band. As students shift into lower grade bands, the ability to meet with the Lexile targets for college and career readiness become further out of reach. The percent of change provides a clear illustration of the shifting distribution of student scores after the higher standards were applied for White students on Campuses 1, 2, and 3. This means that as the text complexity increased at each grade band, fewer students were able to access more complex text, resulting in more students in lower grade bands.

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Figure 34 provides a graphic display of the difference in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for White students on Campuses 1, 2, and 3. Figure 34 provides numbers of students passing to illustrate changes in distribution of passing cut scores using Standard Lexile measures and Stretch Lexile measures for White students. Campus 1 had 120 students passing under the Standard Lexile measures: there were 78 students passing under the Stretch Lexile measures for a difference of 42 fewer students passing; Campus 2 had 131 students passing under the Standard Lexile measures; there were 110 students passing under the Stretch Lexile measures for a difference of 21 fewer students passing. Campus 3 had 132 students passing under the Standard Lexile measures; there were 90 students passing under the Stretch Lexile measures for a difference of 42 fewer students passing. Although increases in failing students were not as great for White students as other student groups, the increase does indicate that White students will also potentially fail the state of Texas reading assessment if standards are aligned with the Stretch Lexile measures.
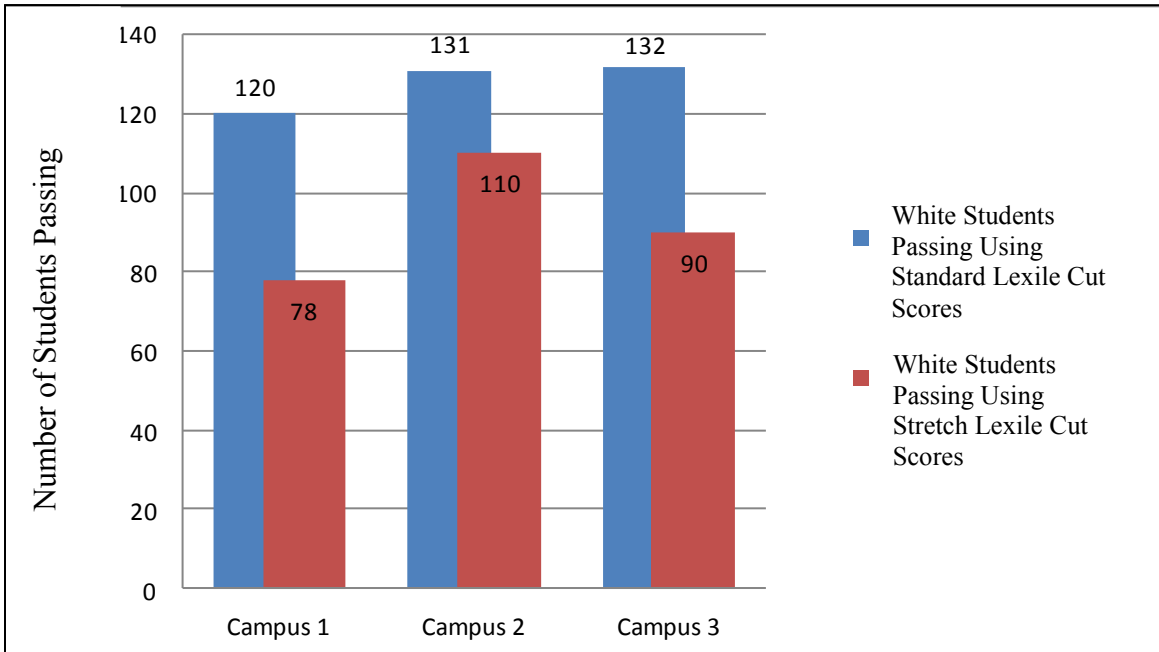
Figure 34. **Comparison and Number of Students Passing Based on Standard Lexile Cut Scores and Stretch Lexile Cut Scores for White Students on Campuses 1, 2, and 3.**

With Stretch Lexile measures in place, 32% fewer White students would pass the state reading assessment on Campus 1; 15% fewer White students would pass the state reading assessment on Campus 2; and 30% fewer White students would pass the state reading assessment on Campus 3.

Figure 35 indicates percentage comparisons between Standard Lexile cut scores and Stretch Lexile cut scores for White students on Campuses 1, 2, and 3.
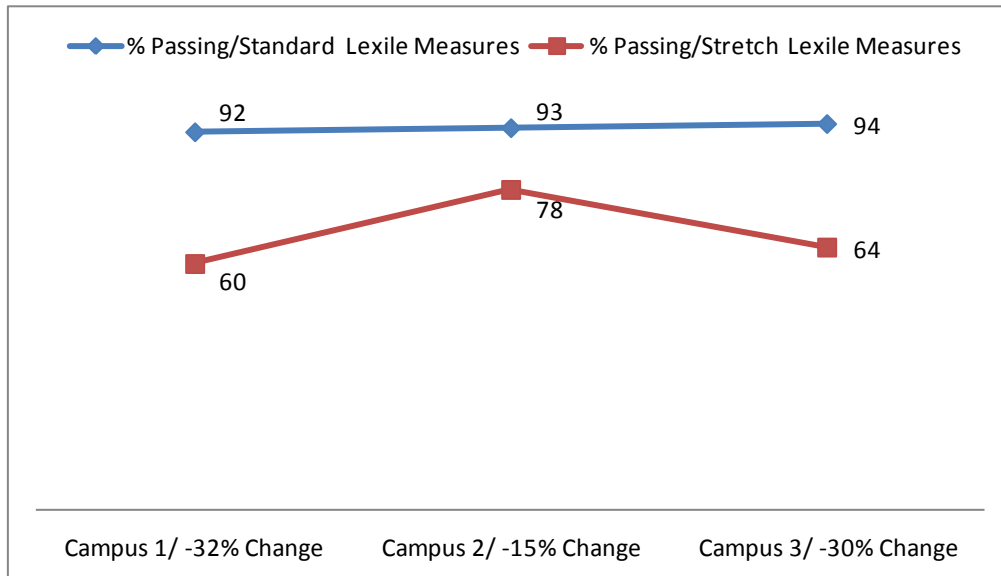
Figure 35. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for White Students on Campuses 1, 2, and 3.**

Campus 1 tested 131 White students; 120 students met the passing cut scores for all grade levels combined for an overall percent passing rate of 92%; under the Stretch Lexile cut scores, 78 White students met the passing cut scores for all grade levels combined, resulting in an overall percent passing rate of 60%. The percentage differences in passing cut score rates for Campus 1 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for White students was -32%, an increase of 42 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 53 White students on Campus 1 would have failed the state reading assessment. Campus 2 tested 141 White students; 131 students met the passing cut scores for all grade levels combined for an overall percent score passing rate of 93%; under the Stretch Lexile cut scores, 110 White students met the passing cut scores for all grade levels combined,

resulting in an overall percent passing rate of 78%. The percentage differences in passing cut score rates for Campus 2 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for White students was -15%, an increase of 21 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 31 White students on Campus 2 would have failed the state reading assessment. Campus 3 tested 140 White students; 132 students met the passing cut scores for combined grade levels for an overall percent score passing rate of 94%; under the Stretch Lexile cut scores, 90 White students met the passing cut scores for combined grade levels, resulting in an overall percent passing rate of 64%. The percentage differences in passing cut score rates for Campus 3 between Standard Lexile passing cut scores and Stretch Lexile passing cut scores for White students was -30%, an increase of 42 students failing; furthermore, if Stretch Lexile cut scores were used, a total of 50 White students on Campus 3 would have failed the state reading assessment. Figure 35 indicates that the percentage differences between Standard Lexile cut scores and Stretch Lexile cut scores were higher on Campuses 1 (difference of -32%) than scores on Campus 3 (difference of -30%); Campus 2 had the least percentage difference (-15%).

Figure 36 provides a graphic display of the differences in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for White students at each grade level on Campus 1. It is important to note the changes in the distributions of students who are in specific ethnicity accountability groups as each accountability group must meet the passing standards; furthermore, it is important to note student achievement at each grade level.

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Figure 36 legend: % Passing/Standard Lexile Measures — % Passing/Stretch Lexile Measures

94   89   91

65   65

50

Grade 6/ -44% Change   Grade 7/ -24% Change   Grade 8/ -26% Change

Figure 36. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for White Students on Campus 1 by Grade Level.**

Figure 36 provides White passing percentages for Campus 1. Campus 1 tested 131 White students; there were 120 students passing under the Standard Lexile measure cut scores, and 181 White students passing using the Stretch Lexile measure cut scores. Campus 1 tested 48 White sixth graders; 45 met the Standard Lexile measure cut score, for a passing percentage of 94%; 24 students met the Stretch Lexile measure cut score for sixth grade, for a passing percentage of 50%; the percent change in cut scores for White sixth graders on Campus 1 was -44%, an increase of 21 students failing; furthermore, if Stretch Lexiles were used, a total of 24 students would have failed the state reading assessment. There were 37 seventh graders tested; 33 met the Standard Lexile measure cut score, for a passing percentage of 89%; 24 students met the Stretch Lexile measure cut score for seventh grade, for a passing percentage of 65%; the percent

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change in cut scores for White seventh graders on Campus 1 was -24%, an increase of 9 students failing; furthermore, if Stretch Lexiles were used, a total of 13 students would have failed the state reading assessment. There were 46 White eighth graders tested; 42 met the Standard Lexile measure cut score, for a passing percentage of 91%; 30 students met the Stretch Lexile measure cut score for eighth grade, for a passing percentage of 65%; the percent change in cut scores for White eighth graders on Campus 1 was -26%, an increase of 12 students failing; furthermore, if Stretch Lexiles were used, a total of 16 students would have failed the state reading assessment.

Figure 37 provides a graphic display of the differences in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures White students at each grade on Campus 2.
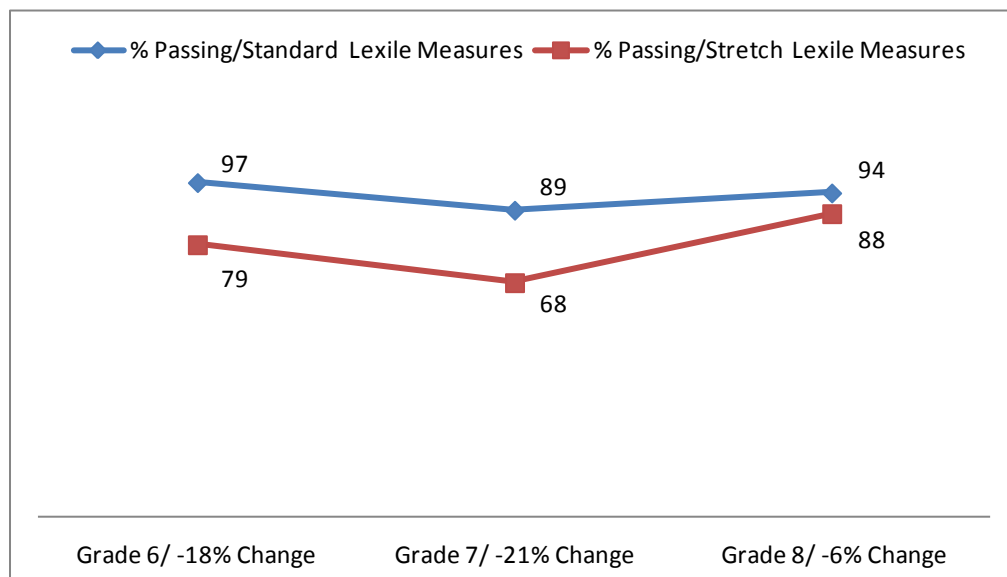
Figure 37. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for White Students on Campus 2 by Grade Level.**

Figure 37 provides White passing percentages for Campus 2. Campus 2 tested 141 White students; there were 131 students passing under the Standard Lexile measure cut scores; there were 90 White students passing using the Stretch Lexile measure cut scores. Campus 2 tested 38 White sixth graders; 37 students met the Standard Lexile measure cut score, for a passing percentage of 97%; 30 students met the Stretch Lexile measure cut score for sixth grade, for a passing percentage of 79%; the percent change in cut scores for White sixth graders on Campus 2 was -18%, an increase of 1 student failing; furthermore, if Stretch Lexiles were used, a total of 8 students would have failed the state reading assessment. There were 53 White seventh graders tested; 47 students met the Standard Lexile measure cut score, for a passing percentage of 89%; 36 students met the Stretch Lexile measure cut score for seventh grade, for a passing percentage of 68%; the percent change in cut scores for White seventh graders on Campus 2 was -21%, an increase of 11 students failing; furthermore, if Stretch Lexiles were used, a total of 17 students would have failed the state reading assessment. There were 50 White eighth graders tested; 47 met the Standard Lexile measure cut score, for a passing percentage of 94%; 44 students met the Stretch Lexile measure cut score for eighth grade, for a passing percentage of 88%; the percent change in cut scores for White eighth graders on Campus 2 was -6%, an increase of 3 students failing; furthermore, if Stretch Lexiles were used, a total of 6 students would have failed the state reading assessment.

Figure 38 provides a graphic display of the differences in passing cut scores between the Standard Lexile measure and the Stretch Lexile measures for White students at each grade on Campus 3.
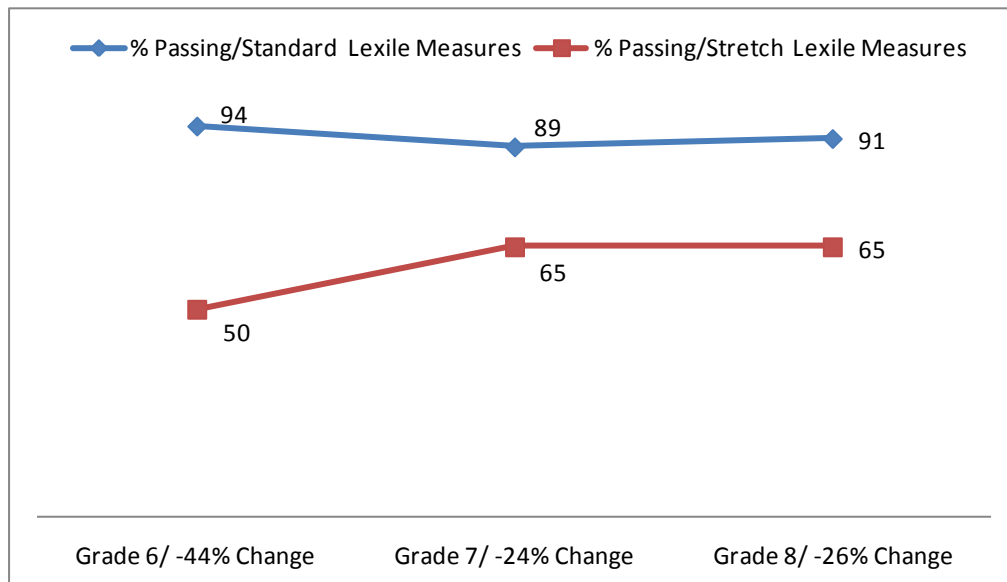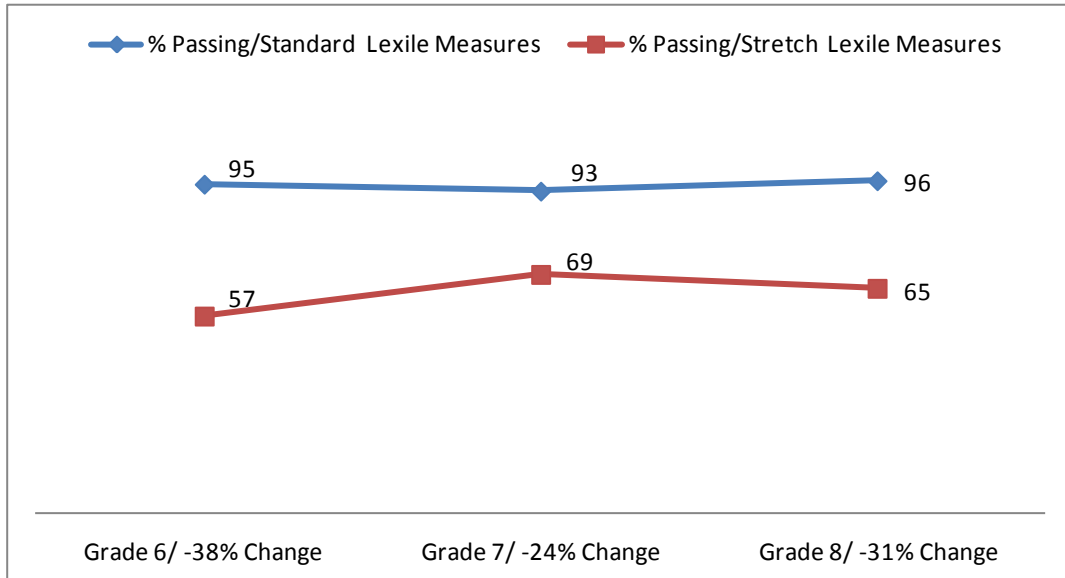

Figure 38. **Passing Percentage Comparisons between Passing Standard Lexile Cut Scores and Passing Stretch Lexile Cut Scores for White Students on Campus 3 by Grade Level.**

Figure 38 provides White passing percentages for Campus 3. Campus 3 tested 140 White students; there were 132 students passing under the Standard Lexile measure cut scores, and 90 students passing using the Stretch Lexile measure cut scores. Campus 3 tested 37 White sixth graders; 35 met the Standard Lexile measure cut score, for a passing percentage of 95%; 21 students met the Stretch Lexile measure cut score, for a passing percentage of 57%; the percent change in cut scores for White sixth graders on Campus 3 was -14%, an increase of 14 students failing; furthermore, if Stretch Lexiles

were used, a total of 16 students would have failed the state reading assessment. There were 54 White seventh graders tested, and 50 met the Standard Lexile measure cut score, for a passing percentage of 93%; 37 students met the Stretch Lexile measure cut score for seventh grade, for a passing percentage of 69%; the percent change in cut scores for White seventh graders on Campus 3 was -24%, an increase of 13 students failing; furthermore, if Stretch Lexiles were used, a total of 17 students would have failed the state reading assessment. There were 49 White eighth graders tested, and 47 met the Standard Lexile measure cut score, for a passing percentage of 96%; 32 students met the Stretch Lexile measure cut score for eighth grade, for a passing percentage of 65%; the percent change in cut scores for White eighth graders on Campus 3 was -31%, an increase of 15 students failing; furthermore, if Stretch Lexiles were used, a total of 17 students would have failed the state reading assessment.

Figure 39 depicts the percent changes for White students between Standard Lexile cut scores and Stretch Lexile cut scores at each grade level on Campuses 1, 2, and 3.
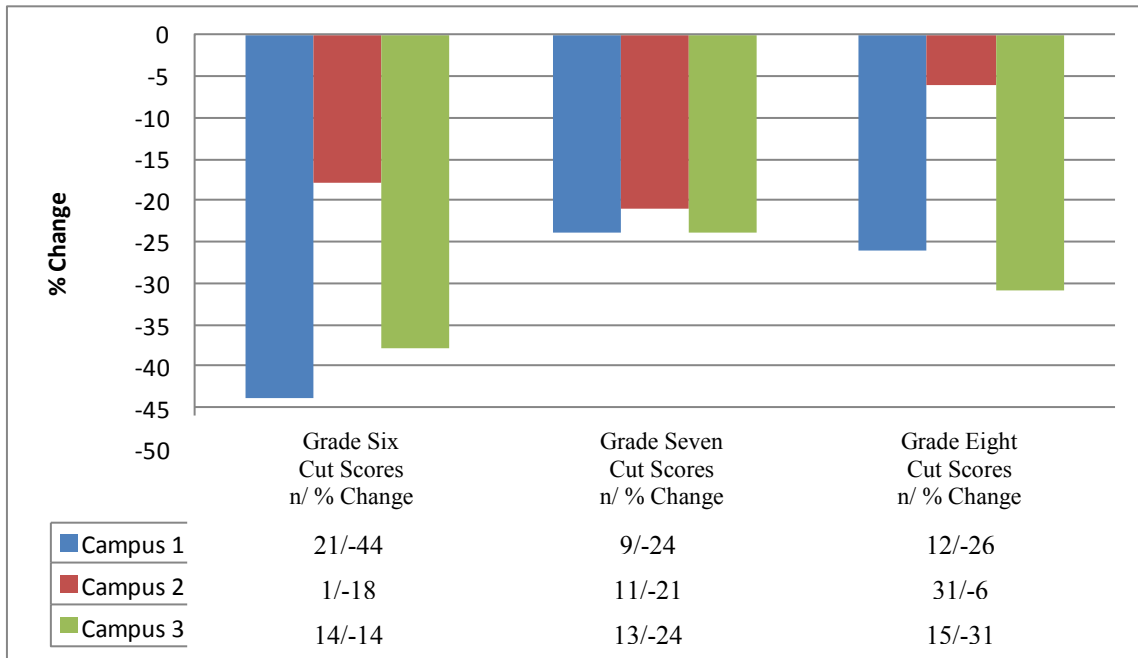
Figure 39. **Increase in Number of Failing Students and Percent Change between Passing Standard Lexile Cut Scores and Stretch Lexile Cut Scores for White Students on Campuses 1, 2, and 3 by Grade Level.**

These calculations were made by first determining the total number of White

test-takers at each grade level and dividing by the passing cut scores for White students

at each grade level to establish passing percentages for Standard Lexile cut score

standards and Stretch Lexile cut score standards at each grade level. The resulting

percentages were then subtracted to determine a percentage difference in passing cut

scores at each grade level. The purpose of this calculation was to determine if campuses

would have similar outcomes in their percent changes by grade level for White student

scores after applying the Stretch Lexile cut scores. Figure 39 indicates that percent

changes were varying in sixth grade for White students on Campuses 1 (-44), Campus 2

(-18), and Campus 3 (-14); percent changes were the same in seventh grade for White

students on Campus 1 (-24) and Campus 3 (-24), but there was less of a percentage

increase on Campus 2 (-21). Percent changes were varying in eighth grade for White

students on Campus 1 (-26), Campus 2 (-6), and Campus 3 (-31).

Table 32 indicates the frequencies (numbers of White students passing under the

Standard Lexile measures) and percentages (percent of White students passing at each

campus from the total number of test-takers on Campuses 1, 2, and 3). Campus 1 had

131White test-takers; there were 120 students passing; Campus 2 had 141 White test-

takers; there were 131 students passing; Campus 3 had 140 White test-takers; there were

132 students passing.

The total number of White test-takers for Campuses 1, 2, and 3 was 412 with a

total of 383 students passing on all campuses. Table 32 further indicates that 31.3% of

students passing were from Campus 1; 34.2% of students passing were from Campus 2;

34.5% of students passing were from Campus 3.

Table 32
Frequencies and Percentages for White Students Meeting Standard Lexile Cut Scores on Campuses 1, 2, and 3

Campus	Frequency (numbers of students passing)	Percent (% of total passing from campus)	Cumulative Percent
Campus 1	120	31.3	31.3
Campus 2	131	34.2	65.5
Campus 3	132	34.5	100.0
Total	383	100.0	

Table 33 indicates the observed and expected passing numbers for White students on Campuses 1, 2, and 3.

Table 33
Observed and Expected Numbers with Residuals for White Students

Campus	Observed N	Expected N	Residual
1	78	87.0	-9.0
2	110	95.1	14.9
3	90	95.9	-5.9
Total	278		

The Expected N for Campus 1 was 87. This number was determined after first

dividing the number of White students passing with Standard Lexile cut scores on

Campus 1 (120) with the total number of White students passing with Standard Lexile

cut scores on Campuses 1, 2, and 3 (383) for a percentage of 31.3%. This percentage

(31.3%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (278) for an

expected value of 87. On Campus 1, 87 students were expected to pass under the new

standards, contributing a passing percentage of 31.3% among the three campuses, the

same ratio identified under the Standard Lexile cut score standards; however, the

Observed N was 78. The residual difference between the Expected N and the Observed

N was -9.0. The residual number of -9.0 was squared and then divided by the Expected

N of 87 for a sum of .93103.

The Expected N for Campus 2 was 95.1. This number was determined after first

dividing the number of White students passing with Standard Lexile cut scores on

Campus 2 (131) with the total number of White students passing with Standard Lexile

cut scores on Campuses 1, 2, and 3 (383) for a percentage of 34.2%. This percentage

(34.2%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (278) for an

Expected N 95.1. On Campus 2, 95.1 students were expected to pass under the new

standards, contributing a passing percentage of 34.2% among the three campuses, the

same ratio identified under the Standard Lexile cut score standards; however, the

Observed N was 110. The residual difference between the Expected N and the Observed

N was 14.9. The residual number of 14.9 was squared and then divided by the Expected N of 95.1 for a sum of 2.3345.

The Expected N for Campus 3 was 95.9. This number was determined after first dividing the number of White students passing with Standard Lexile cut scores on Campus 3 (132) with the total number of White passing with Standard Lexile cut scores on Campuses 1, 2, and 3 (383) for a percentage of 34.5%. This percentage (34.5%) was multiplied by the Observed N total for Campuses 1, 2, and 3 (278) for an Expected N of 95.9. On Campus 3, 95.9 students were expected to pass under the new standards, contributing a passing percentage of 34.5% among the three campuses, the same ratio identified under the Standard Lexile cut score standards; however, the Observed N was 90. The residual difference between the Expected N and the Observed N was -5.9. The residual number of -5.9 was squared and then divided by the expected value of 95.9 for a sum of .36298.

The total sum produced after squaring each residual and dividing it by the expected values is 3.641 (.36298 + 2.3345 + .36298). To determine the degrees of freedom, 1 was subtracted from the number of rows (Campus 1, Campus 2, and Campus 3) and then 1 was subtracted from the number of columns (Observed N and Expected N). Then these results were multiplied:

3 - 1 =2; 2 - 1 = 1; 2 x 1 = 2.

Table 34 indicates the sum of the Chi-Square (3.641). Using a Chi-Square distribution table, the value of p = .05 for 2 degrees of freedom is 5.99. Because the result of the Chi-square Test for Independence is less than 5.99, a significant relationship

is not indicated. An independent relationship exists between variables, resulting in acceptance of the Null Hypothesis for Research Question 2 for White students. These results may imply that scores were initially substantially above the Standard Lexile cut scores so applying the Stretch Lexile cut scores did not significantly impact the distribution or increase the number of students failing. The Null Hypothesis is accepted for Research Question 2 for White students.

Table 34
Chi-square Test for Independence Statistics with Significance for White Students

Test Statistics	
Chi-Square	3.641
df	2
Sig.	.162*
	3.641

*Significant at the .05 level.

Results for Research Question Three: Policy Implications

K-12 education functions in a highly dynamic environment that is sensitive to major policy changes. This environment, including political, economic, educational, and sociological factors significantly influence the capacity of the educational system to meet local, state, and federal needs and standards – and more importantly, the educational needs of each and every student

Policy implications relative to the findings of this study will focus on local policy implications, state policy implications, and federal policy implications. The analyses of the findings used a theoretical framework that will examine factors impacting the following categories: political, economic, educational, and social. This approach will allow the researcher to analyze implications externally (at the federal and state educational policy levels) and internally (at the local district policy level).

Local Political Policy Implications

Failure to meet adequate yearly progress when student achievement is deemed unsatisfactory according to standardized testing can create political implications for local school districts and campuses. A campus failing to meet adequate yearly progress and entering the school improvement process must notify parents of the school's status, the campus must provide school choice, and the campus must provide tutoring interventions. In part, concerns regarding failure to meet adequate yearly progress and entrance into school improvement status center on demographics. Distinct demographic patterns typically emerge concerning the kind of children who attend failing schools. Nearly one in five African American and Hispanic students attends noncompliant adequate yearly progress schools, compared to 1 in 20 White students (Donovan, Mooney, & Smith, 2009). Critics have charged that Congress has continually failed to fund the mandates of NCLB and adequate yearly progress requirements to meet the educational needs of these students in failing schools. In 2009, Title I federal appropriations for K-12 exceeded $14 billion; however, critics claim that Title I appropriations are still underfunded by $71 billion (Donovan et al, 2009). Local districts are required to provide state standardized

testing to their students and fund interventions when students fail to meet the standards in mathematics and reading; however, some local governments believe that the federal government has too much authority in decisions that should be made by local education agencies (Donovan et al, 2009). The structure of NCLB ensures federal authority over state educational agencies by dictating when and what type of assessments must occur at each grade level, and state agencies ensure authority over local school districts by identifying low performing school districts according to the standards they have created and by acting as monitors for NCLB requirements. Local school districts are held accountable for student achievement, and failure to maintain state standards results in sanctions that are politically charged. Schools must publicly state their failure to make adequate yearly progress, and school choice can become a volatile issue. Issues of parental trust in the school, student choice and transfers, athletic eligibility, racial inequities, and teacher attitudes and perceptions all become part of the conversations in situations where schools have adequate yearly progress sanctions imposed. Public perception and parental support can also be shaped by a school's adequate yearly progress status. Being identified as a low-performing school is a label that sticks (Abernathy, 2009).

Local Economic Policy Implications

Policymakers and educators have gravitated toward an outcome-based system to assess student achievement. Assessments aligned with curriculum are created and implemented to evaluate the productivity of our classrooms. Enactment of NCLB fueled an intensive effort to improve achievement outcomes through mandated requirements.

Curriculum alignment was at the heart of the state's intensive efforts. Local economic components associated with failing student achievement centered on instruction and transportation-related resource allocation. Local districts not meeting adequate yearly progress must use school improvement funds to provide accelerated instruction after school as well as during the summer, provide professional development to teachers to improve first-time instruction in their content area, ensure that teachers are highly qualified, purchase alternative curriculum resources for re-teaching, develop a system and personnel to collect and use rigorous data to monitor changes after implementing a scientifically-based form of school improvement, provide tutors, and fund school choice transportation costs. According to the National Center for Educational Statistics (2010), schools in Texas received approximately 10% of their funding from the federal government; 44% from the state; and local districts provided 46% of their revenues. Local districts must make educational choices for students based on priorities and available funding for resources. School districts entering adequate yearly progress mandated school improvement must utilize funds carefully to provide scientifically-based strategies that will result in improved student achievement. School districts must use all available resource allocations to focus on the neediest students--often excluding programs and activities for students who are achieving at targeted levels. In fact, educators are concerned about the unintended consequences of abandoning high achieving students while focused on low-achieving students (Hamilton et al., 2012). Local school districts are forced to make choices regarding funding as they strive to close instructional gaps for low-achieving students. On the campuses in this study, Title

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I allotment in 2010 was approximately $301,581 per campus. The total allotment for the entire district was $11,761,697. In 2010, there were 39 campuses identified as Title I. A campus that does not meet adequate yearly progress is required under NCLB mandates to set aside 20% of Title I funds for school choice transportation needs. Furthermore, 10% of Title I funds must be set aside for professional development, leaving approximately $211,107, or 70% of $301,581, for instructional purposes after each campus in school improvement has set aside a total of 30% of Title I funds to cover transportation and professional development costs. Funding to provide intervention services to failing students would drain the Title I allotment from other impoverished students on the campus who passed the state reading assessment. When 30% of the funds are not earmarked for school improvement transportation and professional development, Title I funds can be used to improve curriculum and instruction on a campus. For example, a campus can increase teacher allocations, resulting in lower student to teacher ratios, which can increase the number of students who are in lower Response to Intervention tiers. Adding teachers so that there are fewer students per teacher allows more effective intervention for struggling students because corrective instruction is provided in smaller groups and/or individually to students.

Even though all three campuses must AYP requirements when using state standards, with the implementation of Stretch Lexile Measures, all three campuses would fail to make adequate yearly progress on the state of reading assessments due to the more rigorous text complexity found in the Stretch Lexile measures associated with passing cut scores. Campuses failing to meet adequate yearly progress would be

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mandated to reserve 30% of their funds for transportation and professional development. With Stretch Lexile measure implementation on Campus 1, 494 additional students would not meet the cut scores and would fail the state of Texas reading assessment, for a campus total of 711 failing students. In 2010, 70% of all students and 70% of students in each accountability subset must pass the state of Texas reading assessment with at least 73% to meet adequate yearly progress. On Campus 1, the failure rate after Stretch Lexiles are applied is 53% (711 failing students ÷ 1,351 total number of students tested), resulting in failure to make adequate yearly progress. The overall passing percentage for all students (students passing the state of Texas reading assessment with 73% or higher) would be 47%, well below the needed 70% of students passing with 73%.

For illustrative purposes, the economic funding impact resulting from increased failures when using Stretch Lexile measures is calculated for each campus. On Campus 1, instead of the full $301,581 being available for interventions, there will be only $211,107 available after removing the mandatory 30% for transportation and professional development costs. Therefore, on Campus 1, instead of $1,390 being available per student for distribution in lower tiers of RtI for the 217 failing students ($301,581 in Title I funding ÷ 217 failing students = approximately $1,390 per student), Stretch Lexile cut scores will result in 711 failing students needing RtI intervention, and the funding available for each failing student will drop to $297 per student ($211,107 available in Title I funds ÷ 711 failing students = $297 per student). Even though only $211,107 would be available to the campus after the mandatory 30% is set aside for transportation and professional development costs, these funds must still be used to

improve academic success for failing students, even though the cost per student would be significantly lower. If Campus 1 maintains funding intervention per student to remain at the same level after Stretch Lexile measures are implemented as they were before they were implemented, the cost for each of the 711 failing students would be $1,390 per student, resulting in a total cost of $987,579, requiring $685,998 in additional funds ($987,579 - $301,581 = $685,998).

On Campus 2, 367 additional students would not meet the cut scores and would fail the state of Texas reading assessment with the implementation of Stretch Lexile cut scores. There would be a campus total of 514 failing students; therefore, on Campus 2, instead of $2,052 available per student for instruction to the 147 failing students in lower tiers of RtI ($301,581 in Title I funding ÷ 147 failing students = approximately $2,052 per student), Stretch Lexile cut scores will result in 514 failing students needing RtI intervention, and the funding available for each failing student will drop to $411 per student ($211,107 available in Title I funds ÷ 514 failing students = $411 per student). If Campus 2 maintains funding intervention per student to remain at the same level after Stretch Lexile measures are implemented as they were before they were implemented, the cost for each of the 514 failing students would be $2,052 per student, resulting in a total cost of $1,054,507, requiring $752.926 in additional funds ($1,054,507 - $301,581 = $752,926).

On Campus 3, 508 additional students would not meet the cut scores and would fail the state of Texas reading assessment with the implementation of Stretch Lexile cut scores; therefore, on Campus 3, instead of $2,600 available per student for instruction to

the 116 failing students in lower tiers of RtI ($301,581 in Title I funding ÷ 116 failing students = approximately $2,600 per student), Stretch Lexile cut scores will result in 624 failing students needing RtI intervention, and the funding available for each failing student will drop to $338 per student ($211,107 available in Title I funds ÷ 624 failing students = $338 per student). If Campus 3 maintains funding intervention per student to remain at the same level after Stretch Lexile measures are implemented as they were before they were implemented, the cost for each of the 624 failing students would be $2,600 per student, resulting in a total cost of $1,622,400, requiring $1,320,819 in additional funds ($1,622,400 - $301,581 = $1,320,819). Campuses will not receive additional Title I funding when failures increase; funding levels are determined by economically disadvantaged status of students, not failure to achieve academic success. Campuses will have to secure funding through additional sources to keep current funding levels available for academic interventions.

For intervention funding levels for failing students to remain the same after Stretch Lexile measures are implemented, an additional $2,759,743 ($685,998 + $752,926 + $1,320,818) would be needed for all three campuses; the district in this study has 17 middle schools, if enrollment and failure rates were somewhat comparable at all 17 campuses, $15,638,544 would be needed to maintain similar funding levels to provide interventions to failing students after Stretch Lexile cut scores are implemented (approximate average of $919,914 per campus x 17 campuses). Furthermore, this sum could potentially add up to $36,796,573 for the 40 comparable campuses across the Texas Education Agency's determination of the Campus Group that includes Campuses

1, 2, and 3 to maintain current levels of funding for interventions after the implementation of Stretch Lexile cut scores; in 2010, there were 1,591 middle schools in Texas; to maintain current funding levels needed to sustain the same level of intervention support if Stretch Lexile cut scores are implemented the cost increase could potentially soar to $1,463,583,174 ($919,914 average per campus to maintain same level of funding x 1,591 middle schools = $1,463,583,174). While this focus is on economic impact, such staggering amounts quickly become political.

Providing students with additional supplemental educational opportunities is another economic factor that could potentially cause serious cost considerations at the local district level. According to the Texas Education Agency (2013), supplemental educational services are additional academic instruction designed to increase the academic achievement of students in campuses needing improvement. These services may include academic assistance such as tutoring, remediation, and other educational interventions. Students who attend a Title I school that has been designated as failing to meet adequate yearly progress for more than one year are eligible to enroll in supplemental educational services. The cost of supplemental educational services is incurred by the school district. Additional instruction must occur outside the school day—either before school, after school, or during the summer. Every year the U.S. Department of Education designates an amount per student that each district must pay to provide additional educational services; however, there is a cap on per student spending that varies by district. In 2010, the district in this study was required to pay $1,383 per student for outside tutoring. For the three campuses in this study, the school district was

required to potentially contribute $5,343,912 for supplemental education (1,351 students on Campus 1 + 1,282 students on Campus 2 + 1,231 students on Campus 3 x $1,383 per student). There are 13,931 students on the ten middle school campuses currently designated as Title I in this district. Providing supplemental educational services to each of these students would require the district to provide $19,266,573 for supplemental educational services. If all 17 middle school campuses in the district for this study were designated Title I based on their economically disadvantaged population, 23,222 middle school students would be eligible for supplemental educational services, potentially costing the district an additional $32,116,026 for supplemental educational services (23,222 middle school students x $1,383 per student).

The additional costs to keep Response to Intervention levels of funding the same after the implementation of Stretch Lexile cut scores, in addition to the cost of providing supplemental education services to students on campuses failing to meet adequate yearly progress after one year, could deeply impact a district's finances. These additional costs stemming from the mandates of NCLB could potentially affect the day-to-day business of an already financially strained school district. For example, cuts could potentially increase class size. The district in this study has an average of 22 students per middle school class. Statewide, middle school class sizes are 22-24 students per class; class sizes in this district are on the lower end of standard practice range, allowing the district to increase student to teacher ratios, while also potentially eliminating teaching positions. Furthermore, as funds for school day interventions become more limited, fewer students will be served during the regular school day.

Local Educational Policy Implications

The American Institutes for Research and researchers from Vanderbilt University and the University of Kansas -- through funding from the U.S. Department of Education's Office of Special Education Programs (OSEP) -- established the National Center on response to intervention. The Center developed a model of response to intervention and provides technical assistance to states and districts and building the capacity of states to assist districts in implementing proven models for RTI (National Center on Response to Intervention, 2013). Robert Scott, former Commissioner of Education for Texas, advocated this multi-tiered approach to instruction to assist students who were struggling readers in local districts to use on their campuses. He stated that the purpose of this multi-tiered approach to reading instruction would be implemented to ensure that students have the opportunities to experience a range of educational opportunities through the general education program (Texas Education Agency, 2008).

According to the *Response to Intervention Manual* provided to educators by Texas Education Agency (Texas Education Agency, 2008), RtI contains the following elements:

1. high quality instruction and scientific-based tiered interventions aligned with students needs

2. frequent monitoring of student progress to make results-based interventions

3. application of student response data to important educational decisions

4. struggling students are identified using data-based progress monitoring

Table 35 is an example of a multi-tiered approach to reading instruction/intervention for a middle school campus to address the needs of struggling students. The model provides specifics regarding curriculum, number of students at each intervention tier, time involved, how progress will be monitored in each tier, and who will facilitate the intervention model at the campus level for each tier.

Table 35
Example of a Tiered-Reading Instruction/Intervention Model

CHARACTERISTICS	TIER 1: CORE CLASS CURRICULUIM	TIER 2: SMALL GROUP INTERVENTION	TIER 3: INTENSIVE INTERVENTION
Focus	All students	Identified students with marked difficulties who have not responded to Tier 1 efforts	Identified students with marked difficulties who have not responded to Tier 1 and Tier 2 efforts
Program	Scientific research-based curriculum and instruction	Specialized scientific research-based intervention	Individualized and responsive intervention
Grouping	As needed	Homogeneous small group instruction (1: 15-20)	Homogeneous small group instruction (1:5-10)
Time	60 minutes per day or more	20-30 minutes per day in small group instruction, in addition to 60 minutes of core instruction	50 minutes per day in individual or group instruction in addition to 60 minutes of core instruction
Assessment	Universal screening tool at beginning, middle, and end of each school year	Weekly progress monitoring on target skill(s) to ensure adequate progress and learning	Weekly progress monitoring on target skill(s) to ensure adequate progress and learning
Interventionist	General Education Teacher	Determined by the school	Determined by the school

A study by Regional Education Laboratory Northwest (2009), funded by the U.S.

Department of Education, found that the funding for RtI is generally an unfunded

mandate by most states in the study. RtI is considered a program for improving general

education for all students and providing screening and progress monitoring to students

so that high-quality first time instruction and interventions can take place effectively.

The RtI screening tool used on the three campuses in this study were based on student

Lexile scores obtained through the online assessment, Scholastic Reading Inventory. The

bands used by the assessment tool aligned with standard Lexiles, not the Stretch Lexile

measures associated with the Common Core Curriculum. The U.S. Department of

Education has released guidelines for funding of local RtI models in the publication

Implementing RTI Using Title I, Title III, and CEIS Funds (U.S. Department of

Education, 2008). According to this publication, states may use Title I funds if the

following conditions exist on a campus: 40% of students are economically

disadvantaged and comprehensive strategies are used for improvement of the whole

school or schools with targeted assistance programs. States can also use Title I funds to

provide supplemental instructional services for specific students who have been

identified as failing or failing to achieve academic proficiency. The purpose of Title III

funds is to ensure that limited English proficient students (LEP) students master English

and meet the same state academic standards that all children are expected to meet.

Schools may use Title III funds for high-quality language instruction programs based on

scientifically-based research; RtI interventions could apply to students who meet the

LEP criteria. Although Individuals with Disabilities Education Act (IDEA) funds are

allowed to be used only for students with disabilities, when Congress reauthorized IDEA in 2004, a new provision titled Coordinated Intervening Services were funded for students in grades kindergarten through grade 12 who need assistance but are not identified as special education students. These CEIS funds may be used for professional development for teachers and must enable them to provide improved delivery of scientifically based academic interventions; furthermore, these funds may be used for direct interventions, such as educational evaluations; and finally, the funds can be used for services and activities that are aligned under the Elementary and Secondary Education Act (ESEA). Additionally, CEIS funds have the following limitations:

- must be used solely for educators in the general education environment
- must provide direct interventions, such as the services of a reading teacher and the supplies directly related to those services

As noted previously under the *Local Economic Policy Implications*, eligibility for federal Title I funding distributed to campuses is based on the percentage of economically disadvantaged students attending the campus. Economically disadvantaged status for each campus used in this study exceeds 40%, so these campuses receive Title I funding; Title III funds can be used for students meeting LEP criteria; and CEIS funds can be used for students in general education programs. Because more students will be identified as needing interventions under higher standards, there will be a need for additional funding to provide support to struggling students. If higher Lexiles are implemented as targets of achievement, the results of this study indicate that more students will need interventions funded through these federal programs; however, the

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funding given to campuses is a fixed amount based on campus percentages of
economically disadvantaged students and/or LEP students. Funding amounts will not
change due to the results of a universal screening process or results of state assessments
since funding is not based on these factors. Furthermore, as funding is stretched to meet
the needs of students, those entering in Tier II of the RtI process will need smaller
instructional groups, resulting in more teacher allocations and cost. RtI is seen by many
educators as a framework for early academic intervention that will lead more students to
success, but funding for additional support to students not meeting higher cut scores is
an issue that some campuses could face. Policy decisions regarding RtI guidelines and
funding are tied to student scores and progress monitoring--federal decision-makers
must realize that as campuses implement RtI or some other form of a multi-tiered
intervention model, there will be a need for additional funding. If campuses enter school
improvement due to the number of failing students on the state reading assessment, Title
I expenditures per student decrease when mandatory school choice and professional
development funding portions are set aside, and the amount available for RtI
implementation decreases by at least a third. Local districts and schools must determine
to what level this educational intervention model can be implemented in terms of costs
related to personnel and resources.

 School choice is another consideration at the local policy level. Schools required
to offer and fund school choice must also fund transportation and publicly acknowledge
through communication to parents that the campus failed to make adequate yearly
progress. Furthermore, school choice may cause other local policy issues regarding

Local Social Policy Implications

If a school has missed adequate yearly progress for two consecutive years on the same indicator (content area and student accountability group), school choice is available for students within the school district. This controversial aspect of adequate yearly progress has many supporters as well as detractors. Those who disagree with this aspect believe it to be a direct attack on public education (Darling-Hammond, 2004). Others believe it will remove from schools the most politically active parents, which will reduce pressure for substandard school improvement (Godwin & Kemerer, 2002).

Parents with financial resources have always been able to exercise choice by moving to preferred neighborhoods associated with preferred schools, while low-income parents are relegated to the choices that are defined by their financial constraints and economic circumstances. As previously noted in *Local Political Policy Implications*, White students are less affected by school choice than either minority or economically disadvantaged students because they are not attending schools needing improvement at the rates of these other groups of students. Proponents of school choice suggest that within school districts, the choice element will allow low-income families to expand their options, which result in increased achievement for students previously destined to attend inferior schools (Hess & Finn, 2004). Furthermore, Goodman and Moore (2001) found that when low-income students are given opportunities to attend middle-income schools they do significantly better academically than those that are not given the option. The opposing opinions on the subject of choice as it relates to school accountability has social implications as proponents seek to provide equity; those who oppose school

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choice believe that the strength and integrity in the accountability system will serve as

the impetus for improved academic achievement for low-income students.

State Political Policy Implications

Disagreements exist regarding the consequences of shifting educational decision-

making from local districts to the state. Presently, curriculum standards in Texas are

created at the state level. Districts are required to follow these standards in each content

area. These standards are known as the Texas Essential Knowledge and Skills. Fuhrman

and Elmore (2004) suggest that state policymakers can enact vigorous curriculum

standards, and legislators can focus on the immediate interests of their constituents,

regardless of the election cycle; however, the political process works against the creation

of long-term, stable educational policies on which successful school reform depends;

school improvement is a slow process easily derailed by agendas and incentives

promoted by frequent changes in political power.

On February 17, 2009, President Obama signed into law the American Recovery

and Reinvestment Act (ARRA) of 2009. The ARRA provided $4.35 billion for the *Race

to the Top Fund*, a competitive grant intended to reward states achieving significant

improvement in student outcomes. In Texas, state authority was maintained even though

billions of dollars were available for states through *Race to the Top* applications, but

then Texas-Commissioner of Education, Robert Scott, influenced by Texas Governor

Rick Perry, felt that the amount of funding was not worth giving up autonomy to create

curriculum standards and assessments. States applying for and receiving the *Race to the

Top* funds were encouraged to adopt the Common Core Curriculum Standards. States

adopting the standards would receive points on their applications for *Race to the Top*

funds (Lewin, 2010). By this indirect process, the Common Core Curriculum Standards

have now become our national standards, with only a few states (including Texas)

refusing to adopt them. As a state that does not adhere to the Common Core Curriculum

Standards, Texas can choose to calibrate their assessment targets to reading levels they

deem appropriate. These reading levels can be vastly lower in expectations and rigor

than those found in other states; however, the lack of transparency by the state in

releasing text Lexile measures will continue to make reading targets unclear for Texas

educators.

On February 28, 2013, Texas Commissioner of Education Michael L. Williams

announced that the Texas Education Agency submitted a letter to U.S. Secretary of

Education Arne Duncan formally requesting a waiver that would allow Texas to be

released from certain federal requirements associated with NCLB. The waiver being

sought by the Texas Education Agency would relieve Texas from the following federal

mandates.

- *The waiver would allow the Texas Education Agency to use its own accountability rating system to replace federal adequate yearly progress calculations and performance targets.* Currently, federal sanctions are applied when schools and districts fail to meet adequate yearly progress. The waiver would allow the State of Texas to determine its own performance targets for determining yearly progress.

- *The waiver would give the Texas Education Agency the ability to determine teacher certification standards, rather than adhering to the federal highly qualified teacher mandates*. The current federal highly qualified mandates require that middle school teachers major in the subject they teach, have college credits equivalent to a major in the subject, and successfully pass a state-developed content competency test to prove that they know they subject area in which they teach.

- *The waiver would allow the State's schools the ability to determine which school-wide interventions should be implemented*. Currently, Title I funds can be used only on scientifically-based interventions. Furthermore, the waiver requests that the State be allowed determine which schools are in need of improvement.

According to the U.S. Department of Education (2013), as of March 25, 2013, 45 states submitted requests for NCLB waivers; 34 states have had their waivers approved. Of the five states not adopting the Common Core Curriculum Standards (Alaska, Minnesota, Nebraska, Texas, and Virginia), three have not yet had their NCLB waiver requests approved (Alaska, Nebraska, and Texas). All other states receiving NCLB waiver approvals adhere to the higher Stretch Lexile standards associated with the Common Core Curriculum Standards. If the Texas NCLB waiver is granted, the Texas Education Agency would be creating its own unique assessment and its own unique accountability system. Furthermore, it would determine sanctions and interventions at the state level. States not adopting the Common Core Curriculum Standards determining

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their own rigor levels in both curriculum and assessments could have self-determined sanctions that could fluctuate according to available funding.

With the public failing to understand state of Texas standards compared to the Common Core Curriculum Standards and the intricacies associated with the removal of NCLB sanctions if the submitted waiver is approved, state of Texas reading assessments may be viewed more favorably as students will be passing at higher numbers, thus the public might be more inclined to favorably support the political advocacy of students.

State Economic Policy Implications

Educational equity is a central goal of Title I policy. NCLB holds states accountable for eliminating achievement gaps between White and minority students in public schools. The expectation is for all students to be proficient on the state assessments by 2014. To meet the federal mandates of NCLB, states are charged with creating standards, testing blueprints, field testing items, student assessments, and dispersing student results to local school districts. Furthermore, states are responsible for providing assistance to low-performing schools, as well as achieving the goals set for by NCLB with fewer staff and smaller budgets. States are also charged with the responsibility of helping local districts implement Response to Intervention and mobilize resources to help struggling schools. The sanctions districts receive for failure to meet adequate yearly progress expectations are monitored by the state. The intended effect is one of motivation and dedication to student achievement by local districts. In 2010 Texas Governor Rick Perry and state legislative leaders asked the Texas Education Agency to reduce the budget by 5% for the 2009-2010 school year. Cuts to the Texas

Education Agency appropriations totaled about $135 million. Table 36 provides

information regarding the Texas Education Agency budget cuts for 2010-2011 that relate

to reading instruction and assessment (Texas Education Agency, 2010e).

Table 36
Texas Education Budget Cuts with Justification for Fiscal Years 2010-2011

Item	Fiscal Year 2010	Fiscal Year 2011	Biennial Reduction	Justification
Optional Extended Year (summer school for low-achieving students)	$981,585	$15,300,000	16,281,585	Activities authorized under this program include the federal Title I program.
Assessment and Accountability System	$3,525,000			Reduction in field testing
Texas Education Agency Administration	$2,000,000	$3,500,000	$5,500,000	Personnel-hiring freeze and job elimination

Texas has enacted funding equalization legislation that strives to reduce funding

disparities between high- and low- wealth districts by increasing per-pupil expenditures

in poor schools. The purpose of this funding equalization was to improve educational

opportunities and outcomes for minority students (Treisman & Fuller, 2001). Although

funding equalization legislation provided more resources to lower income school

districts, budget reductions at the Texas Education Agency can affect all school districts.

Raising standards could result in more schools entering school improvement, affecting

the political climate of the state. Providing stellar test scores to parents and other

stakeholders based on lowered standards can result in inequity for students but political

gain for politicians.

State Educational Policy Implications

According to its mission statement, the Common Core State Standards Initiative

aims to provide a consistent, clear understanding of what students are expected to learn

so teachers and parents know what they need to do to help them. The standards are

intended to be robust and relevant to the real world, reflecting the knowledge and skills

that our young people need for success in college and careers. With students fully

prepared for the future, our communities will be situated to compete in the global

economy (Common Core State Standards Initiative, 2012).

Preparing students for the future is a goal of the initiative. Currently, 98% of

community colleges offer remedial reading classes, and each year the expectations to

have success in postsecondary education grows, creating a greater gap for students as

they attempt to gain college credits in non-remedial classes. Between 1995 and 2000, the

percentage of students needing remediation before college entry increased from 28

percent to 35 percent (Parsad & Lewis, 2003). One characteristic found in the Common

Core Curriculum Standards is the focus on higher order thinking and expanded critical

thinking. After comparing state standards and the Common Core Standards, Porter, et

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al., stated that (2011) the Common Core represents a change for the better from existing

state standards because there is a demand for higher cognitive thinking skills. Dunkle

(2012) presents the Common Core Standards adopted in most states as a commonsense

approach to curriculum alignment that addresses achievement gaps. Furthermore,

Dunkle (2012) presents the following summarized points of recommendation for states

regarding the adoption of the Common Core Standards:

- Build awareness and understanding of the tenets of the Common Core Curriculum Standards to identify which instructional practices will remain the same and which will need modification.
- Create a gap analysis process that compares existing standards, curriculum, and assessments with Common Core Curriculum Standards.
- Take inventory of what professional learning will be necessary to build the instructional capacity of teachers to meet the demands of the Common Core Curriculum Standards
- Discuss the Common Core Curriculum Standards benefits of efficiency of scale, equity, and uniformity.
- Begin to look at resources that align with cross-disciplinary and project-based learning.

The Standard Lexile measures are less rigorous at each grade level than the

Stretch Lexile measures. The trajectory to increase student Lexile measures, beginning

in early elementary grades, ensures that as students progress through the grade levels,

they will continually increase their reading comprehension abilities. Beginning with

lower standards automatically changes the outcome for students as they exit high school.

Students meeting the expectations are still at a disadvantage when compared to other

states that have higher standards, creating potential gaps between students in Texas and those in other states.

State Social Policy Implications

Some researchers believe that districts are unfairly penalized by the intention of NCLB to ensure that all student groups are included in the accountability calculations. NCLB forces schools to focus on student groups that have been historically under-served and under-performing; however, Texas Title I schools serving low-achieving students will be expected to make greater gains to achieve 100% passing by 2014 than schools and districts serving more affluent students. Although the state strives to provide equalization in funding, Title I campuses throughout the state are also impacted by the NCLB policy of counting students in potentially several categories. Students can be counted in the ALL STUDENTS category, their ethnicity category, or as economically disadvantaged students. Texas provides standards for its content areas, but they are not required to ensure that educational resources are available to all districts. Schools with high percentages of poverty and minority students will have more educational targets to meet for their student groups than schools and districts that are predominantly White, but they might not have the funding to support additional resources. Some students can be included one or more times in the accountability calculations, creating skewed calculations. Staiger and Kane (2002) assert that the accountability measurement system is imprecise; furthermore, comparing districts who must meet the 2014 expectation for students counted in numerous categories with those who must only achieve passing standards in two categories (ALL plus ethnicity) is analogous to comparing one correctly

called coin toss to correctly calling several in a row. Each ethnicity group meeting the minimum size requirements for NCLB are included in score calculations. Some calculations in some districts in Texas are based on small sample sizes that yield varying results. According to Linn and Haug (2002) the variation in sample sizes yields imprecise results that might impact campus accountability ratings unfairly on some campuses. Furthermore, these imprecise calculations determine Title I funding, perhaps distributing these funds imprecisely as well. Districts with large sample sizes feel the calculation effects less severely than districts with smaller sample sizes in each subgroup. If higher standards are imposed, the state must be prepared to address the diverse educational needs of students in local school districts. Knowing how higher standards will impact accountability and funding is important information for state educational leaders. It is also important to note that Texas is now a majority-minority state, where Hispanic students account for a little more than half of all students; the greatest impact if the higher Lexile measures were used on state reading assessments would be to Hispanic students.

Federal Political Policy Implications

According to Peterson and West (2003), federal accountability has the ability to shape how Americans think about education, and although changes and perceptions will often slowly change, they do change. Peterson and West also point out that the political aspects of accountability often limit the actual strength found in NCLB because of the following limitations.

- Congress left the standards-setting to states.

- If a school fails, parents can send their students to non-failing schools within their own school district. There is no incentive to provide parents with meaningful choice. School districts can make it difficult for parents to have viable choices.
- NCLB legislation left it up to each state to devise implementation and promote improvement plans.

In order for NCLB legislation to remain strong, political leaders must continue to uphold the legislation's intent to improve student achievement in reading; however, states' authorities to determine every aspect of the assessment system, including test designs, standards, achievement targets, and implementation of adequate yearly progress sanctions can lead to soft enforcement of NCLB. For example, the standards in the Texas reading assessment fall below the standards of the Common Core Curriculum Standards, allowing reading assessment scores in Texas to remain acceptable and even impressive in some districts; however, these scores, when compared to those of other states, might fall well below the expectations when the same reading measurement system is implemented that is utilized by other states. Just as the nation accepted legislation that lead to the improvement of education for special education students, so can NCLB become a part of the American education belief system. Parental expectations and assessment equity for students should drive politicians to seek rigorous, enforceable standards in the areas of reading. Following the mandates and demanding higher standards for education by sanctioning schools and districts unable to meet expectations

can shape the belief system regarding education; however, if students continue to struggle under minimal standards in some states, the legislation has not served its purpose due to the inability of politicians to concede that higher standards can improve the success of students by providing college and career preparedness.

Federal Economic Policy Implications

The implementation of NCLB coincided with the massive decline in state spending in at least 20 years (Boyd, 2003). Furthermore, according to the National Governor's Association & National Association of State Budget Officers (2004) states also suffered the most severe spending cuts in 60 years. States continue to report shortfalls in funding, causing cuts to state programs, including programs that fund education. The percentage of federal educational funding contributions is under ten percent, and NCLB mandates have required states to fund assessment programs and accountability monitoring systems to ensure fidelity and adherence to NCLB. This was done at a time when states were experiencing severe budget declines. According to the Center on Educational Policy (2005), during the first fiscal year of NCLB in 2002, federal funding for Title I increased 18.11% ; however, subsequent funding increases were smaller and negligible when factoring in inflation; and in 2005, funding increased to 3% but did not keep up with the 6% increase of children in poverty. Appropriations decreased in 2006 but held constant in subsequent years. States are required to set aside a certain portion of their Title I funding for school improvement; 95% of this must go to local educational agencies to support school improvement (United States Government Accountability Office, 2002). Therefore, local educational agencies are required to spend

their Title I allocations in accordance with the mandates of NCLB to implement the required sanctions for schools needing improvement. The remaining 5% may be used by the state educational agencies to provide technical assistance to local school districts needing improvement (United States Government Accountability Office, 2002). The economic impact of implementing NCLB mandates is difficult. Setting standards and providing assessments and data collection and reporting are costly. States having their own uniquely designed standards and assessments lose out on the opportunity to benefit from the standards-setting and assessment designs created for the Common Core to ensure rigorous expectations to improve student achievement. For example, states not adopting the Common Core Curriculum Standards use standardized-multiple choice reading comprehension items that emphasize inferences about main points with short texts. This contrasts with the focus of the Common Core, where there is a reading emphasis on longer, more complex and rigorous texts that require higher-level thinking (Resnick, et al., 2004). As states continue to face budget constraints and shortfalls, creating unique test designs and assessment systems are costly in terms of development and implementation; joining the Common Core allows states to administer more rigorous, well-developed and potentially less costly assessments to their students.

Federal Educational Policy Implications

The increased performance level required by NCLB and the federal accountability system are targeted at a passing standard of 100% by 2014. Until then, campuses falling short of the yearly targets fail to meet adequate yearly progress and sanctions are imposed. These sanctions were established in NCLB legislation.

Title I campuses who fail to meet adequate yearly progress and enter Stage 1 of the School Improvement Process on the same indicator for two consecutive years have to complete the following sanctions: provide student transfers to others schools with transportation provided, develop a two-year improvement plan, notify parents of school status and sanctions, and establish a peer-review process; campuses entering Stage 2 of the School Improvement Process will continue with Stage 1 sanctions but will also provide free tutoring to students; campuses entering Stage 3 of the school improvement process will continue Stage 2 sanctions but also implement corrective actions, such as replacing staff, implement new curriculum, appoint an outside expert to advise the campus, extend the school year or day, and restructure the internal organization of the campus; campuses advancing to Stage 4 will continue with Stage 3 sanctions, but also reopen the school as a charter school, contract with a private management company, have the state take over the school, or restructure the school's administration; campuses entering Stage 5 will continue to offer transfers and tutoring, replace the principal and staff, contract with a private management company, or restructure the school's administration. The policy implications for Title I campuses entering the school improvement are serious. Understanding that higher cut scores can affect accountability if more students fail state reading assessments will help campuses prepare to intervene when students are struggling with reading assessments; implementing a multi-tiered structure for reading improvement could help students improve reading performance. Additionally, knowing which accountability groups will struggle the most can help campuses provide teachers with professional development related to improved first-time

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instruction and the need for an ongoing progress-monitoring system that is aligned with state and federal accountability standards

Another federal educational policy implication concerns the General Education Development assessment, or GED. The GED is a group of five subject area tests which, when passed, certify that the taker has the equivalence of high school academic skills. In 2014, the GED will undergo changes that more closely align it with the Common Core Curriculum Standards. According to the GED Testing Service (2012), the new assessment targets are derived from the Common Core Curriculum Standards and are intended to ensure that assessment targets are in line with postsecondary, credit-bearing courses and also in job training programs. Furthermore, text Lexile measures range from 600-1410 for the reading portion of the test; text Lexile measures range from 910-1360 for the social studies portion of the test; and text Lexile measures range from 1070-1250 for the science portion of the test. The released sample items indicate that the text Lexile range for these content areas is within that of the Stretch Lexile measures for college and career readiness. To ensure that students are reading at the more rigorous Stretch Lexile measures, the text Lexile bands must also adhere to the Stretch Lexiles in middle school. The alignment of the GED to Common Core Curriculum Standards provides students with the opportunity to successfully enter postsecondary education or the work force. The intention of the 2014 revised GED is to ensure that test passers are competitive with students who complete their high school credentials in the traditional manner. Students who are not exposed to the rigor of higher Stretch Lexile measures may not do as well on the GED. Students who choose to procure the high school credentials through a GED

should be equally prepared to demonstrate they have the skill levels necessary to be academically successful beyond high school. The educational implications are long-lasting if students who choose the GED path are unable to compete successfully for colleges and careers due to lowered expectations and required skill levels. The position in Texas not to adopt the Common Core Curriculum Standards will greatly disappoint that large segments of students who seek the GED after dropping out, resulting in fewer individuals who can meet the new GED standards.

Federal Social Policy Implications

The Common Core Curriculum Standards were developed by a consortium of state governments to improve the content of instruction. In the past, national efforts centered on accountability, organizational structures, and philosophical debates on how best to close gaps between student groups. The Common Core Curriculum Standards are centered on exposing all students to the same performance standards in language arts and mathematics. The Common Core Curriculum Standards have the potential to ensure greater equity for students because the content coverage of standards will be used for all students. Although emphasis has been placed on the quality of the standards, states adopting these standards will also be providing equality in the form of opportunity. Developing a national, standardized curriculum has been, for policymakers, an opportunity to close the opportunity gap. A national curriculum potentially provides a rigorous curriculum. Opportunity allows students to gain the same instructional content as their peers and access rigor that will allow them to have exposure to the critical thinking skills necessary to be successful beyond high school. Opportunity gaps prevent

students from having equal access to curricular standards and enhanced instruction/support. Variability in content, teacher competency in teaching rigorous curriculum, and rigor and concepts appropriate to grade level are all issues the Common Core Curriculum Standards strive to address. States, such as Texas, who do not adopt these standards, are creating their own opportunity gaps for students. Schmidt and McKnight (2012) point out that the U.S. education system is rife with curricular inequalities; inequalities meaning that there is less of an opportunity to learn challenging content. The Common Core makes a point of differentiating between standards and curriculum by establishing that the standards are not a curriculum. They are a clear set of shared goals and expectations for what knowledge and skills will help students succeed; furthermore, local teachers, principals, superintendents, and others will decide how the standards are met (Council of Chief State School Officers, 2010). The states adopting the Common Core Curriculum Standards use Stretch Lexiles as reading expectations for each grade level; additionally, instruction and text complexity are aligned to the Stretch Lexiles. Texas reading assessments are not aligned to the higher measures, which creates an opportunity gap for its students when compared to students in other states who are exposed to higher rigor through the Common Core Standards. The Texas standards, known as the Texas Essential Knowledge and Skills, are standards provided by the state to local school districts. The local districts use these standards to design specific lessons and instructions. The state reading assessments provide a blueprint for educators indicating which standards will be tested and what percentage of the test will comprise

each standard. Table 37 conveys typical similarities and differences in the Common

Core Curriculum Standards and the Texas Essential Knowledge and Skills for middle

reading.

Table 37
Informational Text Standards for Texas Essential Knowledge and Skills and
Common Core Curriculum Standards

Texas Essential Knowledge and Skills	Common Core Curriculum Standards
Make inferences about text and use textual evidence to support understanding. Summarize, paraphrase, and synthesize texts in ways that maintain meaning and logical order within a text and across texts.	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
Summarize the main ideas and supporting details in text, demonstrating an understanding that a summary does not include opinions	Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
Use context (e.g., cause and effect or compare and contrast organizational text structures) to determine or clarify the meaning of unfamiliar or multiple meaning words.	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
Explain how different organizational patterns (e.g., proposition-and support, problem-and-solution) develop the main idea and the author's viewpoint	Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.

In the last informational text standard for the Common Core Curriculum (*By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range*), it is explicitly stated that students will adhere to a particular text complexity band, also known as the Stretch Lexile band. Text complexity specifics are not included in the Texas Essential Knowledge and Skills. The Common Core Curriculum Standards focus on text complexity because they were established with the belief that the ability to comprehend complex texts is the most significant factor differentiating college-ready from non-college ready readers (Alberti, 2012). Furthermore, to understand complex texts, students need support in developing the key academic vocabulary common to informational texts. The complexity bands used in the Common Core provide rigorous expectations and a clear target for educators.

An outcome produced by the Common Core Curriculum Standards that many policymakers hope will occur is in the area of capacity building and professional development for teachers. Increasing teachers' ability to understand and convey their content is a key component of the Common Core Curriculum Standards. ACT (2010) suggests what it will take for the Common Core Curriculum Standards to succeed is the belief that all students can reach the standards and the educator behaviors to support it and coherent support structures from state-level down to classroom-level. Understanding the nuances of the standards and how they differ from previous standards will require educators to participate in professional development as they put standards into practice. A recent study by the Center on Education Policy (2011) based on a survey of states

implementing the Common Core Curriculum Standards found that all states and territories adopting the standards have developed plans to fully implement the standards by 2014; furthermore, these plans include statewide professional development activities to ensure alignment and understanding of the Standards. Additional plans include partnerships with higher educational institutes to align teacher preparation programs to the standards and align college admission requirements or entry-level college coursework with the Common Core Standards. The professional development associated with implementation of the Standards can improve instruction; teachers and students in Texas will not benefit from the massive professional development needed to implement the Common Core Curriculum Standards. The study by Center on Education Policy (2011) also examined the implementation of Standards in 34 states. Policies regarding professional development are found as an implementation component in most states. Table 38 provides information from the study that explains how state policies and practices are used to support implementation in reform activities that are related to teachers.

Table 38
Reform Activities Initiated in 34 States Participating in the Center on Education Policy Survey

Reform Activities Related to Teachers	Numbers of States Initiating Reform Activity	Numbers of States Not Initiating Reform Activity
Develop and disseminate materials and guides for school districts to use in providing professional development to help teachers master the Common Core Standards and use them to guide instruction	34	0
Carry out statewide professional development to help teachers master the Common Core Standards and use them to guide instruction	33	0
Align academic content of teacher preparation programs with the Common Core Standards	27	5
Develop and implement new teacher induction programs that help new teachers master the Common Core Standards and use them in instruction	23	9

The Partnership for Assessment of Readiness for College and Careers (PARCC) is a consortium of 23 states plus the U.S. Virgin Islands working together to develop a common set of K-12 assessments in English and math anchored in what it takes to be ready for college and careers. PARCC has developed a Common Core Implementation Workbook for all states implementing Common Core Curriculum Standards. The

workbook provides clear action steps for states and districts as they begin the full implementation of Common Core Curriculum Standards by 2014.

An important component of implementation is professional development for teachers. In the workbook created for PARCC, professional development is explained as being the time and money diverted to increasing knowledge and skills of teachers to improve instructional practice (Partnership for Assessment of Readiness for College and Careers, 2013). In the workbook, states and districts are provided materials to identify key factors in a successful delivery chain of professional development. Delivery chain weaknesses and solutions are also analyzed, and measures to identify the impact of professional development on instruction is a critical component of the planning process. Professional development is also aligned with expected outcomes. States adopting the Common Core Curriculum Standards engage in planning that affects all students in the state. All students benefit from the alignment of standards with professional development that is intentional and purposeful. A number of tools have been developed to assist states in determining how closely their current standards match the Common Core Curriculum Standards. One such tool, the Common Core Comparison Tool, designed by Achieve, provides an online process for comparing a state's standards with the Common Core Curriculum Standards resulting in a detailed analysis that provides states with specific alignment comparisons.

Exposure to instruction that is aligned with the Common Core Curriculum Standards is a pathway to learning how to successfully access complex texts. Beginning in elementary school, the impact of literacy skills can affect educational outcomes. One

study found that third graders who failed to recognize words on a grade-level assessment were later four times more likely than their peers to drop out of high school (Hernandez, 2011). Early literacy skills and the ability to access complex texts are critical attributes in academic success. Although NCLB did require proficiency in reading at each grade level on a standardized assessment, there is no mention of text complexity or students' ability to access complex texts; additionally, although reading comprehension is fundamental to NCLB, each state was allowed to interpret the complexity targets for each grade level. The states adopting the Common Core Curriculum Standards have one set of text complexity targets. How the instructional targets are met, in day-to-day instructional practices, is left to the states and local school districts to determine, but the targets are clear and transparent to all.

Students lacking access to the rigorous standards found in the Common Core Curriculum Standards do not have the same educational opportunities that students who are exposed to these more rigorous standards and enhanced instruction/support have. The following components contribute to the opportunity gap found in Texas compared with other states adopting the Common Core Curriculum Standards.

Professional Development for Teachers

The billions of federal dollars given to states receiving *Race to the Top* funds to fully implement the Common Core Curriculum Standards by 2014 will also increase teacher capacity through well-planned delivery models of teacher professional development regarding instructional alignment with the Standards. States adopting the Standards have used a variety of planning models to include professional development

as a priority. Funding for the professional development is given to states through federal funding, and better instructional alignment and delivery will impact student achievement by giving all students access to more rigorous standards. Since Texas has chosen not to adopt the Common Core Curriculum Standards, no federal funds have been received for this purpose; furthermore, there may be implications created by teacher preparation programs if pre-service teachers are not trained to meet the higher standards. The lack of professional development for these teachers might exacerbate the problem as implementation of rigor might not be their first consideration due to their lack of experience in the classroom

Text Complexity Included in Standards

Stretch Lexiles are targets and expectations in each grade-level for states adopting the Common Core Curriculum Standards. The text complexity at each grade level is determined by Lexile bands. Reading selections and texts reflective of the Lexile bands are recommended reading at each grade level. The Common Core Curriculum Standards include recommended texts as exemplars so that educators have a better understanding of what text complexity is at each grade level. As the text complexity increases at each grade level, students become more able to access complex texts required for college and careers. It is important that students are monitored with each grade level to ensure that they are meeting instructional text complexity targets; students unable to meet the expectations are targeted for interventions before they become further behind. Monitoring student progress as it relates to text complexity is an approach that

will enable students to access complex informational texts successfully upon completion of high school.

Transparency in Expectations

The text complexity bands associated with the Common Core Curriculum Standards provide transparency to educators, parents, and students regarding expectations. Students know from grade-level to grade-level the Lexile range associated with texts that they will be expected to comprehend. Understanding the expectations also gives educators a clear indicator of which students need interventions and how much intervention is needed to close the Lexile gap for students who are falling behind. Clearly defined reader Lexile measures also enable teachers to align their curriculum to the expectations. School libraries, classroom libraries, and reading assignments are identified for each complexity band. Students are encouraged to read within their independent instructional range to improve their reading skills. Knowing each student's instructional range is critical in understanding how much scaffolding is needed to support students in the general education classroom. The clearly defined Lexile bands found in the Common Core Curriculum Standards exceed the text complexity standards currently outlined in the English Language Arts and Reading Standards produced by the Texas Education Agency. This discrepancy creates an additional opportunity gap for Texas students. The opportunities for instructional rigor associated with higher standards are denied to Texas students because lower standards are the expectation. These lowered standards produce inequities in the access to rigor and can affect the college and career preparedness of Texas students.

Summary of Local Policy Implications

Local policy implications center on who is impacted most by the NCLB federal legislation that is monitored at the state level. Local districts and campuses with large numbers of low-achieving students are impacted to a greater extent than districts with higher achieving students; furthermore, sanctions associated with low-achieving status can affect low-income and minority students to a greater extent. Providing school choice, changing curriculum, and requiring interventions are mandatory sanctions for low-achieving schools; these sanctions will incur costs to local districts. As local districts determine how to best fund these mandates for targeted students, limited funds could affect instructional programs for higher-achieving students.

Local districts and schools must make funding decisions based on the required mandates and work within the NCLB policy framework, regardless of the number of low-achieving students they have in their schools and the cost incurred. A lack of common standards between and among districts creates variability in outcomes and a lack of comparable measures to determine the validity of student achievement.

Summary of State Policy Implications

Due to reductions in state funds and the failure of federal Title I funds to adequately address the mandates to implement and monitor NCLB and the imposed sanctions against low-performing school districts, there is in imbalance in the funding required to adequately implement accountability requirements. The rejection of the *Race to the Top* funds and the insistence on creating unique assessments and standards has made Texas stand apart from other states; the current policy is destined to place Texas

students below the national norm on reading assessments. Amid these controversial aspects of accountability are the calculations for determining adequate yearly progress status that can unfairly penalize school districts and campuses that have low percentages of minority and economically disadvantaged students, creating calculation situations where students are potentially counted in several student groups and due to low numbers, every student score is very important. In these situations, NCLB sanctions are placed on the shoulders of small numbers of students. Lowering or increasing standards for accountability can manipulate the outcome and effects of accountability to districts facing this situation. States, such as Texas, can manipulate these outcomes through their unique standards and assessments.

Summary of Federal Policy Implications

States facing budget shortfalls that result in decreased spending for education can also manipulate the use of Title I funds through the accountability system. Setting standards that are easier for students to meet results in adequate yearly progress success. Allowing states to determine their own assessments and standards can also result in weakened curriculum and testing so that meeting federal accountability standards will be easier. The Common Core Curriculum requires that students adhere to certain rigor levels. These higher standards and expectations, coupled with enhanced teacher professional development, can lead students to higher achievement. The goal is to prepare students for either college or careers, preventing the need for remedial help post high school. States adopting the higher standards found in the Common Core are preparing students at high levels for their futures. Students receiving instruction at less

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rigorous levels in some states are not ensured a level playing field due to the lowered expectations for their achievement.

Summary of Findings for All Students

When analyzing the distribution of 2010 TAKS reading scores under both the traditional TAKS Lexile standards and the higher Stretch Lexile standards used in the Common Core Curriculum, through the use of cross-tabulations with Chi-square analysis, the following results and interpretations were determined.

Scores for all students were analyzed to determine if there was a statistically significant difference between those students scoring under the Standard Lexile measure and the Stretch Lexile measure. In this analysis, $p = .0001$, resulting in a rejection of the Null Hypothesis, indicating that significantly more students would fail the state of Texas reading assessment had the Stretch Lexile measures been used instead of Standard Lexile measures. Furthermore, 1,369 more students would fail across the three campuses, representing 29-42% of students tested who would fail under the Stretch Lexile measures, thus the impact of changing to the Stretch Lexile measures would be extreme. Even knowing the limitations of this study, campuses can become more aware of the impact that higher, more rigorous standards would have on their accountability status.

Data for Research Question 1 indicates that the accountability set of All Students will be affected if more rigorous text is used on the state of Texas reading assessments. Although a greater percentage of All Students will be affected on Campus 3, all campuses will be affected to some extent. Comparable data also indicates that the failure rate for each campus after the implementation of Stretch Lexile cut scores would initiate the school improvement process for failing to make adequate yearly progress. Table 39 provides the combined data for comparison purposes. Additionally, the increase in failing students would create numerous policy implications, which are discussed in results for Research Question 3.

Table 39
Data for All Students Tested on Campuses 1, 2, and 3

	Campus 1	**Campus 2**	**Campus 3**
# of All Students Tested	1,351	1,282	1,231
# of All Students Passing with Standard Lexile Measures	1,134	1,135	1,115
% of All Students Passing with Standard Lexile Measures	84%	89%	91%
# of All Students Not Passing with Standard Lexile Measures	217	147	116
% of All Students Not Passing with Standard Lexile Measures	16%	11%	9%
# of All Students Passing with Stretch Lexile Measures	640	768	607

Table 39
Continued

	Campus 1	**Campus 2**	**Campus 3**
% of All Students Passing with Stretch Lexile Measures	47%	60%	49%
# of All Students Not Passing using Stretch Lexile Measures	711	514	624
% of All Students Not Passing using Stretch Lexile Measures	53%	40%	51%
# of Additional All Students Not Passing with Stretch Lexile Measures	494	367	508
% of Additional All Students Not Passing with Stretch Lexile Measures	37%	29%	42%

Campuses can also become more aware of how less rigorous standards could affect their students' abilities to compete with other students nationally in seeking both careers and college success. Campuses will also see the effects of high Lexile standards as the standards are increased at each grade level. Beginning with a higher standard will result in ending with higher standards. Although higher standards and expectations could result in more cost due to interventions, students will be more prepared for their futures. As districts acquire a better understanding of the impact of more rigorous standards on their Title I, Part A funding, the urgency for improved first-time instruction and effective well-developed intervention models will be apparent.

Summary of Findings for Economically Disadvantaged Students

Scores for economically disadvantaged students were analyzed to determine if there was a statistically significant difference between those students scoring under the Standard Lexile measure and the Stretch Lexile measure. In this analysis, p = .003, resulting in a rejection of the Null Hypothesis, indicating that significantly more students would fail the state of Texas reading assessment had the Stretch Lexile measures been used of Standard Lexile measures. Table 40 provides a summation of data relative to economically disadvantaged students.

Title I funds are provided to each campus to intervene with failing students. The sum is based on numbers of students living in poverty, not the numbers of students who are failing state of Texas reading assessments; therefore, the data indicate that more economically disadvantaged students would fail and there would be less funding per student to spend on interventions. The policy implications related to additional failing economically disadvantaged students are discussed in results for Research Question

Table 40

Data for Economically Disadvantaged Students Tested on Campuses 1, 2, and 3

	Campus 1	**Campus 2**	**Campus 3**
# of Economically Disadvantaged Students Tested	1000	909	877
# of Economically Disadvantaged Students Passing with Standard Lexile Measures	818	779	766
% of Economically Disadvantaged Students Passing with Standard Lexile Measures	82%	86%	87%
# of Economically Disadvantaged Students Not Passing with Standard Lexile Measures	182	130	111
% of Economically Disadvantaged Students Not Passing with Standard Lexile Measures	18%	14%	12%
# of Economically Disadvantaged Students Passing with Stretch Lexile Measures	440	487	382
% of Economically Disadvantaged Students Passing with Stretch Lexile Measures	44%	54%	44%
# of Economically Disadvantaged Students Not Passing using Stretch Lexile Measures	560	422	495
% of Economically Disadvantaged Students Not Passing using Stretch Lexile Measures	56%	46%	56%
# of Additional Economically Disadvantaged Students Not Passing with Stretch Lexile Measures	378	292	384
% of Additional Economically Disadvantaged Students Not Passing with Stretch Lexile Measures	38%	32%	44%

Summary of Findings for African American Students

Scores for African American students were analyzed to determine if there was a statistically significant difference between those students scoring under the Standard Lexile measure and the Stretch Lexile measure. In this analysis, p = .086, resulting in acceptance of the Null Hypothesis for African American Students. Even though a statistically significant difference was not established between the performances of these students under the new standards, percentage differences did occur on campuses. Campus 1 had a -39% change for African American students when comparing the Standard Lexile measure to the Stretch Lexile measures. Campus 2 had a -29% change for African American students when comparing the Standard Lexile measures to the Stretch Lexiles measures. Campus 3 had a -43 percent change for African American students when comparing the Standard Lexile measures to the Stretch Lexile measures. These differences can be attributed to many factors, such as quality of instruction, prior knowledge of students, or other external factors including attendance and mobility. Investigating these differences, though not statistical differences, might provide insight and contribute information regarding the higher achievement rate on Campus 2 for African American students.

Table 41 provides a summation of data relative to scores of African American test-takers. Even though the Chi-square Test for Independence did not reveal a statistical significance between the two Lexile systems, the failure rate would increase and this subset of students would not meet the criteria for adequate yearly progress, launching the campus into the school improvement process.

Although there was not a statistically significant difference for African American students regarding the distribution of scores between Standard Lexile measures and Stretch Lexile measures, there are still serious implications for this study. Using the Standard Lexile cut scores, 49% of African American students failed on Campus 1, 43% of African American students failed on Campus 2, and 31% of African American students failed on Campus 3. The percentage of additional African American students failing is far less than that of All Students, Economically Disadvantaged Students, Hispanic students, or White Students, implying that the distribution of failing students did not change significantly because when compared to other campuses, the percentages of failing scores were initially higher; therefore, the distribution of passing scores was less affected for African American scores on Campuses 1, 2, and 3 after Stretch Lexile cut scores were used. The concern rests on the lack of significance regarding distribution after the Stretch Lexile cut scores are applied due to the already high numbers of failing students. This aspect of the study clearly illustrates the achievement gap for this subset of students on the state of Texas reading assessment.

Table 41
Data for African American Students Tested on Campuses 1, 2, and 3

	Campus 1	Campus 2	Campus 3
# of African American Students Tested	374	310	321
# of African American Students Passing with Standard Lexile Measures	325	267	290
% of African American Students Passing with Standard Lexile Measures	87%	86%	90%
# of African American Students Not Passing with Standard Lexile Measures	49	43	31
% of African American Students Not Passing with Standard Lexile Measures	13%	14%	10%
# of African American Students Passing with Stretch Lexile Measures	181	176	151
% of African American Students Passing with Stretch Lexile Measures	48%	57%	47%
# of African American Students Not Passing using Stretch Lexile Measures	193	134	170
% of African American Students Not Passing using Stretch Lexile Measures	52%	43%	53%
# of Additional African American Students Not Passing with Stretch Lexile Measures	144	91	139
% of Additional African American Students Not Passing with Stretch Lexile Measures	39%	29%	43%

Summary of Findings for Hispanic Students

Scores for Hispanic students were analyzed to determine if there was a statistically significant difference between those students scoring under the Standard Lexile measure and the Stretch Lexile measure. In this analysis, p =.003, resulting in a rejection of the Null Hypothesis, indicating that significantly more students would fail the state reading assessment had the Stretch Lexile measures been used instead of Standard Lexile measures. Preparing students for higher standards can begin with Response to Intervention. Placing students in intervention tiers so that they can receive the necessary progress monitoring will keep students on a positive and increasing trajectory regarding their student Lexile scores.

Table 42 provides a summation of data relative to Hispanic students. On each campus, after Stretch Lexile measures are applied as cut off scores, the Hispanic subset would fail to make adequate yearly progress, initiating the school improvement process for each campus based on these scores. When that occurs, there are fewer funds per student to address academic needs because certain allocations are mandated to be set aside for transportation and professional development. Hispanic students on Campuses 1, 2, and 3 would actually receive less support after more students fail than they do under a less rigorous assessment.

ACT (2010) conducted a study to analyze student success on state reading assessment for states adopting the Common Core Curriculum Standards. Furthermore, ACT defines college and career readiness as the acquisition of the knowledge and skills a student needs to enroll and succeed in credit-bearing courses at a postsecondary

institution without remediation. This definition was adopted by the Common Core Curriculum Standards Initiative. ACT was instrumental in providing longitudinal research identifying knowledge and skills necessary for success in postsecondary pursuits to the development of the Common Core Curriculum Standards. In the study (ACT, 2010), 256,765 students were tested, of which 11% were Hispanic. The reading assessment focused on three key areas with the following results: key ideas and details (24% passing rate), craft and structure (24% passing rate), and integration of knowledge and skills (21% passing rate). The purpose of this study was to analyze student data so that curriculum better prepared students for academic success. The study raises awareness about the preparedness of Hispanic students regarding potential postsecondary success. The ACT assessment is closely aligned with the Common Core Curriculum Standards; the assessment provides an indication of mastery of content material. The study clearly shows that Hispanic students are performing at rates that are not likely to prepare them well for postsecondary success; the lowered standards associated with the Standard Lexile measures could hinder academic success after high school for a subset that is already struggling on ACT assessments.

Table 42
Data for Hispanic Students Tested on Campuses 1, 2, and 3

	Campus 1	**Campus 2**	**Campus 3**
# of Hispanic Students Tested	818	762	743
# of Hispanic Students Passing with Standard Lexile Measures	663	673	666
% of Hispanic Students Passing with Standard Lexile Measures	81%	89%	90%
# of Hispanic Students Not Passing with Standard Lexile Measures	155	89	77
% of Hispanic Students Not Passing with Standard Lexile Measures	19%	12%	10%
# of Hispanic Students Passing with Stretch Lexile Measures	363	440	346
% of Hispanic Students Passing with Stretch Lexile Measures	44%	58%	47%
# of Hispanic Students Not Passing using Stretch Lexile Measures	455	322	397
% of Hispanic Students Not Passing with Stretch Lexile Measures	56%	42%	53%
# of Additional Hispanic Students Not Passing with Stretch Lexile Measures	300	233	320
% of Additional Hispanic Students Not Passing with Stretch Lexile Measures	37%	30%	43%

Summary of Findings for White Students

Scores for White students were analyzed to determine if there was a statistically significant difference between those students scoring under the Standard Lexile measure and the Stretch Lexile measure. In this analysis, p = .162, resulting in acceptance of the Null Hypothesis for White Students.

Table 43 provides a summation of data relative to White students on Campuses 1, 2, and 3. In the case of this subset, the lack of a statistical significance can be attributed to the lack of significant change in the distribution of scores after the Stretch Lexile cut scores were applied. Under the Standard Lexile cut scores, the passing percentage on Campus 1 for White students was 92%, Campus 2 was 93%, and Campus 3 was 94%, above the passing percentages for other subsets of students. The additional number of failing students was much lower for White students when compared to All Students, Economically Disadvantaged students, African American students, and Hispanic students after the Stretch Lexile cut scores were applied. On Campus 1, 25% more students failed after Stretch Lexile cut scores were used; Campus 2 had 11% more failures; Campus 3 had 21% more failures. In each case, the increases in additional numbers of students failing were far less than that of other student subsets. Consequently, the distribution for White students did not change significantly due to the lower numbers of students moving into the failing category. This information illustrates the gap between White students and other students. The changes in distribution did not affect White students significantly because they were already passing at higher rates, and an achievement gap is clearly demonstrated with this data. Realizing that this

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achievement gap exists and addressing it instructionally will help districts begin the

process to eliminate such differences in student scores based on ethnicity.

Table 43
Data for White Students Tested on Campuses 1, 2, and 3

	Campus 1	**Campus 2**	**Campus 3**
# of White Students Tested	131	141	140
# of White Students Passing with Standard Lexile Measures	120	131	132
% of White Students Passing with Standard Lexile Measures	92%	93%	94%
# of White Students Not Passing with Standard Lexile Measures	11	10	8
% of White Students Not Passing with Standard Lexile Measures	8%	7%	6%
# of White Students Passing with Stretch Lexile Measures	78	110	90
% of White Students Passing with Stretch Lexile Measures	60%	78%	64%
# of White Students Not Passing using Stretch Lexile Measures	53	31	50
% of White Students Not Passing with Stretch Lexile Measures	40%	22%	36%
# of Additional White Students Not Passing with Stretch Lexile Measures	33	15	30
% of Additional White Students Not Passing with Stretch Lexile Measures	25%	11%	21%

Summary

In this study, the distribution of passing scores changes when applying the higher Stretch Lexile on three campuses for some students found in the accountability categories: All Students, Economically Disadvantaged Students, and Hispanic Students. However, this study contained several limitations that possibly could have affected the outcome of the data. The study was limited to the 2010 TAKS reading assessment on three campuses, and the data only examined scores from one assessment. Although not all student groups were affected, the fact remains that the changes in distribution using the higher cut scores impacted several accountability groups and could impact instruction and accountability on each campus. Although statistical significance was determined for these accountability groups, other, non-statistically significant differences did emerge that could be investigated further. Campus 2 had fewer economically disadvantaged students failing than the other campuses and fewer African American and Hispanic students failing than the other campuses. Slight differences emerged in grade levels, indicating that the added state writing assessment in seventh grade might negatively impact reading scores. Overall, Hispanic and economically disadvantaged students were the most impacted student groups, suggesting that these students will be less ready for college and careers, and even the GED (because of the higher standard to which the GED is moving if they drop out and subsequently attempt the GED).

The policy implications emerging from this study illuminate serious concerns at the federal, state, and local policy levels. Political, educational, economical, and

sociological concerns regarding the decision to adhere to lower expectations and rigor levels on the state of Texas reading assessments could profoundly affect the ability of students to meet with postsecondary success. Students will be asked to perform at levels below that of ACT, GED, and other states adhering to the Common Core Curriculum Standards. For Texas students to remain competitive in college and career pursuits, the playing field must be fair; however, the opportunity gap that will exist with the lowered standards brings fairness into question.

The findings and analyses in Chapter IV needs more investigation to determine possible explanations for the statistically significant differences found in the study. If the study were applied to the over 1,000 school districts in Texas, the impact to certain accountability groups and campus ratings would be greatly impacted. Furthermore, there is a relationship between the higher standards and student achievement for some student groups. Adjusting the measurement system to include higher text Lexile measures will better prepare students to compete in college and careers; however, in Texas, adhering to the higher reading standards could affect accountability status. Campuses could prepare to adjust funding, resources, and personnel for the change in passing cut score distributions. Knowing the impact beforehand could help campuses not only prepare students by pushing them to achieve at higher levels, but it would also prepare students for life beyond high school.

The summary of findings, conclusions, recommendations for practice, and recommendations for further study will be discussed in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter I of this research study discussed the difference in text Lexile measures on Texas reading assessments and those used by the Common Core Curriculum Standards adopted by most other states. Understanding the Lexile reader measure allows educators to match a student correctly with text so that it is not too easy or frustrating. Lexile reader measures can provide information relative to student performance. Knowing a student's reader Lexile measure will help educators understand when students need reading support and classroom scaffolding to access text successfully; this information also helps educators understand text complexity and the texts that students can access independently. The Common Core Curriculum Standards adopted higher Lexile bands, known as Stretch Lexiles, to meet the rigor of the standards set forth by the Common Core; however, Texas did not adopt the Common Core Curriculum Standards, nor have they adhered to the higher Lexile measures known as Stretch Lexiles. In the new Texas reading assessments, the Lexile measures have been removed and deemed unreliable, so educators no longer know how close to the text targets their students are; furthermore, Texas students are not given the opportunity to experience the rigor of higher standards found in other states through standardized testing. Chapter I further explained how the Common Core Curriculum standards are more rigorous than Texas standards, and a detailed explanation and comparison of the Lexile cut scores used for both assessments was also explained.

Chapter II of this study, *Review of Literature*, discussed the history and evolution of readability formulas as they apply to educational settings. This detailed account provides insight into both how and why Lexiles are being used on standardized testing. Chapter II also provided an explanation of how Lexiles are calculated, and how the measures are both reliable and valid. The history and purpose of readability formulas was also discussed. Readability formulas are used in schools so that educators have a better sense of text appropriateness for the age and grade of students. Understanding the complexity of text helps educators know on a continuum where students should fall at each grade level. Students performing below certain Lexile bands are considered to be reading below grade levels. These students become targeted for reading interventions and support. Readability formulas are now computed with online software so that there is ease of use for students and accuracy for educators in determining the level of reading support students need. Because Lexile text measures were published along with cut scores on the 2010 TAKS reading assessment, it was possible to know how close students were to being within a readability range; in other words, it was possible to predict if the complexity of the text on a given assessment was too great for the student based on reader text measures; since text measures and reader measures align, campuses could predict which students would potentially fail the state reading assessment, but more importantly, campuses would know what interventions were needed in order to better meet students' needs.

Chapter III discussed the methodology used in this study to examine the impact of replacing the 2010 TAKS reading cut scores on three middle school campuses with

the higher Stretch Lexile measures. Chapter III also discussed the origin of the data, how it was prepared for SPSS and analysis. Furthermore, each research question was addressed in regard to the output of the Chi-square statistical tests to determine if there was a relationship between the old standards and the new standards.

Chapter IV first presented broad demographic information for each campus so that the placement within the same Campus Group by the Texas Education Agency would be apparent. The percentages and numbers of economically disadvantaged students on Campuses 1, 2, and 3 was also presented. The campuses shared similarities regarding socio-economic status among students as well. Ethnicity percentages and numbers were also presented by both campus and grade level so that the similarities could be noted. An overarching table of information also gave the percentages and numbers of students meeting the current cut off scores on each campus by ethnicities that are part of the accountability system (African American, Hispanic, and White students). Research Question 1 first presented information regarding the Lexile scores for both standard and Stretch Lexiles Then changes in grade bands were noted, followed by information comparing passing cut scores for ALL STUDENTS under both standard and Stretch Lexile criteria. Passing percentages comparisons were noted for each campus, as well as information indicating percent change between passing standard Lexile scores and Stretch Lexile scores for ALL STUDENTS on campuses 1, 2, and 3 by grade level. A frequency table indicated numbers of ALL STUDENTS passing and percent passing for each campus. Then the Expected N was presented for each campus along with the Observed N. Residuals were also noted. A Chi-square Test for

Independence was run in SPSS to determine if there was significance regarding the distribution of cut scores for ALL STUDENTS and the two Lexile measures used to create cut scores. Chapter IV gave the results of the Chi-square Test for Independence and the significance outcome regarding the Null Hypothesis for ALL STUDENTS.

Chapter IV also addressed Research Question 2. The purpose was to first determine if a change in the Lexile measurement to the higher standards of the Stretch Lexiles would impact economically disadvantaged students on Campuses 1, 2, and 3. Information was presented regarding the percent change in Lexile grade bands for economically disadvantaged students on each campus. Comparison of passing cut scores using Standard Lexile measures and Stretch Lexile measures was presented for economically disadvantaged students on Campuses 1, 2, and 3. Then data was presented to show the passing cut scores using Standard and Stretch Lexile measures for ethnicity groups in the accountability system for Campuses 1, 2, and 3; additionally, passing percentage comparisons were given between passing cut scores using Standard and Stretch Lexile measures for ethnicity groups in the accountability system for Campuses 1, 2, and 3. The percent changes in cut scores between the two Lexile measures were also shown for each campus and for each grade (grades 6, 7, and 8). A frequency table indicated numbers of economically disadvantaged students passing and percent passing for each campus. Then the Expected N was presented for each campus along with the Observed N. Residuals were also noted. A Chi-square Test for Independence was run in SPSS to determine if there was significance regarding the distribution of cut scores for economically disadvantaged students and the two Lexile measures used to create cut

scores. Chapter IV gave the results of the Chi-square Test for Independence and the significance outcome regarding the Null Hypothesis for this student group.

Research Question 2 also sought to determine if a change in the Lexile measurement to the higher standards of the Stretch Lexiles would impact African American students on Campuses 1, 2, and 3. Information was presented regarding the percent change in Lexile grade bands for African American students on each campus. Comparison of passing cut scores using Standard Lexile measures and Stretch Lexile measures was presented for African American students on Campuses 1, 2, and 3. Additionally, passing percentage comparisons were given between passing cut scores using Standard and Stretch Lexile measures for African American students on Campuses 1, 2, and 3. The percent changes in cut scores between the two Lexile measures were also shown for each campus and for each grade (grades 6, 7, and 8) for African American students. A frequency table indicated numbers of African American students passing and percent passing for each campus. Then the Expected N was presented for each campus along with the Observed N. Residuals were also noted. A Chi-square Test for Independence was run in SPSS to determine if there was significance regarding the distribution of cut scores for African American students and the two Lexile measures used to create cut scores. Chapter IV gave the results of the Chi-square Test for Independence and the significance outcome regarding the Null Hypothesis for this student group.

The Hispanic student group was also analyzed to determine how the distribution of scores would be affected by a higher measure. Information was presented regarding

the percent change in Lexile grade bands for Hispanic students on each campus. Comparison of passing cut scores using Standard Lexile measures and Stretch Lexile measures was presented for Hispanic students on Campuses 1, 2, and 3. Additionally, passing percentage comparisons were given between passing cut scores using Standard and Stretch Lexile measures for Hispanic students on Campuses 1, 2, and 3. The percent changes in cut scores between the two Lexile measures were also shown for each campus and for each grade (grades 6, 7, and 8) for Hispanic students. A frequency table indicated numbers of Hispanic students passing and percent passing for each campus. Then the Expected N was presented for each campus along with the Observed N. Residuals were also noted. A Chi-square Test for Independence was run in SPSS to determine if there was significance regarding the distribution of cut scores for Hispanic students and the two Lexile measures used to create cut scores. Chapter IV gave the results of the Chi-square Test for Independence and the significance outcome regarding the Null Hypothesis for this student group.

The White student group was also analyzed to determine how the distribution of scores would be affected by a higher measure. Information was presented regarding the percent change in Lexile grade bands for White students on each campus. Comparison of passing cut scores using Standard Lexile measures and Stretch Lexile measures was presented for White students on Campuses 1, 2, and 3. Additionally, passing percentage comparisons were given between passing cut scores using Standard and Stretch Lexile measures for White students on Campuses 1, 2, and 3. The percent changes in cut scores between the two Lexile measures were also shown for each campus and for each grade

(grades 6, 7, and 8) for White students. A frequency table indicated numbers of White students passing and percent passing for each campus. Then the Expected N was presented for each campus along with the Observed N. Residuals were also noted. A Chi-square Test for Independence was run in SPSS to determine if there was significance regarding the distribution of cut scores for White students and the two Lexile measures used to create cut scores. Chapter IV gave the results of the Chi-square Test for Independence and the significance outcome regarding the Null Hypothesis for this student group.

Research Question 3 examined the policy implications regarding the adherence to a higher set of standards for reading assessments in Texas. Policy implications focused on environmental, political, economical, educational, and sociological factors; these policy implications were further divided into local policy factors, state policy factors, and federal policy factors for each of the aforementioned factors.

Finally, summaries and findings were presented for each research question. The purpose of this study was threefold:

1. To determine if the distribution of passing rates for students taking the Texas reading assessments will change if cut scores associated with the Common Core Curriculum reading assessments are used as a standard for the Texas reading assessments.

2. To determine if the distribution of passing rates for student groups identified in the accountability system will change if cut scores associated with the Common

Core Curriculum reading assessments are used as a standard for the Texas reading assessments.

3. To determine the policy implications that may result from changes in the distribution of passing scores on Texas reading assessments after higher cut scores associated with the Common Core Curriculum standards are used to determine passing rates.

Additionally, three research questions guided this study:

1. What, if any, are the changes in distribution of passing rates among students taking the Texas reading assessments on three middle school campuses in a large Texas school district if cut scores associated with the Common Core Curriculum reading assessments are used as a standard for the Texas reading assessments?

2. What, if any, are changes in distribution of passing rates among student groups identified in the accountability system on three middle school campuses in a large Texas school district if cut scores associated with the Common Core Curriculum reading assessments are used as a standard for the Texas reading assessments?

3. What are potential policy implications that may result from changes in the distribution of student TAKS reading scores on three middle school campuses in a large Texas school district if higher cut scores are used to determine passing rates?

Summary of Findings for Research Question One

Research Question 1 sought to uncover the change in distribution of student reading assessment scores after moving from Standard Lexile measures to Stretch Lexile for grades 6, 7, and 8 on three campuses in a large Texas school district. The change in distribution was first analyzed for ALL STUDENTS on Campuses 1, 2, and 3. It is possible to determine at what level students are reading by their scores on state reading assessments. Two types of Lexiles, student Lexile measures and text Lexiles measures are used together to determine where in the band of Lexiles standards rank. Lexiles place text measures and students measures on the same scale so that it is also possible to determine grade level achievement for students; however, it is difficult to determine exact grade level reading achievement as reading ability is not fixed, so Lexile ranges are given in terms of grade bands. Student Lexile measures are ever-changing and fluid. Students' scores are continually improving as they become more mature readers. Research Question 1 examined the distribution of passing cut scores based on Standard Lexile measures that were used in 2010. The Common Core Curriculum Standards adopted by other states adhere to higher Lexile measures, known as Stretch Lexile Measures. Students' scores were placed on this higher system of measurement to determine if the distribution for ALL STUDENTS would change if the text measure changed. The distributions were examined to identify possible relationships among variables to determine if a statistical significance could be established between student performance and the type of Lexile measures that are used on the state of Texas reading assessments in grades 6, 7, and 8.

The combined number of students tested on Campuses 1, 2, and 3 was 3,864 students. Of these 3,864 students, 3,384 students met the 2010 TAKS reading standard that used Standard Lexile measures (88%). If Stretch Lexile measures were applied, the number of students passing would drop to 2,015 (52%). The Chi-square Test for Independence determined a statistically significant relationship exists (p = .0001) between the distribution of cut scores for ALL STUDENTS using the Standard Lexile measures and the Stretch Lexile measures.

When data concerning the distribution for both Lexile measures were analyzed for ALL STUDENTS on Campuses 1, 2, and 3, the impact was greatest on Campus 3. The percent change for Campus 3 between the Standard Lexile cut scores (1,115 students passing) and the Stretch Lexile cut scores (607 students passing) was -42%. Campus 2 had the least impact when adopting the higher reading measures; 1,135 students passed under the Standard Lexile measures, and 768 students passed using Stretch Lexile measures, for a percent change of -29%. However, on all three campuses, at least one third of additional ALL STUDENTS would fail the state of Texas reading assessment if Stretch Lexile measures were in place as compared to the Standard Lexile measures (711 or 53% failing students on Campus 1; 514 or 40% failing students on Campus 2; 624 or 51% failing students on Campus 3). Data for all students were also analyzed for each grade level on Campuses 1, 2, and 3. Seventh grade scores on Campus 3 were the least affected when compared to other grades and other campuses. The percent change for seventh grade reading when the higher Stretch Lexile cut scores were used was only -12% (364 students passing under Standard Lexile measures and 204

students passing under Stretch Lexile measures). On other campuses, the percent

changes for seventh graders were -36% (Campus 1 with 385 students passing under

Standard Lexile measures and 201 students passing under Stretch Lexile measures) and -

31% (Campus 2 with 373 students passing under Standard Lexile measures and 233

students passing under Stretch Lexile measures). The impact of adopting the higher

Stretch Lexile cut scores varied greatly from campus to campus and grade level to grade

level; more study could add to the understanding of these varying results.

A basic tenet related to test reliability is correlation of test items to curricular

standards. According to the results of Research Question 1, the subset of ALL

STUDENTS would be significantly affected by implementation of Stretch Lexile

measures on the state of Texas reading assessments. Because reliable tests should

correlate well to curricular standards, the same rigor found in the standards should be

reflected in the assessments. Students taking assessments that reflect standards lower

than those found in other states will also be taught at instructionally lower levels; both

instructional rigor and assessment rigor are a direct reflection of curricular rigor based

on standards. Teachers are required to follow curriculum provided by the state, and state

standards are used as a basis for developing state assessments. Texas students will not

only be tested over standards that are less rigorous, but instruction will stem from

standards that are less rigorous. The connection between curriculum, instruction, and

assessment is crucial. If ALL STUDENTS are receiving lowered assessment standards,

they could be assessed under lowered instructional and curricular standards as these

three components are linked.

Results for Research Question 1 indicate that the distribution of failing students after Stretch Lexile measures are applied could affect accountability regarding the subset of ALL STUDENTS. Because assessment targets (cut scores) must be achieved for all subsets in the accountability system, failing to meet the standard for this subset would begin the school improvement process for failure to make adequate yearly progress for ALL STUDENTS. If standards are raised and districts anticipate the increase in failing students, preventative interventions could take place. Through continuous progress monitoring, students failing to be on a trajectory to meet higher standards could be identified to receive additional academic assistance. Moving to higher standards does not necessarily have to result in more sanctions and lack of student achievement relative to federal standards; instead, results of Research Question 1 can forewarn districts that the potential for increased failures could significantly affect their testing results if interventions do not take place for students who are failing to make progress toward the assessment targets.

Conclusions of Findings for Research Question One

The main conclusion regarding the results of Research Question 1 concerns the increased rigor in standards and the resulting increase in failures on state reading assessments due to significant changes in distribution scores after Stretch Lexile measures are applied. Failure to align the curriculum and instruction with the Stretch Lexile measures associated with higher testing standards will leave students potentially unable to have adequate instructional rigor necessary to achieve academic success on

state of Texas reading assessments, and subsequently, adequate preparation for college and careers.

Several other conclusions can be drawn from Research Question 1. First, the impact to ALL STUDENTS is statistically meaningful. The holistic group of ALL STUDENTS must meet certain cut scores for adequate yearly progress. On some campuses and grade levels, the distribution of passing scores would be profoundly affected for ALL STUDENTS. The changing distributions vary by campus, and any number of variables could also contribute to the variation. For example, Campus 3 underwent the resignation of a principal and hiring of a new one in 2010; since that time, 54% of all teachers on that campus have been in the profession fewer than five years, and all reading teachers have been in the profession fewer than five years. Furthermore, financial reductions are a consideration. This district received a lower level of state funding than surrounding school districts for several years; in 2007-2010, the district was forced to reduce spending by $56 million; in 2010, the district was forced to further reduce spending by another $10 million. The ability to provide federally mandated after school tutorials with busing and supplemental services were hindered by the budget reductions. This district and 600 other districts throughout the state of Texas won a lawsuit against the state on February 4, 2012 when a Texas judge declared school funding unconstitutional. The state has pledged to appeal the ruling to the Texas Supreme Court. The inequities in funding created a depletion of funds on Campuses 1, 2, and 3 that were reserved for remediation and supplemental resources in the form of extended days, school year, and Saturday schools and the curriculum resources and

personnel to run these programs. Without this additional funding and higher accountability standards in place, it will be even more difficult to address the needs of ALL STUDENTS because the resources are no longer funded.

The results of Research Question 1 indicate that the distribution in passing cut scores after Stretch Lexile measures are applied would significantly impact federal accountability regarding the subset of ALL STUDENTS. The distribution of failing students could impact other campuses as well, especially additional Title I campuses in this district and campuses throughout the state. The original intention of NCLB was to ensure that all students, regardless of ethnicity or economic status would be educated at a certain level. Mandates and sanctions by the federal government forced accountability and action on the part of school districts. If all students are once again at risk of not meeting a certain standard, such as the Stretch Lexile measures, this is an indicator that Texas students are lagging behind. For many years, school districts adhered to a bell-shaped curve mentality, and placed students in reading ability groups and had varying standards based on perceived ability and intellect. Many students were left behind if they were not perceived as being at the top of the bell curve. NCLB forced districts to examine how all children are being educated and how their learning deficits and gaps are being addressed so that all students would be challenged to meet standards at the same level.

Research Question 1 establishes that distribution of failing cut scores would impact all students on campuses that might otherwise be meeting AYP. The distribution of cut scores after Stretch Lexile measures are applied would once again indicate that

many students are unable to meet instructional targets; only certain students would be able to have academic success by meeting higher cut scores associated with Stretch Lexile measures. The significant change in distribution of cut scores would result in only certain percentages of students meeting academic success (Campus 1, -53%; Campus 2, -40%; Campus 3, -51%). Lack of adherence to higher standards could potentially affect success after high school. Instead, adequately preparing students for higher standards, such as those associated with the Common Core Curriculum Standards, by designing curriculum and instruction for learning at higher levels, has the potential to produce academically successful and competitive students.

Summary of Findings for Research Question Two: Economically Disadvantaged Students

Research Question 2 focused on changes in distribution of cut scores for economically disadvantaged students, African American students, Hispanic students, and White students after Stretch Lexile measures were applied.

The Chi-square Test for Independence determined a statistically significant relationship exists ($p = .003$) between the distribution of cut scores for economically disadvantaged students using the Standard Lexile measures and the Stretch Lexile measures. Significantly more economically disadvantaged students would be fail to meet the reading standards after the change in Lexile measures.

The combined number of economically disadvantaged students tested on Campuses 1, 2, and 3 was 2,766 students. Of these 2,766 students, 2,363 students met the 2010 TAKS reading standard that used Standard Lexile measures (85% passing). If

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Stretch Lexile measures were applied, the number of students passing would drop to 1,309 students (47% passing); the number of students failing would increase to 1,457 (53%). In 2010 there were 1,049,371 middle school students (352,226 sixth grade students, 351,046 seventh grade students, and 346,099 eighth grade students). Of the 1,049,371 middle school students, 59%, or 619,129 students were economically disadvantaged. If the results for economically disadvantaged in Research Question 2 could be applied to the entire state of Texas, then of those 619,129 economically disadvantaged students, approximately 290,991 (47%) of students would potentially pass the state reading assessment and 328,138 (53%) would potentially fail the state reading assessment.

This study revealed that there is little doubt that economically disadvantaged students would fail the state of Texas reading assessment in higher numbers under Stretch Lexile measures and there would be a significant relationship between the Standard Lexile measures used as cut scores and the Stretch Lexile measures used as cut scores. Economically disadvantaged students are within the ethnic groups that are included in the accountability process. These students are included in several groups that must meet adequate yearly progress through established cut scores; for example, an economically disadvantaged African American student would be counted in the African American group, in the economically disadvantaged group, and in the ALL STUDENTS group; this student's score would be counted three times for a campus; therefore, a failing score could impact the campus in several categories.

Conclusions of Findings for Economically Disadvantaged Students

Adhering to the higher Stretch Lexile cut scores on state of Texas reading assessments on Campuses 1, 2, and 3 would significantly impact economically disadvantaged students; furthermore, students in eighth grade must meet the reading standard to promote to ninth grade. If a student fails the state of Texas eighth grade reading assessment, a grade placement committee is held responsible for placing failing students in ninth grade. Districts are responsible for funding and holding summer school for eighth grade students who fail the state of Texas reading assessment. Students are then retested to determine their grade placement for the following school year; these promotion standards are held for mathematics and reading assessments in grades 3, 5, and 8 in Texas public schools, and might potentially impact economically disadvantaged students as a subset to a greater extent since there was significance in the distribution of cut scores after the Stretch Lexile measures were applied. Funding would be a concern as the distribution of passing scores shifted to failing and more students need the support of reading intervention and extended school days and years. The impact to a school district in terms of funding could be profound, especially for a school district that had to slash funding by $66 million over a four-year period.

Understanding how deeply the impact may be to economically disadvantaged students might better prepare campuses in determining where their focus and funds would have the greatest impact, especially since the scores related to this subset of students will impact campuses several times.

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Summary of Findings for Research Question Two: African American Students

Although the Chi-square Test for Independence did not determine an existing statistically significant relationship between cut scores of African American students and the Lexile Measures used for cut scores (p = .086), several relevant findings emerged from this study, and African American students could potentially be affected by the adherence to higher standards. It was determined that if Stretch Lexiles were in place, 39%, or 144 fewer African American students would pass the state of Texas reading assessment on Campus 1; 29%, or 91 fewer African American students would pass the state of Texas reading assessment on Campus 2; and 43%, or 139 fewer African American students would pass the state of Texas reading assessment on Campus 3.

The percent difference between African American sixth grade students on Campus 1 who passed with Standard Lexile cuts cores but not after Stretch Lexile cut scores were applied was -41% or 48 students; the percent difference between African American seventh grade students on Campus 1 who passed with Standard Lexile cut scores but not after Stretch Lexile cut scores were applied was -31% or 63 students; and on Campus 1, the percent difference between African American eighth grade students who passed with Standard Lexile cuts cores but not after Stretch Lexile cut scores were applied was -31% or 33 students.

The percent difference between African American sixth grade students on Campus 2 who passed with Standard Lexile cuts cores but not after Stretch Lexile cut scores were applied was -46% or 44 students; the percent difference between African American seventh grade students on Campus 2 who passed with Standard Lexile cuts

cores but not after Stretch Lexile cut scores were applied was -34% or 37 students; and on Campus 2, the percent difference between African American eighth grade students who passed with Standard Lexile cuts cores but not after Stretch Lexile cut scores were applied was -10% or 5 students.

The percent difference between African American sixth grade students on Campus 3 who passed with Standard Lexile cuts cores but not after Stretch Lexile cut scores were applied was -43% or 52 students; the percent difference between African American seventh grade students on Campus 3 who passed with Standard Lexile cuts cores but not after Stretch Lexile cut scores were applied was -39% or 40 students; and on Campus 3, the percent difference between African American eighth grade students who passed with Standard Lexile cut scores but not after Stretch Lexile cut scores were applied was -44% or 47 students.

Once again, the least percent difference in cuts scores was on Campus 2 for African American students. African American students on Campus 3 were the most impacted of all. Although the Chi-square Test for Independence did not determine a statistically significant relationship existing between cut scores of African American students and the Lexile Measures used for cut scores indicate that more students would potentially fail the state of Texas reading assessments.

Data revealed for African American students in Research Question 2 indicates that, although the Chi-square Test for Independence did not reveal statistical significance, more African American students would fail, widening the already existing achievement gap.

Conclusions of Findings for African American Students

This study indicates that when more rigorous Lexile measures are used, more African American students will fail the state of Texas reading assessment. The gap will widen between these students and their peers. This should result in the need for well-developed and effective RtI systems. Students receiving early intervention will receive the reading support to increase their Lexile reader measure. Progress monitoring students so that they are working on skills related to achieving access to more complex texts is a priority for these students. Addressing the gap with improved first time-instruction, followed by effective interventions for struggling students, will proactively address the gap that will exist for African American students when higher Stretch Lexile measures are applied.

Although no significant relationship was found, other data of interest emerged from this study concerning African American students' scores. African American students were impacted least on Campus 2 when the passing cut scores increased. Other additional information related to Campuses 1, 2, and 3 was experience level of the teachers. On Campus 1, 60% of teachers had five years or fewer of teaching experience; Campus 2 had 60% of teachers with six years or more of teaching experience; Campus 3 had 60% of teachers with five years of teaching or fewer. Investigating teachers' experience level and the impact on test scores might provide additional data for administrators. Additionally, professional development targeting achievement of African American students might be another consideration for further study by campus administrators. Finally, on Campus 2, the percent increase of students failing under

Stretch Lexile cut scores was only 10% in eighth grade; it was 46% in sixth grade and 34% in seventh grade; the impact was less severe as students progressed through the grade levels, indicating that achievement gaps for African American students were being addressed more effectively on Campus 2.

Summary of Findings for Research Question Two: Hispanic Students

The Chi-square Test for Independence determined a statistically significant relationship exists ($p = .003$) between the distribution of cut scores for Hispanic students using the Standard Lexile measures and the Stretch Lexile measures. Hispanic students in this study would be the most impacted student group by some measure.

The combined number of Hispanic students tested on Campuses 1, 2, and 3 was 2,323 students. Of these 2,323 students, 2,002 students met the 2010 TAKS reading standard that used Standard Lexile measures (86% passing). If Stretch Lexile measures were applied, the number of students passing would drop to 1,149 students (49% passing); the number of students failing would increase to 1,174 students (51%). In the district in this study, there are 11,378 Hispanic students in grades 6, 7, and 8 who would be potentially impacted by the change in Lexile measures. If the data results for Hispanic students on Campuses 1, 2, and 3 were applied to the district, then 5,802 students of the 11,378 students tested would fail the state of Texas reading assessment. In 2010, there were 1,049,371 Hispanic students tested in grades 6, 7, and 8 in the state of Texas. If the data results for Hispanic students found in this study were applied to the state, then 535,179 Hispanic students could potentially fail the state of Texas reading assessment, which is over half of the Hispanic students in Texas middle schools.

Conclusions of Findings for Hispanic Students

Adhering to the higher Stretch Lexile cut scores on state of Texas reading assessments on Campuses 1, 2, and 3 would significantly impact Hispanic students; however, one campus would be less affected than the other two. Campus 2 showed a continued improvement in scores through grades 6-8, and the percent change between Standard Lexile cut scores and Stretch Lexile cut scores showed a trend of improvement. Although more students would fail, the percent changes for each grade level were less than percent changes found on the other two campuses. As students moved through the grades, failing cut scores decreased in percentages. On Campus 1, there was a similar pattern, although to a lesser extent; on Campus 3, the percent differences in passing scores between Standard Lexile cut scores and Stretch Lexile cut scores did not vary much from grade level to grade level. The variation was much greater on Campus 2 where the percent differences in passing scores between Standard cut scores and Stretch Lexile cut scores decreased as the grade levels increased, indicating that other variables may contribute to the improvement. The teacher demographics on Campus 2 might also serve as another avenue of investigation to determine if teacher ethnicity and passing cut scores are related; 11% of teachers on Campus 1 were Hispanic; 12% of teachers on Campus 2 were Hispanic; only 5% of teachers were Hispanic on Campus 3.

Data in this study revealed that the higher rigor found with Stretch Lexile measures would significantly impact Hispanic students. If applied to the district as a whole and to the state, then half of middle school Hispanic students in Texas would fail reading assessment. Campus 2 surpassed the other two campuses in closing the

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achievement gap for students as they moved up in grade levels. Understanding how severe the impact could be if more rigorous cut scores were used will help Texas educators better align instruction and curriculum to the higher standards. The assessments should reflect the curriculum and instruction, and the first step in helping students achieve access to more rigorous texts is in improving first-time instruction based on more rigorous curriculum standards. If Texas were to move to the Common Core Curriculum Standards, data for Hispanic students reveals that there would be a significant increase in failing scores, and educators would need to prepare students for higher rigor in order that they could be better prepared for college and careers.

Summary of Findings for Research Question Two: White Students

Although the Chi-square Test for Independence did not reveal an existing statistically significant relationship between cut scores of White students and the Lexile measures used for cut scores, several relevant findings emerged from this research. It was determined that if Stretch Lexiles were in place, 25%, or 33 fewer White students would pass the state of Texas reading assessment on Campus 1; 11%, or 15 fewer White students would pass the state of Texas reading assessment on Campus 2; and 21%, or 30 fewer students would pass the state of Texas reading assessment on Campus 3.

Conclusions of Findings for White Students

Once again, the least percent difference in cuts scores was on Campus 2 for White students. Percent differences would indicate that scores of White students were at high enough levels with Standard Lexile measures that changing to a more rigorous standard in the Stretch Lexile measures did not impact students as severely on Campus 2

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when compared with Campuses 1 and 3. Although the Chi-square Test for Independence did not reveal a statistically significant relationship existing between cut scores of White students and the Lexile Measures used for cut scores, the White student group was also least impacted on Campus 2, indicating a recurring pattern on Campus 2. Understanding instructional practices and design, professional development and planning, and expectations from campus leadership would be students for further research that could possibly uncover reasons why the impact of higher Lexile cut scores was not as severe on Campus 2.

Furthermore, the data revealed that distribution of scores for White students did not change significantly. White students were scoring at high enough levels that a change in cut scores did not significantly change the distribution of scores after Stretch Lexile cut scores were applied. This data reveals that the achievement gap between White students and other subsets of students in the accountability system would be sustained using Stretch Lexile measures. This indicates that the achievement gap will continue to exist, and campuses and districts can clearly see that it is an issue of concern to be addressed.

Summary of Research Question Three

This study's intention was to uncover the relationship between student achievement and the use of different Lexile measures on state standardized and federally mandated achievement tests. Although Research Question 1 and Research Question 2 clearly established a link between achievement and measuring systems significant numbers of students in the accountability system, policy implications for all students

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arose out of this study as well. Implications of using lowered standards while other states have adopted standards with higher reading expectations have deep policy implications. One possible weakness associated with the NCLB legislation is a state's ability to determine its own standards based on its own uniquely designed assessments. Federal standards are set, but it is left up to states to determine where on the continuum of student achievement these standards fall. For example, a 70% passing score in one state could be based on totally different standards in another state, leaving much variability in the rigor of the assessment. The national Common Core Curriculum Standards have taken the guesswork out of where the rigor is placed in state achievement tests. The targets are clear and precise and states can finally compare their own results with those of other states. Furthermore, higher education can depend on certain assurances regarding the preparation of incoming students as there are common standards among the states and expectations for students are understood and clearly established.

The unintended consequences for lowered standards can leave Texas students at a profound educational disadvantage when compared to the achievement of students in other states whose standards are higher and more rigorous. Furthermore, declaring readability formulas inaccurate and making disclosure of text Lexile Measures forbidden only adds to the lack of clarity for Texas teachers when trying to determine educational targets and rigor necessary for success after high school. Deeming a time-honored, successful measurement system as unreliable with no proven research to support the decision to abandon Lexile measures has left no way for teachers to be clear about where on the continuum of readability their students should be. As was shown in Chapter II,

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readability formulas have been used extensively to understand better how and when to help students. Lexile measures help teachers determine appropriate text for students that will lead them in a positive trajectory through the school years so that they leave public education with enough reading skills to do well after high school. Refusing to accept the higher standards used by the Common Core Curriculum allows students to begin their educational careers at lower levels, thus ending at lower levels. The Standard Lexile measures fall short of the college ready mark, dooming students to possible remedial classes and the inability to take credit-bearing college classes.

The findings of this study indicate that certain student groups will be more deeply impacted if Texas were to adopt the higher standards found in the Stretch Lexile Measures associated with the Common Core Curriculum Standards. Furthermore, these groups will not be able to compete academically with their peers in other states. Of course, the long term effects of providing an entire state of students with lowered reading standards is not yet known, but the outcome for students does not look positive.

Summary of Findings for Research Question Three: Local Policy Implications

A number of factors impact local school districts in terms of policy. Local districts are held to federal testing standards on reading assessments, but rigor and test design, including cut scores, are a product of the state's education agencies. In Texas, the state reading assessment rigor falls well below that of other states. When local districts fall below established standards, they must endure sanctions intended to create school improvement regarding student achievement. One improvement advocated by the state of Texas is Response to Intervention. This multi-tiered approach to instruction requires

that schools identify students who are struggling and place them in instructional tiers that provide progressively more intensive instruction. The funding for this program is limited, and in local districts where the need is great, this can be a difficult program to finance with fidelity to the level endorsed by the state. Another sanction for failing to meet adequate yearly progress on federal testing is the mandate to offer school choice. Local school districts having campuses that do not meet adequate yearly progress, must also arrange for students to move to other schools within the district if they choose to do so. Students moving to other campuses must be bused, and transportation must be provided by the district. Furthermore, complying with these sanctions leads to a number of related issues for schools districts, including the politically charged decisions to move students in failing schools to more successful schools.

Conclusions of Findings for Local Policy Implications

Local districts must somehow manage to fund the nuts and bolts associated with NCLB. For example, schools must offer interventions through Title I funding. This funding is tied to students receiving free and reduced lunch, not the number of students failing to meet state reading assessment requirements. In this regard, districts vary. If districts have high numbers of struggling students, the amount of intervention students receive is limited by the funding the local district receives. If a district has fewer failing students but high numbers of economically disadvantaged students, they are in better shape to fund the required interventions. In other words, more students failing does not equal more funding. Some campuses will be more affected than others, and a local school district's capacity to address the needs of students will vary. Understanding the

impact of higher standards will help districts better prepare for the intervention needs of their students in terms of resources and personnel. Failure to understand the financial impact of higher standards will leave districts struggling to fund programs.

Summary of Findings for Research Question Three: State Policy Implications

The policy implications are slightly different at the state level. The state has the ability to determine the rigor of reading assessments and the cut scores at each grade level; currently, rigor is not revealed to Texas politicians, educators, parents, and students. Lexile measures have been removed from confidential student reports given to parents regarding the results of the state reading assessment. Beginning in 2012, educators no longer knew the text rigor found in the assessments, nor did they know how the reader Lexile measures correlate to students' scores. As shown by results of this study, knowing the Lexile text measure and the student measures can provide valuable information regarding targets for educators and students. Students have a better sense of what is expected, and educators understand the Lexile expectation for graduating seniors. This lack of transparency does not allow educators to align their rigor throughout grade levels so that the appropriate ending target is met that will lead to successful college and career readiness. The failure of Texas to adopt the Common Core Curriculum Standards has given Texas the opportunity to determine their own unique test design. This also gives them the ability to manipulate how many students can potentially pass or fail the state reading assessment and, consequently, how much funding they need to contribute to local districts.

Conclusions of Findings for State Policy Implications

      The unique test design found in Texas reading assessments allows much control by the state over the assessment's rigor level. Because the targets are not set into motion by the Common Core Curriculum Standards, the targets are determined completely by the state. Although there are definitive passing standards for adequate yearly progress, these passing standards rely on each state's ability to create a test based on the standards that are taught; therefore, the rigor can be manipulated to determine an intended outcome. If the rigor and expectations are lowered, more students will pass and fewer schools will face NCLB sanctions.

      In 2013, the passing standards for students on the new state of Texas reading assessments, State of Texas Assessments of Academic Readiness (STAAR), declined in their expectations. The passing standard for middle school reading is a mere 56% correct for sixth grade reading, and 54% correct for seventh and eighth grade reading. Although there is a phase-in for a the new STAAR test, these passing standards are well below what other states are working toward to determine their progress toward meeting NCLB. For example, if 90% of students pass by getting 56% correct, the federal passing standard of an 80% on performance for sixth grade reading can be easily met. In 2012, 71.1% of school districts in Texas failed to make adequate yearly progress; 47.5% of campuses failed to make adequate yearly progress (Texas Education Agency, 2013). However, beginning in 2012-2013, Lexile measures will not be used by the state of Texas to help educators better understand reading instructional targets, nor will the rigor of the test be transparent; the rigor will be unknown. Perhaps the greatest concern

emanating from the state's decision to determine a unique test design is the opportunity gap that may be incurred for Texas students. Students may be denied the opportunity to experience the more rigorous standards that are found in states adhering to the Common Core Curriculum Standards, thus influencing their college and career preparedness.

Summary of Findings for Research Question Three: Federal Policy Implications

Federal policy implications center on the attempt to create opportunities to close achievement and opportunity gaps for students by ensuring that common curriculum standards are available for adoption to all states. These common standards were written with an end goal: college and career readiness. NCLB has illuminated the achievement of students in traditionally under-served groups; it has done so through sanctions and mandates enforced by states. States were encouraged and challenged to adopt higher standards. Most states did. Texas did not. Higher standards that lead to college and career readiness prepare students for success beyond high school.

Conclusions of Findings for Federal Policy Implications

The potential achievement and opportunity inequities resulting for some groups in the accountability system created by lowering standards in Texas as compared to other states is of great concern. Knowing that higher standards would likely increase the numbers of students in need of interventions and increase the need for funding as well may create a politically charged atmosphere for state politicians, especially after the total rejection of federal assistance grants intended for improvement of educational standards. The professional development associated with implementing the Common Core Curriculum Standards will also be denied to the teachers of the students in states where

the new standards have not been adopted; therefore, students will not receive the benefit of a more rigorous curriculum based on the standards that are aligned with college and career readiness. Furthermore, without the new standards, the text complexity bands are not transparent to educators, students, and other stakeholders. Policies regarding effective delivery models are in place in states adopting the Common Core Curriculum Standards, and federal funds are being used to provide professional development associated with more rigorous instruction based on the standards. Texas has elected not to gain these benefits.

Conclusions of the Research

Preparing students for college and career readiness is a priority in school districts across the country. To better prepare students, the Common Core Curriculum and the Career and College Readiness Standards were aligned, and reading measures, known as Stretch Lexile Measures, associated with the rigor required for college and career readiness, were adopted; however, the Common Core Curriculum and the Stretch Lexiles are not used in Texas schools or endorsed by the Texas Education Agency. Presently, 48 states and three territories have adopted the Common Core Curriculum Standards and the Stretch Lexile Measures associated with them. *Federal Race-to-the-Top* funding was tied to the adherence of the Common Core Curriculum Standards, which became a contentious point for Texas Governor Rick Perry. This study indicates that adhering to the higher standards adopted by other states could impact student performance on the state's reading assessment, thus also affecting a district or campus's federal accountability status. There are sanctions against campuses not meeting federal

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accountability standards. Additionally, policies that limit how federal funds are spent may not provide enough financial support to provide the tiered approach to reading improvement recommended by the state. Finally, inequity is created when some students are exposed to higher text complexity bands that are used to build their curriculum and assessments and other students are not. The level of exposure is dependent on the state in which students reside and the standards the state has adopted.

Contributions to the Literature

With continued focus on preparing our students for life after high school by having the ability to access complex texts, especially academic texts, this study should provide insight into how Texas standards compare to the standards found in other states. One national study found that 29% of students entering four-year universities need remedial assistance (Strong America Schools, 2008); a Texas study found that 24% of students entering a university need remedial assistance (Terry, 2007). A 2010 study by the Southwest Regional Education Laboratory studied text requirements and students' ability to access text at the University of Texas System universities. A methodology was developed to utilize the Lexile framework to calculate the proportion of Texas public school students who are prepared to read and comprehend entry-level college textbooks. The study had these key findings: 80% can read 50% of all English textbooks; 9 percent can read no more than 5% of all English textbooks (Southwest Regional Educational Laboratory, 2010). Furthermore, 50% of textbooks were in the 1100-1260 Lexile text range; therefore, a reader would have to be at this same range to comprehend 75% of the text. The Stretch Lexile associated with eleventh and twelfth grade is in the 1185-1385

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text measure range; while the standard Lexile used in Texas for eleventh and twelfth grade ranges from 1070-1220, below the range that might help a student meet with academic success as a college freshman. This study indicates that putting students on the college and career readiness path also means increasing the Lexile range expectations as students move from grade-level to grade-level, so that when they reach the end of high school, they will be college and career ready.

Recommendations for Practice

1. Adopt state reading standards calibrated with the Common Core Curriculum so that Texas students are on a competitive level with their counterparts in other states and are prepared for colleges and careers when they graduate high school.

2. Use a multi-tiered approach to teaching reading. Differentiating instruction based on students' needs will address gaps that students have in their ability to access texts. Focusing on effective and corrective instruction to students during first time instruction in the general education setting will improve learning outcomes. Progress monitoring and ongoing assessment will also ensure that students are placed in the appropriate tier.

3. Implement a screening tool that will provide Lexile reader scores. Understanding Lexile scores will enable teachers to adjust instruction and match reader and text at a level where 75% can take place at the independent level. Teachers can provide scaffolded instruction when the text complexity increases;

understanding when to increase classroom support based on text complexity is key in helping students become more successful readers.

4. Identify students who are not in the appropriate Lexile ranges that correspond with the text complexity for the state reading assessments at their grade levels. Provide targeted assistance to students funded through Title I, Title III, or Coordinated Early Intervening Services funds. Knowing how many students will need interventions will help campuses plan their budgets and adjust them accordingly.

5. Hire teachers who hold certifications in reading or are highly qualified in the area of reading. Depending on certification types, reading can be added as an area of certification, or courses can be taken to enable teachers to become reading certified. Having additional teachers that are certified will enable campuses to have more flexibility in before and after school programs and in providing reading interventions.

6. Provide professional development that promotes more rigorous first-time instruction and that helps teachers understand how to scaffold assignments so that students can move toward higher instructional targets more successfully.

7. Code school libraries and summer reading lists with Lexile text measures. Encourage students to read in their independent instructional range (50 Lexile text measures above and 100 below their reader text measure) so that they can practice at the 75% comprehension rate.

8. Inform parents of their child's Lexile reader range so that they can also monitor, encourage, and provide materials that match reader and text measures. Over 135,000 books have been measured and text Lexile measures can be found at http://www.lexile.com/.

9. Students should be placed in tiers based on Response to Intervention methodology.

10. Research variation among campuses. Campuses closing or eliminating gaps at higher rates should be analyzed for success factors, especially within the same district, as was established on Campus 2 in this study.

11. Research Lexile reader variation on campuses. Best practices should be shared across campuses.

12. The Texas Education Agency and school districts across the state should be made aware of the study's results and its implications.

Recommendations for Further Research

The scope of this research project is limited to the information derived from the literature review, the three campuses studied, and the analysis of data collected from the statistical tests that were run. The review of literature, along with the analysis of the research data collected and the subsequent findings provide for the following recommendations for further research.

- Increase the scope of the study to include other campuses in the district, as well as in other districts. Larger sample sizes can be used to confirm the findings of this study in the district and across the state to understand

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better the local, state, and national implications of adopting higher

reading standards.

- Investigate why there are cut score distribution differences regarding

    ethnicity in more detail; areas of study could include tracking

    (homogeneous grouping), expectations, or curriculum alignment.

- Additional studies can be conducted to focus on the impact of funding

    used to address the achievement gaps found in this study. Specific federal

    funding can be used to provide interventions; a study to examine the

    impact of funding to provide tiered instruction on student achievement

    might indicate whether or not other campuses in the district or state

    should use a tiered model for general education instruction.

- Conduct a study to determine if using Stretch lexile text measures in

    district reading benchmark assessments and in classroom instruction,

    beginning in sixth grade, impacts SAT/ACT scores (college readiness).

- Longitudinally evaluate the performance of Texas students compared

    with those students in states that adhere to the Common Core Curriculum

    Standards.

Concluding Comments: Provide Alignment with Post-High School Institutions

Understanding how prepared students need to be for college and careers will also

help districts gauge and provide the rigor and instruction that is needed for students to be

successful after high school. According to ACT (2011), the adoption of the Common

Core State Standards by 45 states and the District of Columbia is a first step on the road

to ensuring all students are ready for college or career; furthermore, it is imperative now that policymakers and practitioners continue this process by aligning all aspects of their systems to college and career readiness. School districts can work with local stakeholders and post-high school institutions to better understand the expectations for students. For example, The Houston Endowment has awarded the Houston Community College System a grant of $1.175 million from 2012-2015 to foster partnerships with local school districts. Working in collaboration with local school districts, the purpose of the partnership is to increase students' readiness for college, especially economically disadvantaged students, by aligning curriculum standards and creating instruction that will bridge the gap that is preventing students from taking credit bearing courses. Vertical teams align curriculum and strengthen teaching techniques to prepare students for college while they are still in high school, ensuring that they graduate "college ready" and not fall into one or multiple semesters of developmental education upon reaching college entrance. Research focused on the instructional alignment that can be structured at the middle and high school to better prepare students for colleges and careers will help guide districts in their efforts to ensure academic success for all students.

Texas' failure to adopt the higher Common Core Curriculum Standards and the associated rigor and support necessary to achieve these standards may well reduce the preparation and competitiveness of our students, as well as the state's future economic and social well-being.

REFERENCES

Abernathy, S.F. (2009). *No Child Left Behind and the public schools*. Ann Arbor, MI:

University of Michigan Press.

ACT. (2006). *Reading between the lines*. Retrieved October, 30, 2011, from

http://www.act.org/research/policymakers/pdf/reading_report.pdf

ACT. (2010). *A first look at the common core and college readiness standards*.

Retrieved October 30, 2011, from http://www.act.org/research/

policymakers/pdf/crs.pdf

ACT. (2011). *The condition of college and career readiness*. Retrieved on January 10,

2011, from http://www.act.org/research/policymakers/cccr11/policies.html

Adams, M. J. (2009). *The challenge of advanced texts: The interdependence of reading

and learning*. New York, NY: Guilford.

Alberti, S. (2012). Making the shifts. *Educational Leadership*, *70*(4), 24-27.

American Recovery and Reinvestment Act. (2009). *Overview: United States Department

of Commerce*. Retrieved January 5, 2011, from http://www.ntia.doc.gov/

page/2011/american-recovery-and-reinvestment-act-2009

Annual Report. (2008). *Report of the Bill and Melinda Gates Foundation*. Retrieved

January 4, 2011, from http://www.gatesfoundation/org/

annualreport/2008/pages/united-states-programhighlights.apex

Betts, E.A. (1946). *Foundations of reading instruction*. New York, NY: American Book

Company.

Betts, E.A. (1954). *Foundations of reading instruction with emphasis on differentiated guidance*. New York, NY: American Book Company.

Boyd, D. (2003). *The current state and fiscal crisis and its aftermath*. Albany, NY: Nelson A. Rockefeller Institute of Government.

Campaign for High School Equity. (2010). *Implementing the common core state standards to achieve equity*. Retrieved January, 10, 2011, from http://www.all4ed.org/files/082310CHSEWebinarPPT.pdf

Center on Education Policy. (2011). *States' progress in implementing the Recovery Act education reforms*. Washington, DC: Center on Education Policy.

Chall, J.S., Conrad, S., & Harris, S. (1977). A*n analysis of textbooks in relation to declining SAT scores*. Princeton, NJ: College Entrance Examination Board.

Chall, J.S., & Dale, E. (1995). *Readability revisited: The new Dale-Chall readability formula*. Cambridge, MA: Brookline Books.

Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational reform*. U.S. Department of Education. Retrieved January 10, 2010, from http://datacenter.spps.org/uploads/SOTW_A_Nation_at_Risk_1983.pdf

Common Core State Standards Initiative. (2012). *Implementing the Common Core State Standards*. Retrieved April 28, 2013, from http://www.corestandards.org/

Common Core Curriculum Standards. (2012). *Supplemental information for Appendix A and Common Core Curriculum Standards for English language arts and literacy: New research on text complexity*. Retrieved January 3, 2012, from

271

http://www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Te

xt_Complexity.pdf

Common Core State Standards: Appendix A. (2012). *Appendix A: Research supporting*

key elements of the standards. Retrieved December 1, 2012, from

http://www.corestandards.org/assets/Appendix_A.pdf

Council of Chief State School Officers. (2010). *National Governors Association and*

State Education Chiefs launch common state academic standards. Retrieved

March 8, 2011, from http://www.ccsso.org/News_and_Events/Press_

Releases

 Daggett, W.R. (2003). *Achieving reading for all*. Retrieved January 4, 2011, from

http://www.leadered.com/pdf/Reading%20White%20pdf

Daggett, W. (2010). *Common core state standards initiative: Classroom implications for*

2014. Retrieved January 11, 2011, from http://www.leadered.com

Daggett, W. (2012). *Proficiency levels vary across states, subjects, and grades*.

Retrieved January 11, 2011, from http://www.leadered.com/pdf/

ProficiencyLevels.pdf

Dale, E.D. & Chall, J.S. (1948). A formula for predicting readability. *Educational*

Research Bulletin, *17*(1), 11-20.

Darling-Hammond, L. (2004). Race, inequality, and educational accountability: The

irony of No Child Left Behind. *Race, Ethnicity, and Education*, *10*(3), 245-260.

DeBray, E.H. (2006). *Politics, ideology, and education*. New York, NY: Teachers

College Press.

272

Donovan, T., Mooney, C.Z., & Smith, D.A. (2009). *State and local politics: Institutions and reform*. Boston, MA: Cengage Publishing.

Dubay, W.H. (2004). *Principles of readability*. Retrieved January 4, 2011, from http://www.nald.ca/library/research/readab/readab.pdf

Dunkle, C.A. (2012). *Leading the common core standards*. Thousand Oaks, CA: Sage Publications.

Erickson, B.L. & Strommer, D.W. (1991). *Teaching college freshmen*. San Francisco, CA: Jossey-Bass Higher Education Series.

Flesch, R.F. (1948). A new readability yardstick. *Journal of Applied Psychology*, *32*(3), 221-233.

Fordham Institute. (2009). *Stars by which to navigate? Scanning national and international educational standards in 2009*. Retrieved March 9, 2011, from http://www.excellence.net/publications/stars-by-which-to-navigate.html 221-233

Fuhrman, S.H., & Elmore, R.F. (2004). *Redesigning accountability systems for education*. New York, NY: Teachers College Press.

GED Testing Service. (2012). *Standardization, norms, and passing standards*. Retrieved March 8, 2013, from http://www.gedtestingservice.com/educators/2014-faqs

Godwin, R.K., & Kemerer, F.R. (2002). *School choice tradeoffs: Liberty, equity, and diversity*. Austin, TX: University of Texas Press.

Goodman, J.C., & Moore, M.M. (2001). *School choice vs. school choice*. Retrieved March 4, 2012, from http://www.ncpa.org/pdfs/bg155.pdf

Gravetter, F.J., & Wallnau, L.B. (2009). *Statistics for the behavioral sciences*. Belmont, CA: Cengage Publishing.

Hamilton, L.S., Stecher, B.M., & Yuan, K.(2012). Standards-based accountability in the United States: Lessons learned and future directions. *Education Inquiry*, *3*(3), 149-170.

Hayes, D.P., Wolfer, L.T., & Wolfe, M.F. (1996). Schoolbook simplification and its relation to the decline in SAT-verbal scores. *American Educational Research Journal*, *33*(3), 489-508.

Heller, R., & Greenleaf, C.L. (2007). *Literacy instruction in the content areas: Getting to the core of middle and high school improvement*. Washington, DC: Alliance for Excellent Education.

Hernandez, D.J. (2011). *Double jeopardy: How third-grade reading skills and poverty influence high school graduation*. Albany, NY: University of Albany.

Hess, F.M., & Finn, C.E. (2004). Inflating the life rafts of NCLB: Making public school choice and supplemental services work for students in troubled schools. *The Phi Delta Kappan*, *86*(1), 34-40.

Kingsbury, G., Gage, A.O., Cronin, J., Hauser, C., & Houser, R. (2003). *The state of state standards: Research investigating proficiency levels in fourteen states*. Portland, OR: Northwest Evaluation Center.

Kitson, H.D. (1921). *The mind of the buyer: A psychology of selling*. New York, NY: The Macmillan Company.

Klesius, J.P., & Homan, S.P. (1985). A validity and reliability update on the informal reading inventory with suggestions for improvement. *Journal of Learning Disabilities*, *18*(2), 71-76.

Koretz, D. (2003). Using multiple measures to address perverse incentives and score inflation. *Educational Measurement: Issues and Practice*, *22*(2).

Kress, R. (1988). *Some caveats when applying two trends in diagnosis*. Washington, DC: Office of Educational Research and Improvement.

Lewin, T. (2010). *Many states adopt national standards for their schools*. Retrieved March 5, 2012, from http://www.nytimes.com/2010/07/21/education/ 21standards.html

Linn, R.L., & Haug, C. (2002). Stability of school-building accountability scores and gains. *Educational Evaluation and Policy Analysis*, *24*(1), 29-36.

Lively, B.A., & Pressey, S.L. (1923). A method for measuring the vocabulary burden of textbooks. *Journal of Educational Administration and Supervision*. *9*(7), 389-398.

Lorge, I. (1939). Predicting reading difficulty of selections for children. *Elementary English Review*, *16*(1), 229-233.

Lorge, I. (1944). Predicting readability. *The Teachers College Record*, *45*(16), 229-233.

Lorge, I. (1948). The Lorge and Flesch readability formula: A correction. *School and Society*, *67*, 141-142.

MetaMetrics. (2011). *The Lexile framework for reading*. Retrieved January 4, 2011, from http://www.metametricsinc.com/lexile-framework-reading/

MetaMetrics. (2012). *Text complexity grade bands and Lexile bands*. Retrieved

March 4, 2012, from http://www.tea.state.tx.us/Index4.aspx?id=8061

Metametrics Consulting and Development. (2012). *Item and test development*. Retrieved

January 3, 2012, from http://d1jt5u2s0h3gkt.cloudfront.net/m/

cms_page_media/123/MetaMetrics-Consulting-Development.pdf

National Center for Educational Statistics. (2008). *The condition of education 2008*.

Retrieved January 11, 2011, from http://nces.ed.gov/pubs2008/2008031.pdf

National Center for Educational Statistics. (2009). *Achievement gaps: How Black and*

White students in public schools perform in mathematics and reading on the

National Assessment of Educational Progress. Retrieved January 4, 2011, from

http://nces.ed.gov/nationsreportcard/pdf/studies/2009455.pdf

National Center for Educational Statistics. (2010). *Revenues and expenditures for public*

elementary and secondary school districts: School year 2009-10. Retrieved

January 4, 2011, from http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013307

National Center on Response to Intervention. (2013). *State assistance*. Retrieved

March 4, 2013, from http://www.rti4success.org/stateassistance

No Child Left Behind Act of 2001. (2001). *Public Law 107-110: 107th Congress*.

Retrieved from January 11, 2011, from http://www2.ed.gov/policy/elsec/leg/

esea02/index.html

National Governor's Association & National Association of State Budget Officers.

(2004). *The fiscal survey of states*. Washington, DC: National Association of

State Budget Officers.

Office on the Governor. (2010). *The honorable Arne Duncan, Secretary of Education*.

    Retrieved January 4, 2011, from http://governor.state.tx.us/files/press-office/

    O-DuncanArne201001130344.pdf

Parsad, B., & Lewis, L. (2003). *Remedial education at degree-granting postsecondary*

    institutions in Fall 2000. Washington, DC: Department of Education, National

    Center for Educational Statistics.

Partnership for Assessment of Readiness for College and Careers. (2013). *Common core*

    implementation workbook. Retrieved April 28, 2013, from

    http://www.parcconline.org/CommonCoreImplementationWorkbook

Peterson, P.E., & West, M.R. (2003). *The politics and practice of school accountability*.

    Washington, DC: The Brookings Institution.

Porter, A., McMaken, J., Hwang, J., & Yang, R. (2011). Common core standards: The

    new U.S. intended curriculum. *Educational Researcher*, *40*(3), 103-116.

Pritchard, M.E., Wilson, G.S., Yamnitz, B. (2007). What predicts adjustment among

    college students*? Journal of American College Health*, *56*(1), 15-21.

Reeves, D.B. (2010). Getting ready for national standards. *ASCD Express, 8*(5), 1-3.

Regional Education Laboratory Northwest. (2009). *Models of response to intervention in*

    the northwest region states. Retrieved January 4, 2011, from

    http://educationnorthwest.org/webfm_send/329

Resnick, L.B., Rothman, R., Slatter, J.B., & Vranek, J.L. (2004). Benchmarking and

    alignment of standards and testing. *Educational Assessment*, *9*(1-2), 1-27.

Schmidt, W. H., & McKnight, C. C. (2012). *Inequality for all: The challenge of unequal opportunity in American schools*. New York, NY: Economic Policy Institute and Teachers College Press.

Sherman, L.A. (1893). *A manual for the objective study of English prose and poetry*. New York, NY: Ginn and Company.

Southwest Regional Educational Laboratory. (2010). *How prepared are students for college reading? Applying a Lexile-based approach*. Retrieved October 9, 2010, from http://www.edvanceresearch.com/images/college_level_reading_ lexile_policymakers.pdf

Staiger, D.O., & Kane, T.J. The promise and pitfalls of using imprecise school accountability measures. *The Journal of Economic Perspective*, *16*(4), 91-114.

Stenner, A. J., Burdick, D. S., Burdick, H., Swartz, C. W., & Hanlon, S. T. (2011). *Variability in estimates of text complexity for different sample sizes from professionally authored text: A white paper from the Lexile Framework for Reading*. Durham, NC: MetaMetrics.

Strong American Schools. (2008). *Diploma to nowhere*. Retrieved January 4, 2011, from http://www.deltacostproject.org/resources/pdf/DiplomaToNowhere.pdf

Terry, B.D. (2007). *The cost of remedial education*. Retrieved January 4, 2011, from http://www.texaspolicy.com/center/higher-education/reports/cost-remedial-education

Texas Education Agency. (2004). *Information on Lexiles for parents*. Retrieved January 10, 2010, from http://www.tea.state.tx.us/student.assessment/lexile/

Texas Education Agency. (2008). *Response to intervention guidance*. Austin, TX: Texas
    Education Agency.

Texas Education Agency. (2009). *Appendix F – campus comparison group*. Retrieved
    January 5, 2011, from http://ritter.tea.state.tx.us/perfreport/account/2010/
    manual/app_f.pdf

Texas Education Agency. (2010a). *Texas college and career readiness standards and
    common core college and career readiness standards crosswalk/review
    analysis*. Retrieved April 28, from http://www.tea.state.tx.us/index2.
    aspx?id=8019

Texas Education Agency. (2010b). *TAKS reading assessments*. Retrieved April 28,
    2013, from http://www.tea.state.tx.us/student.assessment/taks/reading/

Texas Education Agency. (2010c). *Texas essential knowledge and skills*. Retrieved
    April 28, 2013, from http://ritter.tea.state.tx.us/rules/tac/chapter110/ch110b.html

Texas Education Agency. (2010d). *The confidential student report: A guide for parents*.
    Austin, TX: Texas Education Agency, Student Assessment Division.

Texas Education Agency. (2010e). *Biennial budget reduction*. Retrieved February 8,
    2013, from, www.tea.state.tx.us/WorkArea/linkit.aspx?LinkIdentifier=id&Item
    ID=2147488102&libID=2147488101

Texas Education Agency. (2011). *Accountability*. Retrieved January 4,
    2011, from http://www.tea.state.tx.us/acctres/home_index.html

Texas Education Agency. (2013). *Supplemental educational services*. Retrieved March
    1, 2013, from http://www.tea.state.tx.us/index2.aspx?id=6217

Texas Higher Education Coordinating Board. (2009). *Texas college and career readiness standards*. Austin, TX: Texas Education Agency.

Thorndike, E.L. (1921). *The teacher's word book*. New York, NY: New York Teachers College, Columbia University.

Treisman, P.U., Fuller, E.J. (2001). *Searching for indirect evidence for the effects of statewide reform*. Washington, DC: Brookings Institution.

United Stated Government Accountability Office. (2008). *No Child Left Behind Act*. Retrieved April 28, 2013, from http://www.gao.gov/new.items/d08380.pdf

U.S. Department of Education. (2008). *Implementing RTI using Title I, Title III, and CEIS funds*. Retrieved March 1, 2011, from http://www2.ed.gov/programs/ titleiparta/rtifiles/rti.pdf

U.S. Department of Education. (2009). *U.S. Education Secretary releases statement on National Center for Education Statistics*. Retrieved April 30, 2013, from http://www.ed.gov/news/press-releases/us-education-secretary-releases-statement-national-center-education-statistics-n

U.S. Department of Education. (2010). *State and local implementation of the No Child Left Behind Act*. Retrieved April 30, 2013 from http://www2.ed.gov/rschstat/ eval/disadv/nclb-accountability/nclb-accountability-final.pdf

U.S. Department of Education. (2011). *ESEA reauthorization: A blueprint for reform*. Retrieved April 28, 2013, from http://www2.ed.gov/policy/elsec/leg/ blueprint/index.html

U.S. Department of Education. (2013). *Elementary & secondary education: ESEA*.

Retrieved March 28, 2013, from http://www2.ed.gov/policy/elsec/

guid/esea-flexibility/index.html

Vogel, M., & Washburne, C. (1928). An objective method of determining grade

placement of children's reading material. *The Elementary School Journal*, *8*, 373-

381.

Wagner, Tony. (2008). *The global achievement gap*. New York, NY: Basic Books.

White, S., & Clement, J. (2001). *Assessing the Lexile framework: Results of a panel*

meeting. Washington, DC: National Center for Educational Statistics, U.S.

Department of Education.

Williamson, G.L. (2004). *Student readiness for postsecondary options*. Retrieved

January 10, 2010, from http://www.lexile.com/m/uploads/whitepapers/

StudentReadinessforPostsecondaryOptionsv4_1_MetaMetricsWhitepaper.pdf

Williamson, G.L. (2006). *Aligning the journey with the destination: A white paper from*

the Lexile framework for reading. Durham, NC: MetaMetrics.

Williamson, G.L. (2008). *Career and college readiness: Through the lens of Lexiles*.

Retrieved October 11, 2011, from http://ttac.gmu.edu/telegram/article_1

Wirt, J., Rooney, P., Choy, S., Provasnik, S., Sen, A., & Robin, R. (2004).

National Center for Education Statistics: Condition of education 2004. Retrieved

October 11, 2011, from http://nces.ed.gov/pubsearch/pubsinfo.asp?

pubid=2004077