THE ACHIEVEMENT GAP of 3RD-8TH GRADERS IN TITLE I AND NON-TITLE I SCHOOLS

By

Paula Slamowitz

A Dissertation
Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education
In Educational Leadership

Northern Arizona University
May 2018

Committee:
Walter Delecki, Ph.D. Chair
Karyn Blair Ed.D.
Mary Dereshiwsky Ph.D.
David Priniski Ed.D.

ABSTRACT

THE ACHIEVEMENT GAP of 3RD-8TH GRADERS IN TITLE I AND NON-TITLE I SCHOOLS

PAULA SLAMOWITZ

The purpose of this research study was to determine if there was an academic achievement gap between third through eighth-grade students in Title I and Non-Title I schools in the academic content areas of English Language Arts and Mathematics. The study focused on the following subgroup: economically disadvantaged students. The data was gathered from an analysis of a standardized test in English Language Arts and Mathematics of third through eighth-grade students. Within the suburban southwest school district that was being studied, the district formation of schools varied: fifteen schools in the district service kindergarten through fifth-grade students, four schools in the district service kindergarten through eighth-grade students, and five schools in the district service sixth through eighth-grade students. The data was collected from the 2017 Arizona's Measurement of Educational Readiness to Inform Teaching (AzMerit) scores. The Arizona's Measurement of Educational Readiness to Inform Teaching (AzMerit) assessment is a yearly standardized assessment test, starting in the third-grade, used to evaluate student academic progress in the state of Arizona.

In summary, in grades third through fifth, there was a significant difference between students in both English Language Arts and Mathematics scores between Title I and Non-Title I schools. Also, in grades third through fifth, there was a significant difference between socioeconomically disadvantaged students in both English Language Arts and Mathematics scores between Title I and Non-Title I schools.

When it came to the middle school grades, the data results changed. In grades sixth through eighth, there was no significant difference between students in both English Language Arts and Mathematics scores between Title I and Non-Title I schools. But, when looking at socioeconomically disadvantaged students in grades sixth through eighth the data showed there was a significant student achievement gap difference between sixth and eighth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

ACKNOWLEDGEMENTS

My thanks of acknowledgement first and foremost start's with my mother, Holly Michele. There had been many times that she stayed up late to edit my papers and dealt with my frustrations when I had writers block. Thank you for your love and commitment in helping me cross the finish line with that doctoral title. I am blessed and forever grateful to have you as my mother. Thank you for your continued support in achieving my dreams even if the journey was a difficult one.

I also want to thank my precious four legged children. All seven of them have endured many continuous days of me writing and researching and not giving them the attention that they wanted. Even through it all, they were what made me keep striving through this journey. During all the hard work, I did have the much needed work/study breaks and they were what kept me going. Whether it was playing ball with Daisy Duke (West Highland Terrier), watching football with Foxy Roxy (Toy Miniature Schnauzer) and Candy Barr (Maltipoo), taking a nap with Benny Boo-Boo (Black and White Havanese), snuggling with Fabien Lapone and Shadie Sadie Lady (Bichon Frise's), and lately just chatting with Georgie Girl (White Miniature Schnauzer), yes she speaks. They are what kept me going each and every day.

Thank you so much to my committee for challenging me to this journey, even if I changed my topic four times on them. First and foremost, Dr. Delecki, thank you for taking the time to guide me to become a better educator and leader in my field. Dr. Dereshiwsky for putting the love in research and having me learn outside my comfort zone. Dr. Blair, thank you for joining my committee to scare me to the end of the tunnel. Dr. Priniski, thank you so much for joining my committee and this adventure with me. I have watched you as a leader and you have guided me to become a leader just like you are. Lastly, Dr. Eadens, thank you for taking the time

to help me with Chapter 4 and guide me through coding and running statistical analysis of my findings. All of you are amazing people and I am so glad to have you all in my life shaping me to become a superior leader in the educational field.

IN MEMORY

Through this journey I was plagued with the death of my father, grandmother, and grandfather. My mom steel-cladded me to continue my goals, reminding me every day that my father and grandparents would want me to continue and they are looking down and proud of my accomplishments. Even though they all are not here physically, in spirit I want to thank them all. My dad has been my biggest supporter through this journey. Every time I wanted to give up and quit, I heard his little voice telling me not to. I love you dad and I will never forgot you.

TABLE OF CONTENTS

TABLES

FIGURES

CHAPTER 1: INTRODUCTION

Overview

Fifty-two years ago, in 1965, President Lyndon B. Johnson signed the Elementary and Secondary Act (ESEA) as part of his War on Poverty initiative. The goal of the Elementary and Secondary Act was to improve educational equity for students from lower socio-economic families by providing federal funding to school districts to help improve the academic achievement of underprivileged students (The ABC's of ESEA, ESSA and No Child Left Behind, 2017). President Johnson believed that "full educational opportunity" should be "our first national goal" (Every Student Succeeds Act (ESSA), 2017). Title I, which was a provision of the Elementary and Secondary Act, was a program that was created by the United States Department of Education to distribute funding to schools and school districts with a high percentage of students from low-income families (Elementary and Secondary Education Act of 1965, 2017). Title I was designed by the United States Department of Education to close the skill gap in mathematics, reading, and writing between children from low-income family households who attend urban or rural school systems and students from the middle-class who participate in suburban school systems (Elementary and Secondary Education Act of 1965, 2017).

In January 2002, days after taking office as the President of the United States of America, President George W. Bush signed into law Public Law 107-110, also known as the No Child Left Behind (NCLB) Act. This Act was an update to the Elementary and Secondary Act of 1965. President Bush's reasoning behind this act was to build the mind and character of every child, from every background, in every part of America (NCLB Executive Summary, 2004). The goal of No Child Left Behind was to provide disadvantaged students (English-language learners, students in special education, and poor and minority students) equal educational opportunities to

reach the same challenging standards that non-disadvantaged students are expected to master (No Child Left Behind Act of 2001: Background Information, 2017). No Child Left Behind held schools accountable for how the students learned, how they performed in annual state testing and set targets goals for improvement. Schools across the United States of America gave all students in grades three through twelve a yearly performance test in the academic content area of math and reading. Individual states brought all students in schools, including those that received services for special education services, to the level of proficiency in both math and reading on the yearly state assessment test. Schools that did not produce to their adequate yearly progress (AYP) that the state Department of Education had set, the individual school would be placed on probation. If a school did not meet their adequate yearly progress for two years or more in areas such as all students at the school or with a particular subgroup (such as group English-language learners or special education students), the school missed the mark and was identified as not "making AYP" and would have severe sanctions imposed on them (Klein, 2015). Some of those penalties would be: allowing students to transfer to a higher-performing public school in the same district, offer free tutoring, and a state would choose to shut down the school, the state would take them over, or develop a significant turnaround strategy program (Klein, 2015). With a relationship between academic achievement and economic status, many schools that did not meet their yearly adequate yearly progress are considered Title I schools (No Child Left Behind Act of 2001: Background Information, 2017).

Many legislatures saw problems within No Child Left Behind (NCLB) Act, even though it helped with closing the achievement gap and mandating transparency. Since the original Elementary and Secondary Education Act (ESEA) of 1965, the act/law has been reauthorized eight times. The most recent time was on December 10, 2015, by President Barack Obama

renaming it Every Student Succeeds Act (ESSA). Each time the act was reauthorized, new changes were brought to the program to provide better chances and support for students in lower socio-economic families. The Every Student Succeeds Act's goal was to improve the educational opportunities and outcomes for children from lower-income families (Every Student Succeeds Act (ESSA), 2017).

To conform to the No Child Left Behind Act all schools across the United States of America was required to give students in grades three through twelve a yearly performance test in the academic content area of Mathematics and English Language Arts (ELA). Arizona administers a test called the Arizona's Measurement of Educational Readiness to Inform Teaching (AzMerit) to all students in public district schools and charter schools in grades three through twelve which assesses reading, writing, and math each spring (Arizona Aims Higher, 2017). This test provides students with valuable information about how they had done and if they prepared for the next grade and eventually for college and careers (Arizona Aims Higher, 2017).

This study was similar to a study conducted by Amy Scott in 2005 entitled *A Quantitative Examination of Title I and Non-Title I Elementary Schools in East Tennessee Using Fourth-Grade Math and Reading Standardized Test Scores* (Scott, 2005) and Renee Ashley Headen in 2014 entitled *A Quantitative Examination of Title I and Non-Title I Elementary Schools in District 8 of Northern Alabama using Fourth Grade Math and Reading Standardized Test Results* (Headen, 2014) however the location, grade, and subgroups were different. This study differed from the other two previous because it compared data of Title I schools and Non-Title I schools in the academic content areas of reading, writing, and math for students in grades three through eight in a suburban southwest school district. Data was gathered from the Arizona's Measurement of Educational Readiness to Inform Teaching test results to determine if there was

differences in student achievement in the academic content areas of English Language Arts (ELA) and Math between third through eighth-grade students in Title I schools as opposed to Non-Title I schools in a suburban southwest school district. The study focused on the data and broke it down into a subcategories of economically disadvantaged students and non-economically disadvantaged students. The data gathered was from all twenty-four district schools that serve students K-8 into both content areas of English Language Arts and Mathematics. The data was collected from the 2017 Arizona's Measurement of Educational Readiness to Inform Teaching results (AzMerit).

Statement of Problem

The United States over the last decade, since 1965, has recognized that the educational system needs substantial alterations to improve academic achievement for all students. When students go to school, their one job is that they must learn and be academically successful. Research shows that students who are in lower socioeconomic areas face a larger academic struggle in their academic success than their counterparts in higher socioeconomic areas (Headen, 2014). According to the No Child Left Behind (NCLB) Act, academic success is defined as the students' ability to score proficient or to earn a passing standardized test score on their state's assessment. In order for a school to show that they have excelled in their students' academic needs, all students must show Adequate Yearly Progress that has been determined by No Child Left Behind standards. Some schools struggle in achieving their Adequate Yearly Progress due to their demographic makeup of their student population. Research has shown that students that are from certain subgroups such as: English Language Learners, lower socioeconomic status homes, and special education (Considine & Zappala) tend to have a speed bump to overcome in succeeding academically in school. To make sure that all students are given the same opportunities in schools, despite their economic status, Title I assistance was

given to schools, who qualified for funding, which should help bridge the academic achievement gap between Title I and Non-Title I schools.

The Title I, Part A of the Elementary and Secondary Act "provides financial assistance to local educational agencies and schools with high numbers or high percentages of children from low-income families to help ensure that all children meet challenging state academic standards" (Improving Basic Programs Operated by Local Educational Agencies (Title I, Part A)). This funding is important to schools so they have the additional funding that allows schools to provide supplementary resources that are needed to give their students the best education possible. Now with the new Every Student Succeeds Act requirements that were implemented in 2015, many teachers have been concerned that the provisions may not lead to the equitable changes in how schools districts' allocate resources to help students succeed. Teachers are worried about Title I funding rules, the elimination of inequalities, and trying to close the achievement gap (Arizona Teachers Express Concern Over New ESSA Requirements, 2017), which is showing that we have not put the children's success first.

Purpose of Study

The purpose of this study was to determine if there is a difference in student achievement in the academic content areas of English Language Arts and Mathematics between third through eighth-grade students in Title I schools,a as compared to Non-Title I schools in a suburban southwest school district. The study focused on the data and the researcher analyzed the data and divided it into subcategories of economically disadvantaged students and non-economically disadvantaged students. The data was gathered from all twenty-four district schools that served students K-8 into both content areas of English Language Arts and Mathematics. The data was collected from the 2017 Arizona's Measurement of Educational Readiness to Inform Teaching data.

Research Questions

Third-grade:

1. Is there a student achievement gap in English Language Arts (ELA) among third-grade students in Title I schools and Non-Title I schools?

H_o1: There is no significant student achievement gap difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a1: There is a significant student achievement gap difference between third -grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

2. Is there a student achievement gap in third-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o2: There is no significant student achievement gap difference between third-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a2: There is a significant student achievement gap difference between third-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

3. Is there a student achievement gap in Mathematics among third-grade students in Title I schools and Non-Title I schools?

H_o3: There is no significant student achievement gap difference between third-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a3: There is a significant student achievement gap difference between third-grade students Mathematics scores between Title I schools and Non-Title I schools.

4. Is there a student achievement gap in third-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o4: There is no significant student achievement gap difference between third-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a4: There is a significant student achievement gap difference between third-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Fourth-grade:

5. Is there a student achievement gap in English Language Arts (ELA) among fourth-grade students in Title I schools and Non-Title I schools?

H_o5: There is no significant student achievement gap difference between fourth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a5: There is a significant student achievement gap difference between fourth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

6. Is there a student achievement gap in fourth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o6: There is no significant student achievement gap difference between fourth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a6: There is a significant student achievement gap difference between fourth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

7. Is there a student achievement gap in Mathematics among fourth-grade students in Title I schools and Non-Title I schools?

H_o7: There is no significant student achievement gap difference between fourth-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a: There is a significant student achievement gap difference between fourth-grade students Mathematics scores between Title I schools and Non-Title I schools.

8. Is there a student achievement gap in fourth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o8: There is no significant student achievement gap difference between fourth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a8: There is a significant student achievement gap difference between fourth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Fifth-grade:

9. Is there a student achievement gap in English Language Arts (ELA) among fifth-grade students in Title I schools and Non-Title I schools?

H_o9: There is no significant student achievement gap difference between fifth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a9: There is a significant student achievement gap difference between fifth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

10. Is there a student achievement gap in fifth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o10: There is no significant student achievement gap difference between fifth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a10: There is a significant student achievement gap difference between fifth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

11. Is there a student achievement gap in Mathematics among fifth-grade students in Title I schools and Non-Title I schools?

H_o11: There is no significant student achievement gap difference between fifth-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a11: There is a significant student achievement gap difference between fifth-grade students Mathematics scores between Title I schools and Non-Title I schools.

12. Is there a student achievement gap in fifth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o12: There is no significant student achievement gap difference between fifth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a12: There is a significant student achievement gap difference between fifth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Sixth-grade:

13. Is there a student achievement gap in English Language Arts (ELA) among sixth-grade students in Title I schools and Non-Title I schools?

H_o13: There is no significant student achievement gap difference between sixth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a13: There is a significant student achievement gap difference between sixth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

14. Is there a student achievement gap in sixth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o14: There is no significant student achievement gap difference between sixth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a14: There is a significant student achievement gap difference between sixth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

15. Is there a student achievement gap in Mathematics among sixth-grade students in Title I schools and Non-Title I schools?

H_o15: There is no significant student achievement gap difference between sixth-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a15: There is a significant student achievement gap difference between sixth-grade students Mathematics scores between Title I schools and Non-Title I schools.

16. Is there a student achievement gap in sixth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o16: There is no significant student achievement gap difference between sixth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a16: There is a significant student achievement gap difference between sixth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Seventh-grade:

17. Is there a student achievement gap in English Language Arts (ELA) among seventh-grade students in Title I schools and Non-Title I schools?

H_o17: There is no significant student achievement gap difference between seventh-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a17: There is a significant student achievement gap difference between seventh-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

18. Is there a student achievement gap in seventh-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o18: There is no significant student achievement gap difference between seventh-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a18: There is a significant difference between seventh-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

19. Is there a student achievement gap in Mathematics among seventh-grade students in Title I schools and Non-Title I schools?

H_o19: There is no significant student achievement gap difference between seventh-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a19: There is a significant student achievement gap difference between seventh-grade students Mathematics scores between Title I schools and Non-Title I schools.

20. Is there a student achievement gap in seventh-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o20: There is no significant student achievement gap difference between seventh-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a20: There is a significant student achievement gap difference between seventh-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Eighth-grade:

21. Is there a student achievement gap in English Language Arts (ELA) among eighth-grade students in Title I schools and Non-Title I schools?

H_o21: There is no significant student achievement gap difference between eighth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools.

H_a21: There is a significant student achievement gap difference between eighth-grade students ELA scores between Title I schools and Non-Title I schools.

22. Is there a student achievement gap in eighth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o22: There is no significant student achievement gap difference between eighth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a22: There is a significant student achievement gap difference between eighth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

23. Is there a student achievement gap in Mathematics among eighth-grade students in Title I schools and Non-Title I schools?

H_o23: There is no significant student achievement gap difference between eighth-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a23: There is a significant difference between eighth-grade students Mathematics scores between Title I schools and Non-Title I schools.

24. Is there a student achievement gap in eighth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o24: There is no significant student achievement gap difference between eighth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a24: There is a significant student achievement gap difference between eighth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Significance of the Study

The results of this research study will provide schools with insight about whether Title I funds are assisting Title I schools with closing the achievement gap for students in grades 3-8 in the content areas of English Language Arts (ELA) and Mathematics compared to students in Non-Title I schools. The Every Student Succeeds Act and No Child Left Behind required that schools test all students on the specific grade level and disaggregate the data into subcategories of gender, ethnicity and disadvantaged students with limited English proficiency. The findings of this study could help the suburban southwest school district with some clarification of how the particular subgroups at Title I schools are performing on the state assessment test and allow for

paralleling the data to those same subsets at Non-Title I schools within their district. The data will determine if the Title I funds are helping close the achievement gap for the disadvantaged students.

The information obtained from this study could be proven beneficial to educational administrators at all of the Title I schools as well as the district Title I coordinator at the suburban southwest school district that was studied, since they must provide documentation as to how funds are being used and also provide Adequate Yearly Progress for each student. The results from this study could assist administrators at the district schools to look at ways to increase student Adequate Yearly Progress such as providing morning or after school tutoring services for any student that scores below proficient on the state's assessment test, provide teachers with professional development or other activities that might address instructional needs for this student population, purchase supplemental materials that would support implementation of an improved instructional program, or purchase library books for the purpose that is consistent with the needs identified in the comprehensive needs assessment and articulated in the school wide improvement plan (The American Recovery and Reinvestment Act of 2009 (ARRA), 2009).

Scholastic factors that were impacted from this particular study might include changing the current educational policies and contributions to study this same topic further. The study could be examined more closely if the figures released by Arizona's Department of Education or district would release the individual scores of students instead of a combined score. Since the data population is set in this study, examining the statistics into smaller subcategories was appropriate because it showed patterns and discrepancies in certain categories as opposed to larger general categories. The data collected at a Title I school was based on enrollment of

students who qualify for free and reduced lunch. Seeing the data of just those students who are genuinely the Title I students was helpful. However, those students' names are confidential and was not disclosed. Since this data was not available, going more into depth was not possible. If a district can get the names of students who are eligible for free and reduced lunch with parental consent, then a more refined study could have been conducted using individual student data who are Title I students.

This study opened the doors for additional research to be done on the same topic within different districts in the suburban southwest. Since this study is comparing students in a particular district in grades 3-8 in both English Language Arts (ELA) and Mathematics, a replication study could be done in the same state looking at the same classes and content areas but in a different region. Also, the Arizona's Measurement of Educational Readiness to Inform Teaching data could be broken down into different subcategories like English Language Learners and students with disabilities.

Another research study that could be conducted on the same topic but take the 2017 Arizona's Measurement of Educational Readiness to Inform Teaching data and do a comparative analysis to the 2016 Arizona's Measurement of Educational Readiness to Inform Teaching data and the 2015 Arizona's Measurement of Educational Readiness to Inform Teaching data and see the differences in the achievement gap between a Title I School v. a Non-Title I school in the same district.

Limitations

This study was limited to the achievement of all students in grades 3-8 attending both Title I and Non-Title I schools in the suburban southwest school district. The researcher happens to be an employee of the school district selected for this study. The district in study has twenty –

four schools throughout its 112 square miles that it serves. The data that the researcher analyzed was from the Arizona Department of Education and also from the district Title I coordinator. Since the data was collected from a state and district resource, we assume that the information that was provided to the researcher for every school was accurate.

Delimitations

The researcher collected its data from the 2017 Arizona's Measurement of Educational Readiness to Inform Teaching assessment results that was administered to all students across the state of Arizona between March and April of 2017. The study was bound by time since the Arizona's Measurement of Educational Readiness to Inform Teaching test is only held in the springtime once a year. Although this particular study addressed the collection of data from twenty-four schools in a specific school district, it focused on grade 3-8 students in the content area of English Language Arts (ELA) and Mathematics.

Certain restrictions were placed on this study because of the specific area of research and geographical location. This study was focused on one school district in the suburban southwest and looked at their Title I schools and Non-Title I schools. Since the assessment scores in regards to the students in grades 3-8 were analyzed in this study, and compared to other students in the same grade in the same district, generalizations were limited to these grades and district only.

Definition of Terms

1. *Academic Achievement*: This is measured by a student earning proficient or higher on a standardized test score. The progress that a student makes is set by the pretest that they take (Cunningham, 2012).

2. *Achievement Gap*: The differences in average test performance among students subgroups, usually defined in terms of ethnicity or income (Di Carlo, 2014).
3. *Adequate Yearly Progress (AYP):* Measures by which schools, school districts, and states are held accountable for student performance under Title I of the No Child Left Behind Act of 2001 (Adequate Yearly Progress, 2011).
4. *Assessment:* Is another word for a test. The Every Student Succeeds Act requires all tests/assessments to be aligned with academic standards. All Arizona public schools, including districts schools and charter schools, are required to properly administer state and federally mandated assessments once a year. (Assessment, 2017)
5. *AzMerit:* Arizona's Measurement of Educational Readiness to Inform Teaching is a statewide achievement test that all students in Arizona take from grades 3-12 once a year in the springtime (AzMerit, 2017).
6. *Disaggregated Data*: Numerical or non-numerical information that was collected from multiple sources and broken down in component parts such as: disabilities, race, gender, and English Language Learners (Disaggregated Data, 2015)
7. *Elementary and Secondary Education Act (ESEA):* This law brought education into the forefront of the national assault on poverty and represented a landmark commitment to equal access to quality education by President Johnson and his "War on Poverty" (Elementary and Secondary Education Act of 1965, 2017).
8. *English Language Arts (ELA):* In the state of Arizona, students are provided a rich and genuine learning experience combining Reading, Writing, Grammar, Speaking, and Listening together in one content area ELA.

9. *Every Student Succeeds Act (ESSA):* Signed by President Obama on December 10, 2015, that would help to ensure success for students and schools (Every Student Succeeds Act (ESSA), 2017).
10. *Economically Disadvantaged Students:* These are students that qualified for free or reduced lunch in the educational system (U.S.Department of Education, 2002).
11. *Highly qualified teachers:* Must have at least a bachelor's degree, full state certification or licensures, and prove that they know each subject they are teaching (New No Child Left Behind Flexibility: Highly Qualified Teachers, 2004).
12. *Nation at Risk:* A document that looked at the past of what was going on with the educational system and provided an outline for the future of the educational system in the United States.
13. *National Assessment of Educational Progress (NAEP):* largest nationally representatives and continuing assessment of what America's students can do in various academic content areas (NAEP Overview, 2017).
14. *No Child Left Behind (NCLB):* The NCLB is a federal mandated act that requires all states to establish an accountability plan that holds all schools and district accountable for students' performance (Klein, 2015).
15. *Non-Title I Schools*: These are public schools that do not receive any federal funding to support economically disadvantage students that are attending the school (U.S.Department of Education, 2002).
16. *Proficient*: Used in reference for scores on standardized tests and other forms of assessment, student achieving or failing to achieve proficiency levels determined by tests and assessments, students demonstrating or failing to demonstrate proficiency in relation

to learning standards, and teachers being deemed proficient or non-proficient on job-performance evaluations (Proficiency, 2014).

17. *Race/Ethnicity*: In this study, the data is broken down into, Caucasians, Hispanics, African Americans, Native Americans, and Asian/Pacific Islander students (U.S.Department of Education, 2002).
18. *Statistical Package for the Social Science (SPSS)*- A computer statistical package which computes complex data. SPSS can take inputted data and generate reports, charts, descriptive statistics, and complex statistical analysis. This program is used to conduct independent t-tests, ANOVA's, correlations, reliability tests, and linear models to just name a few.
19. *Socioeconomic Status (SES)* - The determination of a person's SES is determined by the families' income.
20. *Subcategories*: These categories can include race, gender, socioeconomic status, and disability.
21. *Title I:* A school that receives federal funding through a program that is intended to help ensure that all students have the opportunity to obtain a high quality education and reach proficiency on challenging state academic assessments (U.S.Department of Education, 2002).
22. *Title I Schools*: These are public schools that receive federal funding from the federal Title I program due to the number of students that qualify for the free or reduced lunch program (U.S.Department of Education, 2002).

Overview of Study

The first chapter of this dissertation included the statement of the problem being researched, the purpose of the study, the research questions being explored, and the significance of the study. The second chapter of this dissertation will consist of a literature review that will examine with current research about the beginning of public schools, the Elementary Secondary Education Act, history of Title I and Non-Title I schools, Title I funding, No Child Left Behind Act (NCLB), Every Student Succeeds Act (ESSA), and finally standardized testing. Chapter three restates the research question, explores the research design and procedures, looks at the research methodology, explains the population and sample used, describes the source of information, explains the data collection used, and finally the data analysis procedures. The fourth chapter will analyze the data in a narration form, tables, and figures. In this chapter the reader will also find the null hypothesis that is related to each of the twenty four research questions. In the final chapter there will be a summary of the findings, the conclusion, and recommendations for further studies to be conducted.

CHAPTER 2: LITERATURE REVIEW

Introduction

This study examined the effects that the Every Student Succeeds Act and the No Child Left Behind Act have on Title I and Non-Title I schools. For schools receiving federal funding support, the funding is based on how many students qualify for free and reduced lunch. The new law of Every Student Succeeds Act (ESSA) emphasized three core goals: increase equity and excellence, so all students succeed; provide support for teachers and school leaders; and promote access, affordability, and completion of higher education (Fiscal Year 2017 Budget Summary and Background Information, 2017).

This chapter will go back in time to set the pathway to show the evolution of the United States educational system. It begins with the common school movement and walk through the education system in the areas of the: development of Title I through the Elementary and Secondary Education Act (ESEA), No Child Left Behind, and finally, to the current, Every Student Succeeds Act.

Beginning of the Public School

In 1782, Thomas Jefferson developed an educational system for the state of Virginia that divided the state of Virginia into sections with each section having a state support free school system for the first three years (Smith, 2012). He wasn't the only leader that believed that education was essential to the new republic. Leaders at both the national and local levels, after the American Revolution, advocated for schools to promote citizenship and democratic values (Reese, 2005).

During the early nineteenth century (the 1830s and 1840s), education was an issue and the common or public school movement became the starting point for education in America. In the early nineteenth century, also known as the "The Common School Movement" was a time

when it allowed all students in the United States to attend school for free (Spring, 2014). There were three distinctive features of the common school movement. The first one was to educate all children in a common schoolhouse and to create common culture while reducing social class conflict. The second one was to use the schools to improve public morality, reduce crime and poverty, and provide equal opportunity. The last feature was the creation of state agencies to control local schools (Spring, 2014).

Teacher qualification was not based on formal training but only on the ability to read, write, and have good moral character (Reese, 2005). Formal teacher education in America began in the first public normal school which was formed in Lexington, Massachusetts, in 1839, under the guidance of Cyrus Peirce (Harris & Neiman). A normal school was a place where people who wanted to be elementary school teachers studied the subjects they wanted to teach, learn teaching methodology, and practice teaching in model schools for up to one year before being allowed to teach a class of student (Spring, 2014). The normal school was designed to provide methods to train teachers to get them ready for the field of education (Harris & Neiman)

Many historians have praised Jefferson for his efforts to change public education, while portraying him as a forerunner of the common school movement that began to take off during the late 1830s, under the leadership of Horace Mann in Massachusetts (Smith, 2012).

In the early 1900s, only the white, wealthy children were the students that received an education, because to go to school would cost money and they were the only ones that had it to spend. The Common School Movement was created in an attempt to make education available to all children in the United States (Spring, 2014). It was also established because it was thought to be unfair to low socioeconomic status families that could not afford to pay for an education. The creation of the Common School Movement was challenging at first because people were

extremely wary of it due to taxes and religion. However, it was the best education step for American in the 1800s. Thanks to Horace Mann and Henry Barnard, the Common School Movement was a stepping stone in how America's education system is shaped today.

The father of the Common School was Horace Mann. Mann began his career as an attorney and was interested in politics eventually becoming a legislator. He was able to use his position to enact significant educational reform to schools when he was elected to act as Secretary of the newly-created Massachusetts Board of Education in 1837 (Horace Mann (1796-1859)). His primary goal in office was to make education available to all children in the United States, starting in his state of Massachusetts. He believed that the public school system was the key to developing the country and improving the quality of life for the citizens of United States (Don Kauchak, 2011). Mann thought his beliefs would make America better off and provide Americans with the opportunity of obtaining better jobs and becoming more successful in what they want to do. However, Brouillette (1999) stated that "The fight to bring education under the control of government was essentially a battle over the schools' role in shaping the character of the American people."

Horace Mann's involvement in the State Senate put Massachusetts as the leader of education in the United States of America. When he was on the board, he worked on three objectives. His first goal was collecting training data. The second goal was that the state needed to adopt textbooks through accepted libraries that were approved by the state. His last goal was to have state control over teacher preparation and the establishment of "Normal Schools" (Brouillette, 1999). A normal school was a two-year post-secondary educational institution dedicated to the training and professional development of a teacher (Normal School, 2008). In addition to the utilization of women in teaching, the common school reformers hoped to improve

education through the establishment of teacher institutes and normal schools both of which introduced the novel idea those methods of instructional could be taught and learned (Spring, p. 146, 2014).

Henry Barnard was an educator and influential in improving public schools and in promoting educational literature in the United States (Henry Barnard Facts). Barnard was a member of the Whig party and was part of the Connecticut State Legislature in 1837; here he helped create the passage of a bill creating the state board of common schools (Henry Barnard Facts). Barnard wanted to focus on schools, wages, and teachers. Barnard found schools poorly maintained and attended; he wanted public education to be a "good education for the best and cheap enough for the poorest" (Henry Barnard Facts). Barnard moved to Rhode Island and studied their schools and in 1845 became Rhode Island's first commissioner of education. While in office he worked on: increasing teacher wages, providing buildings with maintenance repairs, and improving teaching in the classrooms into the state's first school system of 1845. With his heart in education, Barnard became the principal at one of the normal schools as well. Barnard was responsible for helping out with getting education up and running in both Connecticut and Rhode Island. He was the first United States Commissioner of Education in 1867.

Events Leading to the Creation of Title I of the ESEA

The history of protection rights for students with disabilities or students of color started in 1954 when the United States Supreme Court decided *Brown v. Board of Education of Topeka* was unconstitutional for schools to segregate students due to race. *Brown v. Board of Education of Topeka* was the beginning of building the pathway for students of color, students with disabilities, and students to receive a quality education. This Supreme Court case grew a national argument about the equal quality of education that African American students were winning in

the public schools (Thomas, Cambron-McCabe, & McCarthy, 2009). Eventually, *Brown v. Board of Education of Topeka* leads to not only an equal education needed for African American students, but also for students who came from lower socioeconomic families or who had other disadvantages, besides race, are necessary to have equal access to education (Essex, 2012).

With education needing improvements, President Kennedy in 1961 drafted a proposal for federal aid to be used to improve education in the United States. At this time, the percent of nonwhite Americans in poverty was 41%, compared to 12% of white Americans (Marx, 2016). President Kennedy's vision, while he was president, was to improve the public education for students in poverty; however, his proposals were never passed. During this time in the country, many residents feared the changes in how education funding was going to be used due to *Brown v. Board of Education of Topeka*, mandated equal opportunity for White and African American students. While people feared these changes, others feared and wondered if the federal government was going to take control of individual schools. However, the people's fears ended when President Kennedy was assassinated on November 22, 1963, leaving Vice President Lyndon B. Johnson to take over the office of the president on the same day.

The "War on Poverty Act" was enacted in 1965 by President Johnson stating, " Our aim is not only to relieve the symptoms of poverty, but to cure it and, above all, to prevent it" (Matthews, 2014). President Lyndon B. Johnson, in 1965, also signed the Elementary and Secondary Education Act (ESEA).The signing of this act was for the sole purpose for students to receive equal access to the same education as other students, but also federal funding could help for primary and secondary schools for students disadvantaged by poverty (Thomas, Cambron-McCabe, & McCarthy, 2009). It had two main focuses: to improve schooling for students living in high poverty areas and to improve the equality of educational outcomes for students living in

poverty (Liu, 2007). The presentation of the ESEA reformed the federal government's role in the educational system.

The original ESEA was only thirty-two pages long and was itself an amended version of Public Law 81-874 which was an effort for the federal government to assist in public education costs that were impacted by the national defense (Schneider, 2016). The original ESEA had six titles: Title I: Financial Assistance to Local Education Agencies for the Education of Children of Low-income Families and Extension of Public Law 874, Eighty-first Congress; Title II: School Library Resources, Textbooks, and Other Instructional Materials; Title III: Supplementary Educational Centers and Services; Title IV: Educational Research and Training; Title V: Grants to Strengthen State Departments of Education; Title VI: General Provisions (Schneider, 2016). The ESEA established the Title I program subsidizing school districts with a significant share of impoverished students, among other provisions (Matthews, 2014). President Johnson's devotedness to improve the education of poor and minority children made his act of signing of the ESEA as the most noted action that he made as President of the United States.

History of Title I

Title I was a program that was created by the United States Department of Education to distribute funding to schools and school districts with a high percentage of students from low-income families. Title I was designed to close the academic achievement gap in Reading, Writing, and Mathematics of students who were from low-income households (Elementary and Secondary Education Act of 1965, 2017). When Title I was implemented in the Elementary and Secondary Education Act of 1965, politicians, educators, community members, and advocates of students from disadvantaged homes had extremely high expectations for the programs through the 1970s (Title I — Improving The Academic Achievement Of The Disadvantaged, 2017). The

expectations for Title I funding and programs were extraordinarily high, and it stayed through all the way through the 1970s. The fight on the "War on Poverty" many believed should be fought through public education. People thought that Title I programs would help children over the barriers of being economically challenged and become part of the middle class (Jennings, 2000).

According to the trends of the 1970s, the achievement gap seemed to be declining among the more economically advantaged students proportional to the socioeconomically disadvantaged students (Barton & Coley, 2010). The National Center for Education Statistics found that the gap in reading in mathematics between African American and Caucasian students did not see any substantial and consistent differences in the score distribution (Barton & Coley, 2010), showing that the gap was closing. The learning gap between whites and minorities was cut by one-third in Reading, Mathematics, and Science from 1970 to the late 1980s according to test scores measured on the National Assessment of Educational Progress (Puma, Karweit, Price, Ricciuti, & Thompson, 1997).

The National Assessment of Educational Progress (NAEP) is the largest nationally representative and continuing assessment of what America's students can do in various academic content areas (NAEP Overview, 2017). The NAEP and the ESEA of 1965 were the first to officially use formative testing as a means of monitoring student academic progress in 1969. The assessments that are given include subjects of Mathematics, Reading, Science, Writing, the Arts, Civics, Economics, Geography, and U.S history (NAEP Overview, 2017). The purpose of the NAEP was to monitor the progress of students in America. The NAEP is a nation's report card and assesses students in grades 4, 8, and 12 are assessed in each subject periodically, however not all grade levels are evaluated each time. The NAEP assessments are administered uniformly using the same set of test booklets across the nation. Therefore the results serve as a standard

metric for all states and urban districts (NAEP Overview, 2017). Federal laws state that the NAEP test is a voluntary assessment for all students, schools, districts, and states, and if taken all students are to remain anonymous. However, if a state is receiving Title I funding, federal law requires those states, districts, and schools to participate in the assessment for students in grades four and eight to monitor yearly academic progress (NAEP Overview, 2017).

Policymakers started to look at education as a national issue and knew something needed to be done to improve the educational system for students; hence United States Department of Education was formed in 1979. In the 1980s when President Reagan was in office, many Congressmen believed that the Title I program needed some changes due to the disappointing reviews of the program from national evaluators (Puma, Karweit, Price, Ricciuti, & Thompson, 1997). Congress wanted to reduce the federal regulations of Title I and allow local and state levels to have control over the funding, therefore Congress passed the Education Consolidation and Improvement Act of 1981 (H.R. 3941 (97th): Education Consolidation and Improvement Act of 1981, 2004).

Two years later, President Reagan declared that "Our nation is at risk" and held up a report titled *A Nation at Risk* formed by the U.S Secretary of Education Terrel H. Bell (Graham, 2013). The document looked at the past of what was going on with the educational system and provided an outline for the future of the educational system in the United States. The document *A Nation at Risk* painted a grim picture of American education. According to the report, the American schools was getting worse, test scores were falling, millions of Americans were illiterate, and the teachers in the classrooms were not educated enough or paid enough (The National Commission on Excellence in Education, 1983). The entire nation was at risk because the educational system in America was subpar to other countries. The document offered

recommendations on how to get the educational system in America back on track. One suggestion the report stated was to make the educational system more rigorous. States needed to increase their level of difficultly in their curriculum to challenge students to do better and graduate. Another recommendation the report offered was to change state standards. The report wanted states to adopt rigorous standards which required students to meet higher level requirements in order to graduate. A third recommendation was about teacher preparation and pay. Teachers were paid far less than other fields that need a college degree causing a teacher shortage. The report suggested that teacher pay should be tied to student achievement (The National Commission on Excellence in Education, 1983).

With student achievement still a concern, the Hawkins- Stafford Elementary and Secondary School Improvement Act was signed on April 28, 1998. This act focused on school improvement and authorized new elementary and secondary education aid programs, such as: school dropout prevention, joint education of disadvantaged preschool children and their parents, and foreign language education (Elementary and Secondary Education: A Summary of the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988, Public Law 100-297. CRS Report for Congress, 1988).

Lawmakers were still concerned about the effectiveness of Title I and thought it would be beneficial for socioeconomically disadvantaged students. In 1994, Improving America's Schools Act was enacted to provide resources to states, districts, and school to support their efforts to help students reach high state standards (Wiley, 1995). The Improving American's Schools Act also provided additional support and the School-to-Work Opportunities Act to help build other pathways to enable all children to meet challenging state standards (Wiley, 1995).

Socioeconomic Status and Academic Achievement

Early education for children is essential for their educational development. When it comes to entering school, children who come from lower socioeconomic status tended to be less prepared with less background knowledge than peers of their age that were not of lower socioeconomic status. The educational system had the task to close the educational gap that already exists with this group of students along with mastering new skills or knowledge that pertain to the Common Core Standards. The Coleman report in the 1960s along with the book *The Bell Curve* written by Herrnstein and Murray in the 1990s, states that same thing: socioeconomic status is correlated with student achievement (Wiggins, 2017). A study by Ready (2010) reported that children who are socioeconomically disadvantaged are less likely to be successful academically in school. In fact, socioeconomically disadvantaged students have entered schools at older ages than their advantaged peers. Therefore, the gap increased year after year and became more challenging to close the achievement gap.

One study about the effects of socioeconomic status on academic achievement in early childhood was conducted by Judith C. Stull. Stull's longitudinal research focused on the impact of education in school. A focus of the study was on the impact factors outside of the classroom that affected what happened within the school on student achievement (Stull, 2013). The study focused on the relationship between the family characteristics and family expectations that they have for their children (Stull, 2013, pg. 57). The second focus of the study was to differentiate the direct effects of socioeconomic status from complicated ones and capture the size of the impact as it relates to the student achievement (Stull, 2013, pg. 57-58).

The study had two cohorts: one cohort were students entering kindergarten, and the other group was children born in the calendar year 2000. The data collected was from a sample of

approximately 22,000 children that were enrolled in almost 900 kindergarten programs. Along with data being collected from the students, data was collected from their teachers, school administrators, and parents (Stull, 2013). The findings from this study indicated that students entering school with an existing academic achievement gap were not able to close the achievement gap. In fact, as the students went through each year, the deficit grew greater. To draw a parallelization of truth that socioeconomic status had an effect on academic achievement of students, another study conducted by Maleyko and Gawlik (2011) concluded that socioeconomic status did effect academic performance of students because they reported that African American kindergarteners did achieve thirty-four percentage points below their Caucasian kindergartener peers (pg. 612).

A final study showed socioeconomic status was affecting academic achievement by Yalgun and Karaman. This study indicated that the socioeconomic status of a family was a significant factor effecting academic progress. The study noted that students categorized as low socioeconomic status received less social support from parents and had more educational and social difficulty (Yalgun & Karaman, 2015). The study was conducted to show the contrary factors affecting student academic achievement in elementary school age students. The study suggested the most common adverse factor was the socioeconomic condition of families which included the low level of parent education and low level of family income (Yalgun & Karaman, 2015). Low-income families did not have the resources that high-income families have to invest in their student's education, therefore rely on services of the school.

In conclusion, research had shown that children that came from low socioeconomic households and communities tend to develop academic skills much slower than children/peers from higher socioeconomic groups. According to the American Psychological Association,

children that came from low socioeconomic tend to have poor cognitive development, language, memory, socioemotional processing, and consequently reduced income and health in adulthood (Education and Socioeconomic Status, 2017). Inadequate education and increased dropout rates can affect a child's academic achievement. What is needed is to improve the quality of the educational system of schools and early intervention programs. Head Start, could help reduce some of the risk factors. Increasing the research on the correlation between socioeconomic status and education is essential.

No Child Left Behind (NCLB)

The Elementary and Secondary Education Act (ESEA) of 1965 was reauthorized in 2002 with President George W. Bush signing the No Child Left Behind (NCLB) Act which was the most sweeping education-reform legislation of the time. No Child Left Behind was written parallel to President Reagan's A Nation at Risk. A Nation at Risk was broad and pointed out problems in the American educational system while the NCLB was narrowly called to action the individual learner and academic standards (No Child Left Behind).

The primary purpose of the NCLB was to ensure that students in every public school achieve essential learning goals while being educated in safe classrooms by skilled educators. Also, NCLB requires schools to close academic gaps between economically advantaged students and students who are from different economic, racial, and ethnic backgrounds as well as students with disabilities (Yell, 2010). A primary goal of the NCLB was to raise academic standards for all students and to measure student achievement to hold schools accountable for educational progress were the central strategies for promoting educational excellence and equity in American schools (NCLB: Standards, Assessments, and Accountability, 2017). Accountability plans must be carried out by every state, district, and school that receives federal funding. In those

accountability plans, goals, objectives, and tactics for all students must be documented in the accountability workbook before the proposal is submitted to the United States Department of Education for approval.

Components of No Child Left Behind

A primary focus of the NCLB was to increase the student academic standards to more rigorous learning standards. Another focus was to create high stakes tests for accountability, and expand the flexibility and local control of schools. The NCLB wanted to emphasize teaching methods based on scientific research. They wanted to expand options for parents that have students attending low-performing schools. Finally, the NCLB expected all teachers to be highly qualified.

Within No Child Left Behind, adequate yearly progress (AYP) on student achievement must be strictly followed. A minimum benchmark, assessment, or standard must be administered in every school and on every student. The NCLB states that all states must develop defined learning goals, or proficiency standards, and then access if individual students and schools meet these target goals and criteria (Rosenberg, Westling, & McLeskey, 2010). Schools that meet their AYP goals receive public acknowledgment of effort, while schools that do not achieve their annual AYP goals for two consecutive years are considered in need for improvement, and therefore steps will be taken to get that school up to meeting their AYP goals. The NCLB also gave options to parents with students in failing schools.

This act gave parents' choices if their student was attending an underperforming school. The public school choice and supplemental services provision of the NCLB permitted schools that were classified as underperforming: substantial incentives to improve test scores. Some of those incentives included additional educational programs like tutoring, after-school services,

and summer school for children that attend failing grade schools (No Child Left Behind, n.d.). When a school does not make AYP for five years they might lose students to other schools that are meeting their AYP. In principle, parents could transfer their child to a better performing public or charter school of their choice.

When a student transferred to another school, the school lost funding for that student. Failing schools are considered at risk of restructuring under the federal reconstruction plan if the schools did not improve test scores (Civic Issues: No Child Left Behind Act, 2013). The government's goal was to improve teaching and learning while providing the average parent a choice and a chance to decide and find the best educational institution for their student.

The adoption of the NCLB Act also required that all teachers be highly qualified. The NCLB Act explains that highly skilled teachers are defined as being appropriately licensed and have requisite qualifications in the core academic subject area that the teacher wants to educate students in (No Child Left Behind, n.d.). For teachers wishing to teach in content areas, the requirements are as followed: Continuing teachers need to have a college degree, have full state certification or licensure, and demonstrate competency in the areas that they want to teach by passing the required state subject knowledge assessment exam (US Department of Education, 2017).

Positive Effects of the No Child Left Behind (NCLB)

One positive impact that No Child Left Behind had with the population of English Language Learners was that it required schools across the country to attempt to provide quality education to meet ELL student needs. The NCLB also set professional standards for teacher qualifications that would benefit all students in the United States. Before the NCLB Act, schools were not required to give students assessments; however in 2001 when NCLB passed it, became

the first federal law which required schools to assess students and put forth standards for students to pass.

Test scores have improved since the implementation of the NCLB in 2001. Test scores of minority students have developed, which is a good sign for the future of education. Teacher qualification was a concern before NCLB. Therefore NCLB made all teachers be highly qualified. NCLB gave schools funding to help struggling students. Funding became available to provide extra tutoring or other supplemental support for students who were not proficient in academic areas.

Negative Effects of the No Child Left Behind

The No Child Left Behind Act was created as a way to help students in America to attain a quality education and ensure that all students, even students who are labeled at risk, became proficient by the year of 2014. However, students who were the most at risk and needed the most help were not getting the additional support that was promised. Many educational publishing companies were profiting more from the NCLB than the American students (Maleyko & Gawlik, 2011).

One major criticism about NCLB was the concept of Adequate Yearly Progress (AYP). The AYP reports that are produced are used to determine whether a school meets the standard applied by all states; seeing if school's students have achieved (Kolodziej, 2011). Many people believe that the AYP had a fundamental problem. The American Federation of Teachers stated that AYP does not measure the same students over time, so it is not a progress measure at all time in any given year. Because AYP does not measure progress, it cannot discern whether or not a school has the requisite annual percentage of proficient students. (Fisanick, 2008, p. 30-1)

Therefore since AYP cannot accurately measure progress and achievement of students, the entire system can become corrupted. The AYP needs to be altered to achieve its purpose. The unreliability of the current system is not fair to schools; schools that fail to meet the AYP must be restructured in some way, especially if a school failed to meet their AYP repeatedly (Kolodziej, 2011).

Another issue with the NCLB was that there was little done to close the academic achievement gap. Noguera (2009) explains that public schools took a step backwards with NCLB because it provided a misleading definition of achievement and did nothing to address the problem that it was supposed to identify. Some critics questioned student classification. For instance, a student that is classified as an English Language learner was at a disadvantage under the NCLB because they entered the school system already with limited English, but they were required to take and be proficient in the same test as the general population.

The act did not establish any merit for students needing special education services. The implementation of the action did not cater to students with special education needs. Finally, the law was considered a threat to students who were not intelligent, or a struggling student, because of its high standards of learning outcomes put upon students.

Title I Funding

The Title I program which was under the No Child Left Behind provided funds to local school districts so the schools could improve the education of disadvantaged students from birth through 12th grade. Today the purpose of Title I- Improving the Academic Achievement of the Disadvantaged of the Every Student Succeeds Act is to, "provide all children significant opportunity to receive a fair, equitable, and high-quality education, and to close the education achievement gaps" (Welcome to Title I, 2017). Title I is the most extensive federal program

supporting students in elementary and secondary education. Title I was designed to provide technical assistance, service, and support to local educational agencies and schools to help ensure that every student has access to an excellent quality education.

According to the Arizona Department of Education (2017), in Arizona for the 2017-2018 academic school year, there were 1306 schools across the state that were eligible to receive Title I funding. How does a school become a Title I school? There is a formula based on how many students receive free and reduced lunch. If there 35% to 40% of the student population receives free or reduced lunch, a school may qualify for Title I status. There are two types of Title I: schoolwide and target assistance. If a school is schoolwide Title I, a system is put into place for all students that attend that school to make sure that they make proficiency levels in English Language Arts and Mathematics on state standards. Each schoolwide Title I school conducts a comprehensive needs assessment annually to categorize the needs and strengths in order to increase student academic achievement and to strengthen the schools system leading to sustainable improvement On the other hand, if a school is considered targeted assistance Title I, a system is put into to provide services for identified individuals students who qualify for free and reduced lunch to make proficiency levels in English Language Arts and Mathematics on state standards. Struggling students may receive supplement services in order to service them in both English Language Arts and Mathematics. Title I funding is spread extremely thin and has a budget of about fourteen billion dollars a year.

Even though school districts have some discretion about how they distribute Title I funds to schools within their district, federal law requires districts to prioritize schools that have the highest priority first. Money is distributed to school districts according to a set of four separate

formulas: Basic Grant, Concentration Grant, Targeted Assistance Grant, and the Education Finance Incentive Grant.

Basic Grant Formula

The Basic Grant formula is a formula that is used to allocate funding to a school district based on the number of socio-disadvantaged students they serve. If a school district had at least two percent of their student population in poverty, they were eligible to receive funding through the Basic Grant Formula (McCann, 2017). Almost all school districts across the country had at least some Title I funding through this formula due to the nature of two percent of the student population needed to be considered in poverty.

Concentration Grant Formula

The Concentration Grant Formula provides funding to schools based on the how many students in their population are considered poor. If a school wanted to receive money through the Concentration Grant Formula, the school district needed to have at least fifteen percent of their student population living in poverty or 6,500 poor children whichever is less (McCann, 2017). Once a school district passes the threshold percentages of poor children required to receive funding, the school district can receive the same amount of funding per student regardless of how many disadvantaged students they serve. So in other words, if a school district has twenty percent of children in poverty they can receive the same amount of money per student as a school district with ninety-nine percent of children in poverty, even though it costs more to educate students in schools with higher poverty rates (McCann, 2017). Finally, the Concentration Grant provides funds to schools on top of receiving funds through the Basic Grant formula.

Targeted Assistance Grant Formula

The Targeted Assistance Grant formula is entirely different than the Basic Grant Formula and the Concentration Grant Formula. Under the Target Assistance Grant formula, it provides money funding per child as the poverty rate increases in the district, rather than giving the same amount of Title I funding per child like Basic Grant and Concentration Grant (McCann, 2017). This allows school districts with higher poverty rates to get more money per child than school districts with lower poverty rates.

Education Finance Incentive Grant Formula

The Education Finance Incentive Grant Formula was created to reward "good school finance states" that spend more state resources on public education and distribute that funding equitably. Secondly the Education Ignace Incentive Grant Formula was doubly targeted funds on high poverty school districts in "bad school finance states" that inequitably distribute state and locate education funding (McCann, 2017). The formula takes states' fiscal effort, which is the percentage of per capita income that is devoted to education as well as how the state school finance system allocates state and local funding for education (McCann, 2017). The way funding is distributed to school districts mimics Targeted Assistance Grant formula. However, the only differences are that "bad school finance states" weights are doubled (McCann, 2017). The Education Finance Incentive Grant is the most targeted Title I formula to school districts in the United States.

Race to the Top

The Race to the Top (RTTT) program was enacted in part of the federal American Recovery and Reinvestment Act of 2009. The American Recovery and Reinvestment Act of 2009, that was signed by President Obama on February 17, 2009 was designed to stimulate the economy, support job creation, and finally invest in critical sectors which including the field of

education (U.S. Department of Education, 2009). The Race to the Top was the largest federal competitive investment in school transformation. The Race to the Top was a grant program which provided states financial incentives to improve their educational system (Lohman, 2010). This grant provided $4.35 billion to states that created conditions for education innovation and reform; achieving significant improvement with student outcomes, providing substantial gains in student achievement, closing the academic achievement gap among students, improve high school graduation rates, and ensure student preparation for success in college and careers (U.S. Department of Education, 2009). States also needed to have a motivated plan that addressed the following four core education areas:

- Adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace
- Recruiting, developing, retaining, and rewarding effective teachers and principals, especially where they are needed most
- Building data systems that measure student success and inform teachers and principals about how they can improve instruction
- Turning around our lowest-achieving schools

(U.S. Department of Education, 2009)

Every Student Succeeds Act (ESSA)

The Every Student Succeeds Act (ESSA) was signed by President Obama on December 10, 2015, to enact the No Child Left Behind (NCLB) Act that was signed by President Bush on January 8, 2002, which replaced the Elementary and Secondary Education Act (ESEA) of 1965 that President Johnson signed. Both the NCLB and ESSA acts require that if a school is considered to be a Title I school, they need to show yearly academic achievement for all students. The ESSA brought to the education system that all students across America should be

taught to high academic standards that will prepare them to succeed in college and careers (Every Student Succeeds Act (ESSA), 2017). These measures were called the Common Core Standards.

Common Core State Standards

The No Child Left Behind (NCLB) Act of 2002 required each state to develop an accountability system that included assessments to measure student achievement in schools. With each state developing their accountability assessment, comparing states to other states on academic progress was not possible, therefore a new assessment system needed to be created.

The Common Core State Standards were launched in 2009 by state frontrunners, including governors and state commissioners of instruction from 48 states, two territories and the District of Columbia, through their membership in the National Governors Association Center for Best Practices and the Council of Chief State School Officers (Development Process, 2017). The need of new assessments was that state officials and governors recognized the value of consistent, real-world learning goals and wanting to ensure that all students, regardless of their demographical region, were graduating high school prepared for college, career, and life (Development Process, 2017).

The new adopted Common Core State Standards included college and career readiness standards for kindergarten through twelfth grade in the content areas of English Language Arts and Mathematics. Forty two of the fifty states (Not adopted by Texas, Oklahoma, Nebraska, Minnesota, Indiana, South Carolina, Virginia, and Alaska), the District of Columbia, four territories (American Samoan Islands, US Virgin Islands, Guam, and Northern Marian Islands) and the Department of Defense Education Activity have adopted the Common Core State Standards (Standards in Your State, 2017). The state of Arizona adopted the Common Core State

Standards on June 28, 2010, however, did not fully implement it into the educational system until the 2013-2014 academic school year (Standards in Your State, 2017).

History of Standardized Testing

Horace Mann in 1845 had an idea. He decided that instead of annual oral exams, he decided that Boston Public School students should prove their academic knowledge through written assessments. Mann's goal was to find and replicate the best teaching methods so that all children could have equal opportunities (Gershon, 2015). Unlike Mann's exam, many states that adopted standardized school tests designed them not to measure achievement but only ability. In the early twentieth century, intelligence tests grew in prominence which had a scientific objectivity in the assessment (Gershon, 2015). The use of the Army Alpha and Beta test that was developed in World War I to sort soldiers by their mental abilities quickly became a model for schools.

In the year 1960, the federal government started to push for new achievement tests that would evaluate instructional methods and schools (Gershon, 2015). A big question that arose about standardized assessments was whether they help or hurt students who come from disadvantaged backgrounds. In 1957, with the launch of Sputnik, there was a space race and increased pressure for the United States schools to show improvement in academics for students. However, the rating of schools through testing did not advance much until the mid-1970s, when the College Board revealed that average SAT scores had been falling since 1963 (Mathews, 2006). "A Nation at Risk" was a report that was published in 1983 stating that the public school standards were too low. Over the next twenty years, assessment testing took off to show academic achievement growth for students. Congress created the National Assessment Governing Board in 1988 which established new standards for the National Assessment of

Educational Progress. Finally, in 2002 President Bush signed the No Child Left Behind which required annual testing of all public school children in specific grades and required states to use results to help rate schools (Mathews, 2006). Many organizations argued that it was unfair to rate schools through testing results when teachers lack adequate training and pay.

In 2015, President Obama signed the Every Student Succeeds Act (ESSA), which replaced the No Child Left Behind. The requirements for testing under ESSA stayed the same as the NCLB requirements, but the sanctions and consequences were diminished. States under the ESSA were required to test students in reading or language arts and mathematics annually in grades 3-8 and once in grades 10-12, and in science once in each of the following grade spans: 3-5, 6-9 and 10-12 (Every Student Succeeds Act: A New Day in Public Education).

Standardized Testing in the State of Arizona

AzMerit

All students in Arizona in third through twelfth grade are required to take Arizona's Measurement of Educational Readiness to Inform Teaching (AzMerit) test in spring each year. The AzMerit is an annual statewide criterion-referenced test that measures how students are performing in English Language Arts and Mathematics (What is AzMerit, 2017). The AzMerit is the accountability assessment test for all public schools in Arizona.

This test was adopted on November 3, 2014, by the State Board of Education and the Arizona Department of Education. The questions for the AzMerit assessment came from the American Institutes for Research test called Student Assessment of Growth and Excellence on December 5, 2014, making it a uniquely Arizona assessment test to match up the Common Core Standards that Arizona education system adopted and followed (AzMerit, 2017). The first round of AzMerit testing began on March 30, 2015, and replaced the former Arizona assessment test called AIMS (Arizona Instrument to Measure Standards). Today, AIMS is only used in the

academic area of Science since in Arizona students in grades fourth and eighth as well as high school are tested in their knowledge of Science.

AIMS Science Grades 4 and 8

AzMerit assessment test that Arizona adopted on November 3, 2014, only assesses students on Common Core Standards, which are ELA and Mathematics. Arizona decided to keep a portion of the old Arizona assessment test, AIMS to test students in grades 4 and 8, and High School Biology in the academic content area of Science during the spring semester. AIMS Science is a Standards Based Assessment that measures student proficiency of the Arizona Academic Content Standards in Science (Arizona Department of Education, 2017). The AIMS test is still under contract with Pearson, who administers the test. The AIMS Science test is selected response or multiple choice, which covers grade appropriate scientific standards and concepts. A typical AIMS Science assessment is about 40 to 60 questions and usually is taken over 120 minutes (two hours). A new assessment is being designed to correlate with the revised state standards; however, its projected launch date is not until spring of 2021.

Similar Studies Related to Methodology

Recently there have been studies conducted by Scott (2005), Bland-Washington (2009), Heier (2011), and Headen (2014) that shared similarities to this study such as looking at the achievement gap in Title I and Non-Title I schools. Similarities and differences among all of these studies occurred, therefore leaving room for future research to be done on this topic such as different grade levels, content areas, regions, different categories. Scott (2005) started off the research on the achievement gap of Title I and Non-Title I schools. She conducted a quantitative study using a retrospective comparative design. Scott wanted to determine if there was a difference in standardized testing scores of fourth-grade students in Reading and Mathematics that attended Title I and Non-Title I elementary schools in East Tennessee during the 2002-2003

school year. She looked at 172 Title I and Non-Title I elementary schools. The results were calculated using a two factor ANOVA (analysis of variance), and the findings showed that Non-Title I schools scored higher than the Title I schools in East Tennessee. However, her findings showed there was no significant difference between identified economically disadvantaged students in East Tennessee in the content areas of Reading and Mathematics attending Title I or Non-Title I schools.

Four years later Bland-Washington (2009) wanted to research the same topic. She changed the region and studied fourth-grade students in Georgia. Bland-Washington's study was written as a quantitative study using a descriptive ex-post facto design. The reasoning and purpose of her research was to determine the difference in standardized test score for 4th-grade students in the content areas of Reading and Mathematics in nineteen Title I and Non-Title I elementary schools across the state of Georgia in the 2008 school year. Bland-Washington's findings were that Non-Title I schools outperformed Title I schools. When she added the category of economically disadvantaged students in Title I and Non-Title I schools, the results were similar despite the fact that Title I schools receive federal funding and resources for being a Title I school.

Three years later Heier wanted to further the research on the topic of the academic achievement in Title I and Non-Title I schools. Heier conducted a quantitative study that examined the standardized test scores in the content area of Reading and Mathematics during the 2008-2009 school year in Texas. She studied 1,639 fourth-graders in twenty-one different elementary schools (fifteen were Title I and six were Non-Title I) in Texas. The data was collected in two sets using an independent t-test. One of the sets of data compared Reading and Mathematics performance of all fourth-grade students between Title I and Non-Title I schools in

the twenty-one elementary schools studied. The results from the first set of data showed that the differences in means between Title I and Non-Title I schools were significant with Title I school scores being far less than Non-Title I schools studied. The second set of data that was collected looking at the socioeconomically disadvantaged students in the Title I and Non-Tile I schools and the results showed that there was no significant difference in student performance within this category of students.

Finally, in the year 2014, Headen decided to look at the same question in Alabama and looked at fourth-grade students in the content area of Reading and Mathematics. She conducted her study using quantitative research with an ex-post facto design. The study used aggregated longitudinal school data from three different school years, 2004, 2008, and 2012. The data collected was of only fourth-grade students throughout three different school districts which consisted of ninety various elementary schools. Headen used gender and ethnicity as her controlled variables. Her findings were that Title I students' scored lower than Non-Title I students in the controlled variable categories. However, her results showed that the achievement gap over time was decreasing throughout the years studied.

Summary

This chapter offered the history of the educational system from the beginning of the common school to current day under the Every Student Succeeds Act. The reader was given a walk through the educational history in America starting with the common school movement. This chapter also explained the 1965 Elementary and Secondary Education Act and the creation of Title I, understanding what Title I is and the funding for it. Next, the chapter stopped by the Every Student Succeeds Act and how it affected public schools today. Finally, the section ended with understanding standardized testing in the State of Arizona.

CHAPTER 3: METHODOLOGY

Introduction

This chapter outlines the methodological elements of a quantitative ex-post facto study, which this dissertation will follow. The units in this section will include a restatement of the problem that is being studied, the research design and procedures of the study, and the research methodology that will be used. The chapter will conclude with the population and sample data used, sources of information, the data collection procedures, the research questions along with the null and alternative hypotheses, and finally the data analysis procedures.

Restatement of Problem

The United States over the last five decades, since 1965, has recognized that the educational system needs substantial alterations to improve academic achievement for all students. When students go to school, their one job is that they must learn and be academically successful. Research shows that students who are in lower socioeconomic areas face a larger academic struggle in their academic success than their counterparts in higher socioeconomic areas (Headen, 2014). According to the No Child Left Behind (NCLB) Act, academic achievement is defined as the students' ability to score proficient or to earn a passing standardized test score on their state's assessment. For a school to show that they are excelling in their students' academic needs, all students must show AYP that has been determined by NCLB standards. Some schools struggle in achieving AYP because of their demographic makeup of their student population. Research has shown that students who are from specific subgroups such as English Language Learners, lower socioeconomic status homes, and Special Education (Considine & Zappala) tend to have a speed bump to overcome in succeeding academically in school. To make sure that all students are given the same opportunities in schools, despite their

economic status, Title I assistance is provided to schools, who qualified for funding, which should help bridge the academic achievement gap between Title I and Non-Title I schools.

The Title I, Part A of the Elementary and Secondary Act "provides financial assistance to local educational agencies and schools with high numbers or high percentages of children from low-income families to help ensure that all children meet challenging state academic standards" (Improving Basic Programs Operated by Local Educational Agencies (Title I, Part A)). This funding is vital to schools to have the additional resources to support their achievement for all campaign of wanting to make sure all students are succeeding. Now with the new ESSA requirements that were implemented in 2015, many teachers are concerned that the provisions may not lead to the equitable changes in how schools districts' allocate resources to help students succeed. Teachers are worried about Title I funding rules, the eliminating of inequalities, and trying to close the achievement gap (Arizona Teachers Express Concern Over New ESSA Requirements, 2017), which is showing that we are not putting the children's success first.

Research Design

The goal of Every Student Succeeds Act is to improve the educational opportunities and outcomes for children from lower-income families (Every Student Succeeds Act (ESSA), 2017). The purpose of this study was to determine if there is a difference in student achievement in the academic content areas of ELA and Math between third through eighth-grade students in Title One schools as compared to Non-Title One schools in a suburban southwest school district.

This study is quantitative because the researcher examined AzMerit test data from a suburban southwest school district. The researcher gathered, analyzed, and interpreted the existing test data. The data was collected and clustered into categories of school status: Title I

and Non-Title I, grade level, and content subject matter and then was subcategorized into economically disadvantaged versus non-economically disadvantaged students.

Research Methodology

When looking at research design, the casual comparative model, also known as the ex-post facto design, was used. Salkind (2010) explains that a causal-comparative design is a quantitative research design that finds the relationships between the dependent and independent variables. The ex-post facto research design is perfect to use when conducting research when it is not possible to manipulate the human participants studied (Simon & Goes, 2003). Causal comparative research is a type of research that determines the cause or consequences of differences that already exist between groups of individuals (Salkind, 2010). When using the casual comparative model, the researcher's goal for the study was to determine whether the independent variable will affect the outcome (dependent variable), by comparing two or more groups of individuals (Salkind, 2010).

In an ex-post facto research design the researcher looked at the data that had been already collected and readily available for the research. Even though the information is already available does not mean the data was collected for the research purpose, it says that the data of the particular subject was open to the researcher. Ex-post facto means after the fact or what is done subsequently later. An ex-post facto research design begins with groups that are already different in some respect (Title I and Non-Title I Schools) and the researcher wants to examine the factors that bring the variable differences out.

Some advantages for a researcher to conduct an ex- post facto study is: the data needed was collected, the permission to do the research is easier than having to engage participants to

participate in a study, and require less time to conduct the study than by creating new data (Simon & Goes, 2003).

With the meaning of ex- post facto meaning "after the fact", this makes this particular study ex-post facto because the research is looking at the data trying to create subcategories from the data that has already been collected and will be testing for significant differences between these categories. Within the subcategories, the researcher will compare the subcategory in a Title I school and a Non-Title I school.

When thinking about variables they can be classified into two categories: active independent variables and attribute variables. Active independent variables are independent variables that the research can manipulate while an attribute variable is an independent variable that cannot be manipulated by the researcher (Ferrell, 2016). In ex-post facto research, attribute variables are used since we cannot manipulate them, but we, the research, want to see what impact the variable will have on the study (Ferrell, 2016). The study of the achievement gap between Title I and Non-Title I schools in a suburban southwest school district will study attribute variables because the data will be already collected and available to the researcher: therefore, the researcher cannot manipulate the numbers.

The analysis of the data will allowed the researcher to determine whether there is a difference in academic achievement between Title I and Non-Title I schools within the subcategories of economically disadvantaged versus non-economically disadvantaged students.

Population and Sample

Population

The population of this research study consisted of all students in grades 3-8 in a suburban southwest school district in Arizona. The community chosen for this study were students in

grades 3-8 that had taken the AzMerit assessment test in the springtime (minus the high school students who had taken the AzMerit test as well). This exam is an Arizona assessment examination to check for a student's proficiency in their current academic grade level. The reason the researcher studied students in grades 3-8 is that the researcher cannot look at elementary school students or middle school students due to the structuring of the schools in the district. For instance, some of the schools in the district are K-5 schools, middle schools that serve students in grades 6-8, and some schools are K-8 schools.

The total number of students who were tested on the AzMerit assessment test in the spring of 2017 for grades 3-8 was 10,564 students. The population comes from the districts fifteen K-5 elementary schools, four K-8 schools, and five middle schools serving grades 6-8. According to the district data, there were 1,589 third-grade students tested, 1,997 fourth-graders, 1,690 fifth-graders, 1,740 sixth-graders, 1,725 seventh-graders, and 1,740 eighth-grade students tested during the testing window in March-April of 2017.

A causal-comparative study determined if there is an achievement gap between Title I and Non-Title I schools in the district in the content areas of ELA and Mathematics. The data collected was compared using an independent t-test, also known as 2 sample t-test. A t-test is an analysis of two population's means through the use of statistical examination (T-Test, 2017), and is used to test samples commonly used with small sample sizes. The two communities studied were students in Title I schools and students in Non-Title I schools.

Sample

This type of study was a quantitative research study; therefore, nonprobability sampling was used. This sampling method is used when researchers are unable to use probability selection methods (Check & Schutt, 2012). Nonprobability sampling does not use random selection

procedures, so the researcher did not expect a sample selected with any of the ways to yield a representative sample (Check & Schutt, 2012). Availability sampling was used because the data can be obtained on all third through eighth-grade students that had taken the AzMerit test. However, no personal student information was used. Since this study is focusing on students that took the AzMerit test in grades 3-8 in a suburban southwest school district, nonprobability sampling was a good fit. Nonprobability sampling samples are not representative of the population being surveyed (Nonprobability Sampling, 2017).

When looking at the different types of nonprobability sampling the use of purposive sampling would fit this study. A purposive sample is a nonprobability sample that is based on the characteristics of the population being studied and the objective of the research study. The use of purposive sampling would be useful when the researcher needs to reach a target sample quickly, and where sampling for proportionality is not the main concern (Crossman, 2017). For this study, however, total population sampling was used and was appropriate because the research choose to examine the entire population (Crossman, 2017) of students in grades 3-8 who had taken the AzMerit test in 2017 in the suburban southwest school district. This type of sampling technique was used to generate reviews of events or experiences and is common to studies of particular groups within larger populations (Crossman, 2017). In this study, there were one or more specific predefined groups that the researcher is seeking: Title I students and Non-Title I students.

Source of Information

All students in Arizona in grades 3-12 are required to take the Arizona's Measurement of Educational Readiness to Inform Teaching (AzMerit) test in spring each year. The AzMerit is an annual statewide criterion-reference test that measures how students are performing in English

Language Arts and Mathematics (What is AzMerit, 2017). The AzMerit is the accountability assessment test for all public schools in Arizona.

The data the researcher collected from the AzMerit assessment test that was administered in spring 2017 was used in this quantitative ex- post facto study. The data that was collected was the number of students per grade level in all the district schools that had taken the test in ELA and Mathematics. The data will be available to the researcher from the district and can also be obtained from the Arizona Department of Education. The data collected was broken down by the school into total percentages of students who are highly proficient, proficient, partially proficient, and minimally proficient.

This test was adopted on November 3, 2014 by the State Board of Education and the Arizona Department of Education. The questions for the AzMerit assessment came from the American Institutes for Research test called Student Assessment of Growth and Excellence on December 5, 2014, therefore making it not a uniquely Arizona assessment test to match up the Common Core Standards that the Arizona education system adopted and follows (AzMerit, 2017). The first round of AzMerit testing began on March 30, 2015 and replaced the former Arizona assessment test called AIMS (Arizona Instrument to Measure Standards). Today, AIMS only tests in the academic content area of science because ELA and Mathematics is assessed through the AzMerit.

Validity

Validity is the credibility or believability of the research. For the findings to be valid, they must be genuine. Since the data was collected from the district office during the 2017 AzMerit test results, the findings had to be real because the Arizona Department of Education assumes all responsibility of relaying the results to school districts. The American Institutes for

Research (AIR) is the company that administers the AzMerit test. They are responsible for making sure that the test is free from error in the areas of construction of the test and measurement of the results. Validity is the degree to which the instrument (AzMerit) measures what it is supposed to measure (Check & Schutt, 2012). The test is aligned to Arizona's College and Career Ready Standards: therefore, Arizona controlled the decision-making for all aspects of the assessment test including the test design, test and item correct, scoring, and reporting the results (AzMerit, 2017). The AzMerit test is aligned with what students are learning in the classroom. The assessment goes beyond multiple-choice questions to measure real learning; it focuses on assessing critical-thinking and problem-solving skills (AzMerit, 2017). All schools in the state have the same protocols to follow during the AzMerit.

The type of validity that was used might be conclusion validity. Conclusion validity is the degree to which conclusions are reached about the relationships in the data (Conclusion Validity). Conclusion validity is the degree to which the end that the study brings is credible or believable (Conclusion Validity). Since the data was gathered from the district information, the findings and the data had to be reliable because they were downloaded from the assessment site.

Reliability

According to Check and Schutt (2012), reliability is a measurement procedure that yields consistent scores. Within this particular study, the data was reliable as it is being contained from the district and will be the results from the 2017 AzMerit test results. Reliability was the degree of accuracy and that is what the instrument was trying to demonstrate.

Even though this particular study addressed the collection of data from twenty-four schools in a specific school district, it focused on grade 3-8 students in the content area of ELA

and Mathematics. The data that was collected from the 2017 AzMerit test results were broken down into different a subcategory of socioeconomically disadvantaged students.

Certain restrictions had been placed on this study because of the specific area of research and geographical location. This study focused on one school district in suburban southwest and looked at their Title I schools and Non-Title I schools. Since the assessment scores in regards to the students in grades 3-8 were analyzed in this study, and compared to other students in the same grade in the same district, generalizations were limited to those grades and district only.

Since the AzMerit is testing the proficiency of student's achievement, it was verifying what it was intended to measure with a slight margin of error. The Arizona Department of Education was responsible for making sure that the test is free from any errors.

Data Collection Procedures

All demographic data that was used in this survey was collected from a certain sample (3-8 grade students). Within that sample, the data was collected and analyzed to make inferences about the entire population (students in the suburban southwest school district). The data that was used for statistical analysis was available from the suburban southwest school district's office. The permission to use the data from the district was given as long as the district and school names were not used in the study. The data could also be obtained from the Arizona Department of Education's website. It was not the intent of the researcher to identify names of schools that are Title I or Non-Title I. The information that was gathered for this study was presented in a general manner. That will allowed the district and school names to remain anonymous. The unit of analysis was schooling in general and not individual students; therefore, no data on specific students was collected.

Calculating the number of students that took the spring 2017 AzMerit test in grades 3-8 showed how many students in total. The researcher obtained a report from the district about which schools are Title I and Non-Title I schools, and then was able to read the data determining the number of students in each school that are considered economically disadvantaged.

Data Analysis Procedures

The focus of the data analysis on this ex-post facto quantitative study was the mean scale scores of each student's performance on the 2017 AzMerit that was administered in spring to each student in grades 3-8 in the state of Arizona in the content areas of ELA and Mathematics. The purpose of a data analysis for this study was to determine if there was a statistically significant difference in the mean scale scores between Title I schools and Non-Title I schools.

In data analysis, the first step in an ex-post facto study is to construct frequency polygons of the data. The mean and standard deviation (SD) are usually calculated which only occurs in quantitative data. Since the data will have two groups (Title I and Non-Title I schools) a t-test inferential statistical test was used. A t-test is used when you want to assess whether the means of two groups are statistically different from each other. This analysis was utilized because of comparing the means of two groups (The T-Test). There are three different t-tests: 1 sample t, 2 sample t, and paired t (Types of t-test, 2016). The research computed the 2 sample t-test (also known as an independent t-test) to determine the difference between the means of two separate populations that are equal to a target value (Types of t-test, 2016). This study fit this mold because the researcher was comparing student achievement in two groups: Title I and Non-Title I schools. Finally, the results from the causal-comparative research were always interpreted with caution since they do not prove a cause-and-effect relationship.

After analyzing all of the collected data, the researcher also used a one-way ANOVA (analysis of variance) (ANOVA (Analysis of Variance), 2017). A one-way ANOVA was used to examine the difference between student achievement scores on the AzMerit test of third through eighth-grade using two content core subjects: ELA and Mathematics. AzMerit assessment scores were the dependent variables and school type (Title I and Non-Title I schools) were the independent variables. The controlled variables were student's socioeconomic status.

Research Questions, Null and Alternative Hypotheses

The purpose of this quantitative ex-post facto research study was to determine if there is an academic achievement gap between students in Title I and Non-Title I schools. For a school to be considered Title I, forty percent of their student population must have children from families that are considered low-income. Since the study was looking at achievement scores between two groups (Title I and Non-Title I), it is appropriate to use a 2 sample t-test, also known as independent samples t-test to determine if there was a statistically significant difference in academic achievement in the two groups.

Research Questions

The following table (Table A) outlines the research questions, source of information, and the data analysis procedures for the named study if there was an academic achievement gap of students between students in grades 3-8 in Title I and Non-Title I schools. The following are the specific research questions that will be calculated for this particular study.

Table A: Research Questions, Source of Information, and Data Analysis

Research Questions	Source of Information 2017 AzMerit Scores	Data Analysis Procedures
1. Is there a student achievement gap in ELA among third-grade students in Title I schools and Non-Title I schools?	3rd grade AzMerit ELA data	2 sample t test
2. Is there a student achievement gap in third-	3rd grade AzMerit	2 sample t test

grade ELA of economically disadvantaged students between Title I schools and Non-Title I schools?	ELA data	
3. Is there a student achievement gap in Mathematics among third-grade students in Title I schools and Non-Title I schools?	3rd grade AzMerit Mathematics data	2 sample t test
4. Is there a student achievement gap in third-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?	3rd grade AzMerit Mathematics data	2 sample t test
5. Is there a student achievement gap in ELA among fourth-grade students in Title I schools and Non-Title I schools?	4th grade AzMerit ELA data	2 sample t test
6. Is there a student achievement gap in fourth-grade ELA of economically disadvantaged students between Title I schools and Non-Title I schools?	4th grade AzMerit ELA data	2 sample t test
7. Is there a student achievement gap in Mathematics among fourth-grade students in Title I schools and Non-Title I schools?	4th grade AzMerit Mathematics data	2 sample t test
8. Is there a student achievement gap in fourth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?	4th grade AzMerit Mathematics data	2 sample t test
9. Is there a student achievement gap in ELA among fifth-grade students in Title I schools and Non-Title I schools?	5th grade AzMerit ELA data	2 sample t test
10. Is there a student achievement gap in fifth-grade ELA of economically disadvantaged students between Title I schools and Non-Title I schools?	5th grade AzMerit ELA data	2 sample t test
11. Is there a student achievement gap in Mathematics among fifth-grade students in Title I schools and Non-Title I schools?	5th grade AzMerit Mathematics data	2 sample t test
12. Is there a student achievement gap in fifth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?	5th grade AzMerit Mathematics data	2 sample t test
13. Is there a student achievement gap in ELA among sixth-grade students in Title I schools and Non-Title I schools?	6th grade AzMerit ELA data	2 sample t test
14. Is there a student achievement gap in sixth-grade ELA of economically disadvantaged students between Title I schools and Non-Title I schools?	6th grade AzMerit ELA data	2 sample t test
15. Is there a student achievement gap in	6th grade AzMerit	2 sample t test

Mathematics among sixth-grade students in Title I schools and Non-Title I schools?	Mathematics data	
16. Is there a student achievement gap in sixth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?	6th grade AzMerit Mathematics data	2 sample t test
17. Is there a student achievement gap in ELA among seventh-grade students in Title I schools and Non-Title I schools?	7th grade AzMerit ELA data	2 sample t test
18. Is there a student achievement gap in seventh-grade ELA of economically disadvantaged students between Title I schools and Non-Title I schools?	7th grade AzMerit ELA data	2 sample t test
19. Is there a student achievement gap in Mathematics among seventh-grade students in Title I schools and Non-Title I schools?	7th grade AzMerit Mathematics data	2 sample t test
20. Is there a student achievement gap in seventh-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?	7th grade AzMerit Mathematics data	2 sample t test
21. Is there a student achievement gap in ELA among eighth-grade students in Title I schools and Non-Title I schools?	8th grade AzMerit ELA data	2 sample t test
22. Is there a student achievement gap in eighth-grade ELA of economically disadvantaged students between Title I schools and Non-Title I schools?	8th grade AzMerit ELA data	2 sample t test
23. Is there a student achievement gap in Mathematics scores among eighth-grade students in Title I schools and Non-Title I schools?	8th grade AzMerit Mathematics data	2 sample t test
24. Is there a student achievement gap in eighth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I Schools?	8th grade AzMerit Mathematics data	2 sample t test

Null and Alternative Hypotheses

The general hypothesis for each research question for this study was that there is a statistically significant difference of students in grades 3-8 in Title I schools and Non-Title I schools in academic achievement scores. The null hypothesis will reflect that if there was no statistically difference between academic achievements of students in grades 3-8 in Title I

schools and Non-Title I schools then verification of the alternate hypothesis is needed. Table B is the null hypotheses that derived from the research questions. Table C is the alternative hypotheses that derived from the research questions

H_o is null hypothesis and H_a is alternative hypothesis.

Table B: Null Hypotheses

H_o1: There is no significant student achievement gap difference between third-grade students ELA scores all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of third-grade district students that took the 2017 AzMerit ELA test.
H_o2: There was no significant student achievement gap difference between third-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged third-grade district students that took the 2017 AzMerit ELA test.
H_o3: There is no significant student achievement gap difference between third-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of third-grade district students that took the 2017 AzMerit Mathematics test.
H_o4: There is no significant student achievement gap difference between third-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged third-grade district students that took the 2017 AzMerit Mathematics test.
H_o5: There is no significant student achievement gap difference between fourth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of fourth-grade district students that took the 2017 AzMerit ELA test.
H_o6: There is no significant difference between fourth-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged fourth-grade district students that took the 2017 AzMerit ELA test.
H_o7: There is no significant student achievement gap difference between fourth-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of fourth-grade district students that took the 2017 AzMerit Mathematics test.
H_o8: There is no significant student achievement gap difference between fourth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged fourth-grade district students that took the 2017 AzMerit Mathematics test.
H_o9: There is no significant student achievement gap difference between fifth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban

southwest school district with respect to the mean scale score of fifth-grade district students that took the 2017 AzMerit ELA test.
H_o10: There is no significant student achievement gap difference between fifth-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged fifth-grade district students that took the 2017 AzMerit ELA test.
H_o11: There is no significant student achievement gap difference between fifth-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of fifth-grade district students that took the 2017 AzMerit Mathematics test.
H_o12: There is no significant student achievement gap difference between fifth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged fifth-grade district students that took the 2017 AzMerit Mathematics test.
H_o13: There is no significant student achievement gap difference between sixth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of sixth-grade district students that took the 2017 AzMerit ELA test.
H_o14: There is no significant student achievement gap difference between sixth-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged sixth-grade district students that took the 2017 AzMerit ELA test.
H_o15: There is no significant student achievement gap difference between sixth-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of sixth-grade district students that took the 2017 AzMerit Mathematics test.
H_o16: There is no significant difference between sixth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged sixth-grade district students that took the 2017 AzMerit Mathematics test.
H_o17: There is no significant student achievement gap difference between seventh-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of seventh-grade district students that took the 2017 AzMerit ELA test.
H_o18: There is no significant student achievement gap difference between seventh-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged seventh-grade district students who took the 2017 AzMerit ELA test.
H_o19: There is no significant student achievement gap difference between seventh-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of seventh-grade district students that took the 2017 AzMerit Mathematics test.
H_o20: There is no significant student achievement gap difference between seventh-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of

economically disadvantaged seventh-grade district students that took the 2017 AzMerit Mathematics test.
H_o21: There is no significant student achievement gap difference between eighth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of eighth-grade district students that took the 2017 AzMerit ELA test.
H_o22: There is no significant student achievement gap difference between eighth-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged eighth-grade district students that took the 2017 AzMerit ELA test.
H_o23: There is no significant student achievement gap difference between eighth-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of eighth-grade district students that took the 2017 AzMerit Mathematics test.
H_o24: There is no significant student achievement gap difference between eighth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged eighth-grade district students that took the 2017 AzMerit Mathematics test.

Table C: Alternative Hypotheses

H_a1: There is a significant student achievement gap difference between third-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of third-grade district students that took the 2017 AzMerit ELA test.
H_a2: There is a significant student achievement gap difference between third-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged third-grade district students that took the 2017 AzMerit ELA test.
H_a3: There is a significant student achievement gap difference between third-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of third-grade district students that took the 2017 AzMerit Mathematics test.
H_a4: There is a significant student achievement gap difference between third-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged third-grade district students that took the 2017 AzMerit Mathematics test.
H_a5: There is a significant student achievement gap difference between fourth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of fourth-grade district students that took the 2017 AzMerit ELA test.
H_a6: There is a significant student achievement gap difference between fourth-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically

disadvantaged third-grade district students that took the 2017 AzMerit ELA test.
H_a7: There is a significant student achievement gap difference between fourth-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of third-grade district students that took the 2017 AzMerit Mathematics test.
H_a8: There is significant student achievement gap difference between fourth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged fourth-grade district students that took the 2017 AzMerit Mathematics test.
H_a9: There is a significant student achievement gap difference between fifth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of fifth-grade district students that took the 2017 AzMerit ELA test.
H_a10: There is a significant student achievement gap difference between fifth-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged fifth-grade district students that took the 2017 AzMerit ELA test.
H_a11: There is a significant student achievement gap difference between fifth-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of fifth-grade district students that took the 2017 AzMerit Mathematics test.
H_a12: There is a significant student achievement gap difference between fifth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged fifth-grade district students that took the 2017 AzMerit Mathematics test.
H_a13: There is a significant student achievement gap difference between sixth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of sixth-grade district students that took the 2017 AzMerit ELA test.
H_a14: There is a significant student achievement gap difference between sixth-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged sixth-grade district students that took the 2017 AzMerit ELA test.
H_a15: There is a significant student achievement gap difference between sixth-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of sixth-grade district students that took the 2017 AzMerit Mathematics test..
H_a16: There is a significant student achievement gap difference between sixth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged sixth-grade district students that took the 2017 AzMerit Mathematics test.
H_a17: There is a significant student achievement gap difference between seventh-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of seventh-grade district students that took the 2017 AzMerit ELA test.

H_a18: There is a significant student achievement gap difference between seventh-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged seventh-grade district students that took the 2017 AzMerit ELA test.
H_a19: There is a significant student achievement gap difference between seventh-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of seventh-grade district students that took the 2017 AzMerit Mathematics test.
H_a20: There is a significant student achievement gap difference between seventh-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged seventh-grade district students that took the 2017 AzMerit Mathematics test.
H_a21: There is a significant student achievement gap difference between eighth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of eighth-grade district students that took the 2017 AzMerit ELA test.
H_a22: There is significant student achievement gap difference between eighth-grade ELA scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged eighth-grade district students that took the 2017 AzMerit ELA test.
H_a23: There is a significant student achievement gap difference between eighth-grade students Mathematics scores (all students tested) between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of eighth-grade district students that took the 2017 AzMerit Mathematics test.
H_a24: There is a significant student achievement gap difference between eighth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools in a suburban southwest school district with respect to the mean scale score of economically disadvantaged eighth-grade district students that took the 2017 AzMerit Mathematics test.

Ethical Considerations:

In this research study, ethical practices were followed through all steps during the process. The rights of the participants of the participants in the data were respected, and data and outcomes are reported honestly from the data that was collected. Data was collected from the Arizona Department of Education as it was available to the public. There were no ethical issues through this study of was there a statistically significant difference in the student achievement gap among third through eighth-grade students in both content areas of English Language Arts

and Mathematics students in Title I schools and Non-Title I schools in the suburban southwest school district. No data was collected until approval was obtained from Northern Arizona University's Institutional Review Board (See Appendix A).

Summary

This third chapter outlined the methodological element of the quantitative ex- post factor study of the achievement gap of 3rd-8th graders in Title I schools and Non-Title I schools. The sections presented in this chapter were: restatement of the research problem, the research design and procedures, the research methodology, population and sample studied, the source of instrumentation, data collection procedures used, data analysis procedures, the research, null, and alternative hypotheses. Twenty four research questions were analyzed in this study. This study anticipates adding to the current studies that have been conducted about the academic achievement gaps between Title I schools and Non-Title I schools.

CHAPTER 4: FINDINGS AND RESULTS

Introduction

When President Lyndon B. Johnson enacted the Elementary and Secondary Education Act in 1965, he wanted to improve the educational equity for students from lower socio-economic families by providing federal funding for school districts to help improve the academic achievement of underprivileged students (The ABC's of ESEA, ESSA and No Child Left Behind, 2017).

Thirty-seven years later President George W. Bush looked at the educational system and saw that there was a problem in it. In January 2002, the No Child Left Behind was signed into law. This law was enacted to build the mind and character of every child, from every background, in every part of America (NCLB Executive Summary, 2004). The goal of No Child Left Behind was to provide disadvantaged students (English-language learners, students in special education, and poor and minority students) equal educational opportunities to reach the same challenging standards that non-disadvantaged students are expected to master (No Child Left Behind Act of 2001: Background Information, 2017).

Thirteen years after the passing of the No Child Left Behind Act, President Barack Obama, and many legislatures still had concerns about the quality of the educational system in the United States of America, even though the No Child Left Behind did help with closing the academic achievement gap. On December 10, 2015, President Obama reauthorized the No Child Left Behind Act to Every Student Succeeds Act with goals to improve the educational opportunities and outcomes for children from lower-income families (Every Student Succeeds Act (ESSA), 2017). All in all, the primary focus of the three acts and the reauthorization of them

each time was to focus on closing the academic achievement gap for disadvantaged students in schools.

The objective of this ex-post facto research study was to determine if there was an academic achievement gap between third through eighth-grade students in Title I and Non-Title I schools in a particular suburban southwest school district in the content areas of English Language Arts and Mathematics. The outcomes of this ex-post facto study that are reported in this chapter provides the data analyzed to conclude if the academic achievement gap between third-grade students through eighth-grade students in the content areas of English Language Arts and Mathematics in Title I and Non-Title I schools in a particular suburban southwest school district through the use of the 2017 AzMerit assessment test scores will close.

Unambiguously, the twenty-four research questions inquired whether or not there was a student achievement gap in students attending Title I as opposed to Non-Title I schools in grades three through eight in two content areas (English Language Arts and Mathematics). The research questions look at the subcategory of socioeconomically disadvantaged students in both Title I and Non-Title I schools in the two content areas of English Language Arts and Mathematics in grades three through eight. The twenty-four research questions had twenty-four null hypotheses, and twenty-four alternative hypotheses that were defined in chapter three that will be reiterated in this chapter to build the groundwork for composing the analytical test conducted for this study.

Research Questions, Null and Alternative Hypotheses Reviewed

Within Chapter 3, the research questions, null and alternative hypotheses were stated. The research questions are now restated along with the descriptive statistics, influential statistics,

and the findings of the statistical tests. The data will be concluding under the original research question in the place proposed order.

Third-grade:

1. Is there a student achievement gap in English Language Arts (ELA) among third-grade students in Title I schools and Non-Title I schools?

H_o1: There is no significant student achievement gap difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a1: There is a significant student achievement gap difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools.

2. Is there a student achievement gap in third-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o2: There is no significant student achievement gap difference between third-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a2: There is a significant student achievement gap difference between third-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

3. Is there a student achievement gap in Mathematics among third-grade students in Title I schools and Non-Title I schools?

H_o3: There is no significant student achievement gap difference between third-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a3: There is a significant student achievement gap difference between third-grade students Mathematics scores between Title I schools and Non-Title I schools.

4. Is there a student achievement gap in third-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o4: There is no significant student achievement gap difference between third-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I Schools.

H_a4: There is a significant student achievement gap difference between third-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Fourth-grade:

5. Is there a student achievement gap in English Language Arts (ELA) among fourth-grade students in Title I schools and Non-Title I schools?

H_o5: There is no significant student achievement gap difference between fourth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a5: There is a significant student achievement gap difference between fourth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

6. Is there a student achievement gap in fourth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o6: There is no significant student achievement gap difference between fourth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a6: There is a significant student achievement gap difference between fourth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

7. Is there a student achievement gap in Mathematics among fourth-grade students in Title I schools and Non-Title I schools?

H_o7: There is no significant student achievement gap difference between fourth-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a: There is a significant student achievement gap difference between fourth-grade students Mathematics scores between Title I schools and Non-Title I schools.

8. Is there a student achievement gap in fourth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o8: There is no significant student achievement gap difference between fourth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a8: There is a significant student achievement gap difference between fourth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Fifth-grade:

9. Is there a student achievement gap in English Language Arts (ELA) among fifth-grade students in Title I schools and Non-Title I schools?

H_o9: There is no significant student achievement gap difference between fifth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a9: There is a significant student achievement gap difference between fifth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools.

10. Is there a student achievement gap in fifth- grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o10: There is no significant student achievement gap difference between fifth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a10: There is a significant student achievement gap difference between fifth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

11. Is there a student achievement gap in Mathematics among fifth-grade students in Title I schools and Non-Title I schools?

H_o11: There is no significant student achievement gap difference between fifth-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a11: There is a significant student achievement gap difference between fifth-grade students Mathematics scores between Title I schools and Non-Title I schools.

12. Is there a student achievement gap in fifth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o12: There is no significant student achievement gap difference between fifth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a12: There is a significant student achievement gap difference between fifth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Sixth-grade:

13. Is there a student achievement gap in English Language Arts (ELA) among sixth-grade students in Title I schools and Non-Title I schools?

H_o13: There is no significant student achievement gap difference between sixth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a13: There is a significant student achievement gap difference between sixth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

14. Is there a student achievement gap in sixth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o14: There is no significant student achievement gap difference between sixth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a14: There is a significant student achievement gap difference between sixth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

15. Is there a student achievement gap in Mathematics among sixth-grade students in Title I schools and Non-Title I schools?

H_o15: There is no significant student achievement gap difference between sixth-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a15: There is a significant student achievement gap difference between sixth-grade students Mathematics scores between Title I schools and Non-Title I schools.

16. Is there a student achievement gap in sixth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o16: There is no significant student achievement gap difference between sixth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a16: There is a significant student achievement gap difference between sixth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Seventh-grade:

17. Is there a student achievement gap in English Language Arts (ELA) among seventh-grade students in Title I schools and Non-Title I schools?

H_o17: There is no significant student achievement gap difference between seventh-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a17: There is a significant student achievement gap difference between seventh-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

18. Is there a student achievement gap in seventh-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o18: There is no significant student achievement gap difference between seventh-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a18: There is a significant difference between seventh-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

19. Is there a student achievement gap in Mathematics among seventh-grade students in Title I schools and Non-Title I schools?

H_o19: There is no significant student achievement gap difference between seventh-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a19: There is a significant student achievement gap difference between seventh-grade students Mathematics scores between Title I schools and Non-Title I schools.

20. Is there a student achievement gap in seventh-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o20: There is no significant student achievement gap difference between seventh-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a20: There is a significant student achievement gap difference between seventh-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Eighth-grade:

21. Is there a student achievement gap in English Language Arts (ELA) among eighth-grade students in Title I schools and Non-Title I schools?

H_o21: There is no significant student achievement gap difference between eighth-grade students ELA scores (all students tested) between Title I schools and Non-Title I schools.

H_a21: There is a significant student achievement gap difference between eighth-grade students ELA scores between Title I schools and Non-Title I schools.

22. Is there a student achievement gap in eighth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o22: There is no significant student achievement gap difference between eighth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a22: There is a significant student achievement gap difference between eighth-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

23. Is there a student achievement gap in Mathematics among eighth-grade students in Title I schools and Non-Title I schools?

H_o23: There is no significant student achievement gap difference between eighth-grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a23: There is a significant difference between eighth-grade students Mathematics scores between Title I schools and Non-Title I schools.

24. Is there a student achievement gap in eighth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o24: There is no significant student achievement gap difference between eighth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a24: There is a significant student achievement gap difference between eighth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Data Collection and Preparation

The data that was statistically analyzed for this study were collected from the district office. The data could have been obtained from the Arizona Department of Education as well. Due to the data being available to the public, there was no special permission needed or retrieval processes that are necessary to be followed and the IRB (Institutional Review Board) on February 26, 2018 stated that this study did not require oversight of the Northern Arizona University (NAU) Institutional Review Board because the project/study did not meet the definition of 'research' and/or 'human subject' (See Appendix A).

The collected data from the district was used to provide the population of this research study and to determine what the total population sample (which consisted of all students in grades 3-8 in a suburban southwest school district in Arizona). For this study, the use of total population sampling was appropriate because the research chooses to examine the entire population (Crossman, 2017) for students in grades 3-8 that had taken the AzMerit test in 2017 in the suburban southwest school district. This type of sampling technique was used to generate reviews of events or experiences and is common to studies of particular groups within larger populations (Crossman, 2017). In this study, there were one or more specific predefined groups that the researcher was seeking: Title I students and Non-Title I students. The researcher took the data that was collected and filtered the data and sorted it into Title I schools and Non-Title I schools. The researcher also sorted out the data of students that economically disadvantaged in all district schools. Finally, the researcher divided the data Title I and Non-Title I schools and separated the data into English Language Arts and Mathematics. For students to be labeled SES in the data, they were registered as socioeconomically disadvantaged at their school. Even though schools are not labeled as Title I, they could still have a percentage of their student population that is marked SES. Tables D-G are four different tables showing the total numbers of students representing Title I and Non-Title I schools in English Language Arts and Mathematics within grades three through eighth.

Table D: Number of Students in the Population and Sample of Non-Title I Schools: ELA

	Students Tested	Students Passed	SES Students	Students Passed
3rd Grade	n= 1079	n= 837	n= 101	n= 61
4th Grade	n= 1140	n= 931	n= 81	n= 48
5th Grade	n= 1161	n= 912	n= 114	n= 73

6th Grade	n= 933	n= 639	n= 71	n= 29
7th Grade	n= 936	n= 701	n= 71	n= 42
8th Grade	n= 1033	n= 580	n= 82	n=24

Table E: Number of Students in the Population and Sample of Title I Schools: ELA

	Students Tested	Students Passed	SES Students	Students Passed
3rd Grade	n= 523	n= 223	n= 396	n= 147
4th Grade	n= 564	n= 273	n= 417	n= 173
5th Grade	n= 540	n= 279	n= 363	n= 151
6th Grade	n= 813	n= 375	n= 445	n= 144
7th Grade	n= 794	n= 393	n= 425	n= 143
8th Grade	n= 826	n= 311	n= 429	n= 121

Table F: Number of Students in the Population and Sample of Non- Title I Schools: Mathematics

	Students Tested	Students Passed	SES Students	Students Passed
3rd Grade	n= 1080	n= 833	n= 102	n= 63
4th Grade	n= 1139	n= 878	n= 82	n= 51
5th Grade	n= 1162	n= 902	n= 114	n= 65
6th Grade	n= 933	n= 644	n= 71	n= 28
7th Grade	n= 881	n= 561	n= 70	n= 32
8th Grade	n= 1033	n= 603	n= 82	n= 26

Table G: Number of Students in the Population and Sample of Title I Schools: Mathematics

	Population Tested	Students Passed	SES Students	Students Passed
3rd Grade	n= 518	n= 251	n= 393	n= 167

4th Grade	n= 562	n= 247	n= 415	n= 159
5th Grade	n= 540	n= 265	n= 362	n= 148
6th Grade	n= 814	n= 346	n= 445	n= 120
7th Grade	n= 781	n= 288	n= 424	n= 91
8th Grade	n= 827	n= 298	n=430	n=100

Inferential and Descriptive Statistics

The AzMerit assessment data is data that the Arizona Department of Education uses as an annual checkup to measure Arizona's students' performance annually. The data provides students with valuable statistics as to how they are performing in English Language Arts and Mathematics. The AzMerit test shows students if they are prepared for the next academic grade level and eventually for college and career. When looking at the AzMerit scoring/reporting guide, students can be categorized into four categories: Level 4-Highly Proficient, Level 3-Proficient, Level 2-Partially Proficient, or Level 1- Minimally Proficient.

Within each academic content area, English Language Arts and Mathematics, there are three scoring categories that describe the knowledge and skills that are assessed (AzMerit Reporting Guide). Within each category, student performance is reported as one of three levels of mastery: below mastery, at/near mastery, or above mastery (AzMerit Reporting Guide). Students who academically scored "below mastery" in a category is clearly below Proficient. Students who academically scored "at/near mastery" in a category was exactly at or immediately above/below Proficient (AzMerit Reporting Guide). Finally, students who academically scored "above mastery" in a category showed students understanding in that category and showed they were Proficient or Highly Proficient.

The AzMerit test data was analyzed for students testing in Title I and Non-Title I schools in the content areas of English Language Arts and Mathematics. The collected data only represents the 2017 AzMerit data which tested students from the 2016-2017 academic school year. After each school was coded in either Title I or Non-Title I, the data was collected in grades from third to eighth, coded in number of students tested, percentage of students passing, and into the content area of English Language Arts and Mathematics. The data was then disaggregated into subcategories of socioeconomically disadvantaged students in both Title I and Non-Title I schools.

To analyze the data, inferential statistics were used because the researcher was trying to reach conclusions that extend beyond the immediate data alone whereas descriptive statistics are simply used to describe what is or what the data shows (Descriptive and Inferential Statistics). The independent variable was the type of school the students attended (Title I and Non-Title I schools). The controlled variables for the study are number of students tested, number of students passing, SES students tested, and SES students passing. The 2017 AzMerit test results in the content areas English Language Arts and Mathematics served as the dependent variables for the study. All descriptive statistics are reported at the grade level and into academic content area.

Tables H through K exhibit the mean (M) and standard deviation (SD) for all third through eighth-grade students in the suburban southwest school district who had taken the 2017 AzMerit test during the 20116-2017 school year. As the tables show, the data is separated into Title I English Language Arts, Non-Title I English Language Arts, Title I Mathematics, and Non-Title Mathematics. Each category shows the M (mean) and SD (Standard Deviation) of each grade separated into groups and content area. In each category the data for the subcategory of SES Students testing and passed is also calculated.

Table H: Means and Standard Deviations with 95% Confidence of Non-Title I Schools: ELA

	Students Tested	Students Passed	SES Students	Students Passed
3rd Grade M	89.91667	69.75000	8.416667	5.083333
3rd Grade SD	21.90665	20.31177	8.959082	5.777547
4th Grade M	95.0000	77.58333	6.750000	4.0000000
4th Grade SD	25.4951	22.53667	8.863869	5.3935990
5th Grade M	96.75000	76.0000	9.500000	6.0833330
5th Grade SD	22.58771	16.54196	9.170110	5.8225010
6th Grade M	186.6000	127.8000	14.20000	5.8000000
6th Grade SD	81.77591	56.24678	13.19848	5.4954530
7th Grade M	187.2000	140.2000	14.20000	8.4000000
7th Grade SD	67.26589	52.99245	13.34916	8.4439330
8th Grade M	206.6000	116.0000	16.40000	4.8000000
8th Grade SD	89.85711	53.37134	15.51773	4.7644517

Table I: Means and Standard Deviations with 95% Confidence of Title I Schools: ELA

	Students Tested	Students Passed	SES Students	Students Passed
3rd Grade M	74.71429	31.85714	56.571428	21.00000
3rd Grade SD	24.79727	12.34812	22.86086	7.979139
4th Grade M	80.57143	39.00000	59.57143	24.71429
4th Grade SD	25.25112	15.4704	21.62450	8.499300
5th Grade M	77.14286	39.85714	51.85714	21.57143
5th Grade SD	27.56464	16.92561	21.71350	8.443087
6th Grade M	203.2500	93.75000	111.2500	36.00000
6th Grade SD	99.23835	62.55864	55.75754	15.85350
7th Grade M	198.5000	98.25000	106.2500	35.75000
7th Grade SD	101.5267	71.91372	55.30747	19.13766
8th Grade M	206.5000	77.75000	107.2500	30.25000
8th Grade SD	108.6355	58.93146	57.62740	18.99781

Table J: Means and Standard Deviations with 95% Confidence of Non- Title I Schools: Mathematics

	Students Tested	Students Passed	SES Students	Students Passed
3rd Grade M	90.0000	69.41667	8.50000	5.25000
3rd Grade SD	21.89645	20.93044	9.08044	5.91031
4th Grade M	95.00000	77.58333	6.75000	4.000000
4th Grade SD	25.49510	22.53667	8.86386	5.393599
5th Grade M	96.83333	75.16667	9.583333	5.416667
5th Grade SD	22.73897	18.22004	9.199390	5.107184
6th Grade M	186.6000	128.8000	14.20000	9.333333
6th Grade SD	81.77591	61.24296	13.19848	4.041452
7th Grade M	176.2000	112.2000	14.00000	6.400000
7th Grade SD	60.77582	36.10679	13.17194	7.021396
8th Grade M	206.6000	120.6000	16.40000	5.200000
8th Grade SD	89.44719	61.29682	15.51773	6.2209324

Table K: Means and Standard Deviations with 95% Confidence of Title I Schools: Mathematics

	Students Tested	Students Passed	SES Students	Students Passed
3rd Grade M	74.00000	35.85714	56.14286	23.85714
3rd Grade SD	23.76272	19.28236	22.26678	14.75837
4th Grade M	80.28571	32.28571	59.28571	22.71428
4th Grade SD	24.62867	14.00850	20.94209	8.7314429
5th Grade M	77.14286	37.85714	51.71429	21.14286
5th Grade SD	26.34026	16.36489	20.96596	10.15593
6th Grade M	203.2500	86.50000	111.2500	30.00000
6th Grade SD	99.23835	68.18846	55.78754	17.86990
7th Grade M	195.2500	72.00000	106.0000	22.75000
7th Grade SD	98.28318	59.57470	55.21473	11.95478
8th Grade M	206.7500	74.50000	107.5000	25.00000
8th Grade SD	108.1893	57.22762	57.16351	15.39397

Analysis of Research Questions

Data for this study was compiled from the 2017 results of the AzMerit assessment test that all third-grade through eighth-grade students had taken in the 2016-2017 academic school year. A one-way ANOVA and independent t-test were used to analyze the data.

Before running a one-way ANOVA, the researcher needed to make sure that the study meets the assumptions of running an ANOVA. A one-way ANOVA is used to determine if there are any substantial differences between the means of two or more independent groups (One-way ANOVA in SPSS Statistics). A one-way ANOVA could be used to understand whether exam performance differed based on school type amongst students, dividing students into different independent groups (Title I and Non-Title I schools). A one-way ANOVA cannot tell the researcher which specific groups were statistically significant from each other, however it can tell the research that the two group are different (One-way ANOVA in SPSS Statistics)

There are six assumptions to follow to check to make sure that the data from the research can be analyzed using a one-way ANOVA. The first three assumptions need to be met before testing assumptions four through six.

The first assumption is that the dependent variable should be on a continuous level (One-way ANOVA in SPSS Statistics). This study is at a continuous level because we are looking at academic performance scores and has ratio variables. Ratio variables are used because there are zero's in the data because they are actually considered data for the study (no SES students at that school).

Assumption two is about the study having two independent variables. This study has two independent variables that it is looking at. One independent variable is Title I schools and the other independent variable is Non-Title I schools.

The third assumption is about the independence of observations. The groups in this study do not have a relationship with each other. There are two different school types: Title I and Non-Title I schools, therefore, the students cannot be in more than one group.

Assumption four is about not having any significant outliers. The study does not have any outliers. At first the zero in the socioeconomically disadvantaged student's data per grade level and the content area would be considered an outlier, however, after discussions; the zero was not considered an outlier because it is stating that there were no students who were socioeconomically disadvantaged at that school.

The fifth assumption is about the dependent variable(s) being normally distributed for each of the two independent variables (One-way ANOVA in SPSS Statistics). To check this, the researcher conducted a Shapiro-Wilk test for normality in SPSS and found that this assumption is violated. However, since the assumption was violated the study can show valid results because there is significance between students testing the AzMerit test compared to passing the test.

The last assumption is assumption six which is the data needs to have homogeneity of variances within each combination for each combination of the groups of the two independent variables (One-way ANOVA in SPSS Statistics). Since the two independent variables have different populations (Title I school students and Non-Title I school students), this assumption is violated because the significance level was greater than .05 when the Levene's test for homogeneity of variance was run for students tested in each population. However, since we were looking at academic achievement when the homogeneity of variance was run with that variable the significance level was less than .05, therefore, the assumption was not violated. A Robust Tests of Equality of Means was also conducted.

Since this study meets the assumptions of a one-way ANOVA test, an ANOVA and can run.

Before running the independent t-test, the researcher computed the required sample size through the g-power analysis software. The researcher chose the test family t-tests with the statistical test of means: the difference between two dependent factors (two groups).The type of power analysis used was a priori: computer required sample size- given α, power, and effect size. The effect size can be calculated as $d = \mu 1 - \mu 2 / \sigma$. A priori power analysis tells the researcher what is a required sample size to achieve the desired level of power.

One way to calculate the effect size is to calculate the means and standard deviations in the two populations (G*Power: Statistical Power Analyses for Windows and Mac, 2017). A t-test assumes that variances in both populations being study are equal. The t-test is relatively robust against violations of this assumption if the sample sizes are equal (n1 = n2). However, when there are different sample sizes $n1 \neq n2$, the calculated *d* should not be used because it can lead to power values that will differ greatly from the true values (G*Power: Statistical Power Analyses for Windows and Mac, 2017).

When calculating the effect size with each mean and standard deviation for each research question the results gave an effect size that leads to power values that differ from the true values. Since this was the case, the researcher looked at the conventional values for *d:*

- Small d= 0.2 (minimal sample 1084) See Appendix B
- Medium d= 0.5 (minimal sample 176) See Appendix C
- Large d= 0.8 (minimal sample 70) See Appendix D

Since the sample sizes are different in this study, the researcher went with the small d= 0.2 and medium d=0.5 depending on the sample size. When using the .2 effect size and computed the calculations, the minimal sample size was 1,084. The number of students tested in

both Title I and Non-Title I schools in grades three through eight that had taken the 2017 AzMerit test in both academic content areas of English Language Arts and Mathematics along with SES students who passed the AzMerit in fourth-grade English Language Arts and Mathematics, fifth-grade English Language Arts and Mathematics, and seventh-grade English Language Arts, are greater than the 1,084 minimal sample size, therefore, the 0.2 effect size was valued. Hence, the .2 (considered small effect size) would be sufficient, a α err prob or (Type I error/ p-value of .05 was used, and Power (1-β err t prob) was set at .95. When calculated the critical t value was ±1.64626 (See Appendix B).

For the number of socioeconomically disadvantaged students tested and passed in both Title I and Non-Title I schools in grades three through eight that had taken the 2017 AzMerit test in both academic content areas of English Language Arts and Mathematics, are greater than the 176 minimal sample size but smaller than the 1,084 minimal sample size for the small effect, therefore, the 0.5 (considered medium effect size) would be sufficient, a α err prob or (Type I error/ p-value of .05 was used, and Power (1-β err t prob) was set at .95. When calculated the critical t value was ±1.65366 (See Appendix C).

Research Question 1:

Is there a student achievement gap in English Language Arts (ELA) among third-grade students in Title I schools and Non-Title I schools?

H_o1: There is no significant student achievement gap difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a1: There is a significant student achievement gap difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

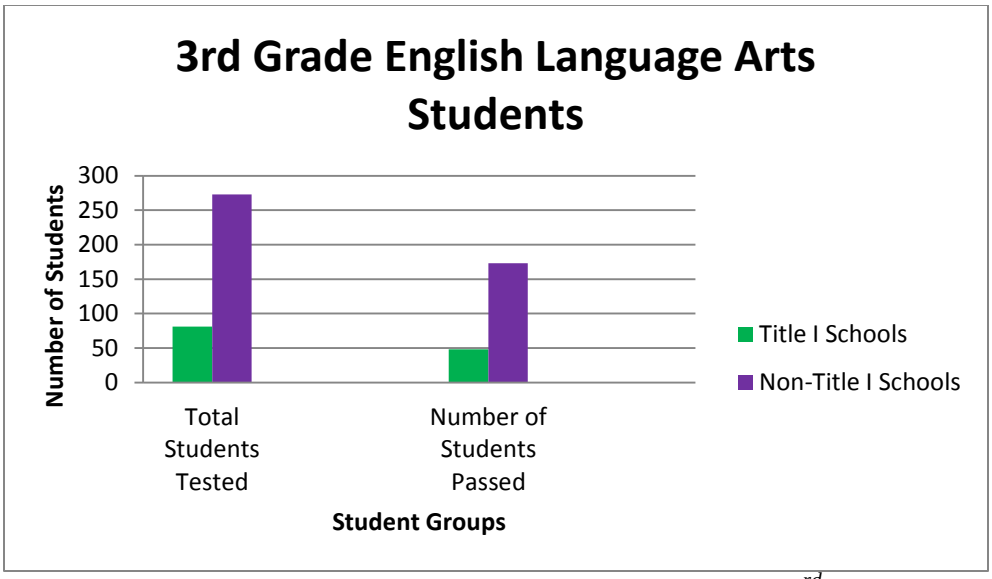


Figure 1: Distribution of English Language Arts Scores for 3rd Grade in both Title I and Non-Title I Schools.

Table L: Percentage of 3rd Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 3rd Graders	n= 523	n= 223	43%
Total Non-Title I 3rd Graders	n= 1079	n= 837	78%
School 1	n= 68	n= 48	71%
School 2	n= 83	n= 62	75%
School 3	n= 98	n= 77	79%
School 4	n= 83	n= 64	78%
School 5*	n= 81	n= 33	41%
School 6	n= 150	n= 121	81%
School 7	n= 83	n= 64	78%
School 8	n= 67	n= 46	70%
School 9*	n= 73	n= 35	48%
School 10*	n= 91	n= 50	55%
School 11	n= 93	n= 79	85%
School 12	n= 87	n= 58	67%
School 13	n= 80	n= 61	76%
School 14*	n= 119	n= 44	37%
School 15*	n= 52	n= 23	44%
School 16	n= 106	n= 90	85%
School 17	n= 81	n= 68	86%
School 18*	n= 52	n= 22	42%
School 19*	n= 55	n= 16	29%

*= Title I schools

Table L provides the percentage of students that passed the English Language Arts content area of the 2017 AzMerit test among third-graders in a suburban southwest school district. There are nineteen schools in the district that service third-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Table L shows there was a large difference in the percentage of students that passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 35%.

When conducting the ANOVA analysis in SPSS the data showed, F (1, 17) = 1.937, p= .182 which was greater than (>).05 significance level for 3rd-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS, the data showed F (1, 17) = 19.814, p= .000 which was less than (<).05 significance level for 3rd-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state, we would reject the null hypothesis and state there was a significant student achievement gap difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools (See Figure 2 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (*df*), mean square, F statistics (*f*), and significance level (*sig*)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	1021.760	1	1021.760	1.937	.182
	Within Groups	8968.345	17	527.550		
	Total	9990.105	18			
# Students Passed	Between Groups	6376.003	1	6376.003	19.814	.000
	Within Groups	5470.524	17	321.796		
	Total	11846.526	18			

Figure 2: ANOVA Analysis on 3rd Grade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 3rd-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -1.392, the degrees of freedom (df) was 17, and finally the significance level/p-value was .182. When looking at the independent t-test the analysis for the difference between 3rd-grade students that had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -4.451, the degrees of freedom (df) was 17, and finally the significance level/p-value was .000 (See Figure 3 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the 05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.401	.535	-1.392	17	.182	-15.20238	10.92368	-38.24933	7.84456
	Equal variances not assumed			-1.345	11.416	.205	-15.20238	11.30643	-39.97745	9.57268
# Students Passed	Equal variances assumed	.757	.397	-4.451	17	.000	-37.97619	8.53153	-55.97615	-19.97623
	Equal variances not assumed			-5.061	16.914	.000	-37.97619	7.50300	-53.81223	-22.14015

Figure 3: Independent T-Test on 3rd Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05.

Research Question 2:

Is there a student achievement gap in third-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o2: There is no significant student achievement gap difference between third-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a2: There is a significant student achievement gap difference between third-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

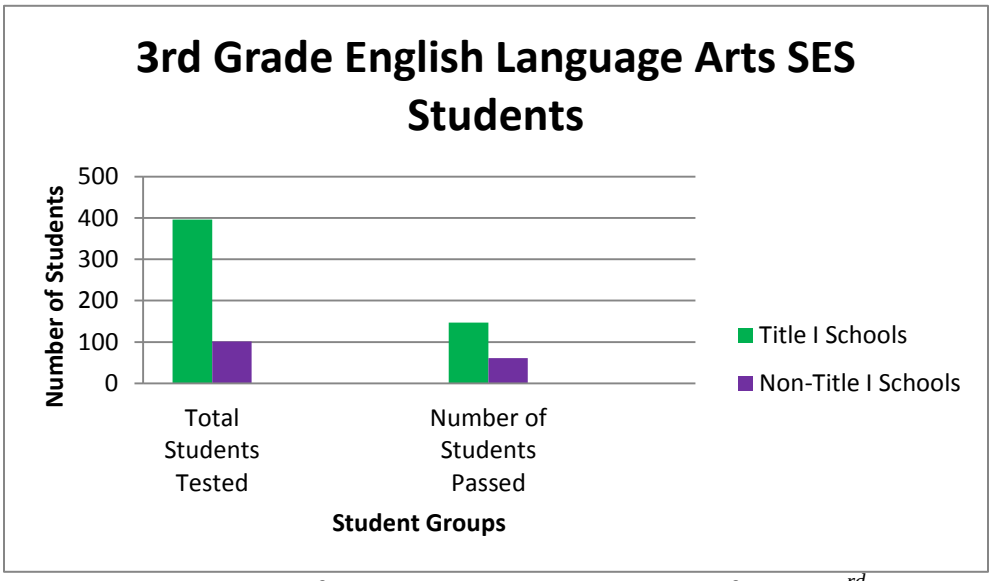


Figure 4: Distribution of English Language Arts Scores for SES 3rd Grade Students in both Title I and Non-Title I Schools.

Table M: Percentage of SES 3rd Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 3rd Graders	n= 396	n= 147	37%
Total Non-Title I 3rd Graders	n= 101	n= 61	60%
School 1	n= 0	n= 0	0%
School 2	n= 14	n= 7	50%
School 3	n= 0	n= 0	0%
School 4	n= 0	n= 0	0%
School 5*	n= 68	n= 27	40%
School 6	n= 16	n= 12	81%
School 7	n= 18	n= 12	72%
School 8	n= 0	n= 0	0%
School 9*	n= 51	n= 24	47%
School 10*	n= 49	n= 23	47%
School 11	n= 19	n= 15	79%
School 12	n= 20	n= 8	40%
School 13	n= 14	n=8	64%
School 14*	n= 102	n= 32	31%
School 15*	n= 48	n= 19	40%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 30	n= 9	30%
School 19*	n= 48	n= 13	27%

*= Title I schools

Table M provides the percentage of socioeconomic status students that passed the English Language Arts content area of the 2017 AzMerit test among third-graders in a suburban southwest school district. There are nineteen schools in the district that service third-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Within those twelve schools that are Non-Title I, six of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table M shows there was a large difference in the percentage of students that passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 23%.

When conducting an ANOVA analysis in SPSS, the data showed; $F(1, 17) = 43.369$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 3rd-grade students that had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, $F(1, 17) = 25.067$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 3rd grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between third-grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 5 which

provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	10251.895	1	10251.895	43.369	.000
	Within Groups	4018.631	17	236.390		
	Total	14270.526	18			
# SES Students Passed	Between Groups	1108.333	1	1108.333	25.067	.000
	Within Groups	751.667	17	44.216		
	Total	1860.000	18			

Figure 5: ANOVA Analysis on Socioeconomically Disadvantaged 3rd Grade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 3rd-grade students that had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 6.585, the degrees of freedom (df) was 17, and finally, the significance level/p-value is .000. When looking at the independent t-test the analysis for the difference between 3rd-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 5.007, the degrees of freedom (df) was 17, and finally, the significance level/p-value was .000 (See Figure 6 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between third-grade English Language Arts (ELA) scores of economically disadvantaged students

between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	3.486	.079	6.585	17	.000	48.15476	7.31226	32.72724	63.58229
	Equal variances not assumed			5.339	7.092	.001	48.15476	9.01935	26.88346	69.42606
# SES Students Passed	Equal variances assumed	.608	.446	5.007	17	.000	15.83333	3.16246	9.16112	22.50555
	Equal variances not assumed			4.591	9.759	.001	15.83333	3.44902	8.12264	23.54402

Figure 6: Independent T-Test on SES 3rd Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between third-grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I schools, therefore, the null hypothesis of there was no significant student achievement gap difference between third-grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I Schools was rejected the significance levels were less than .05.

Research Question 3

Is there a student achievement gap in Mathematics among third-grade students in Title I schools and Non-Title I schools?

H_o3: There is no significant student achievement gap difference between third grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a3: There is a significant student achievement gap difference between third grade students Mathematics scores between Title I schools and Non-Title I schools.

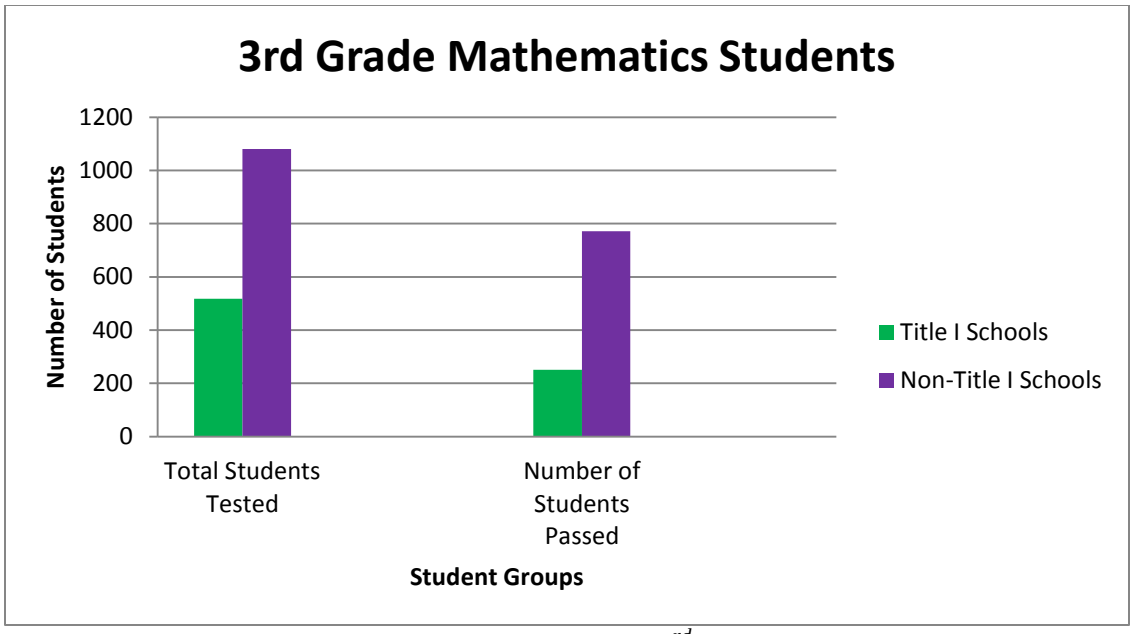


Figure 7: Distribution of Mathematics Scores for 3rd Grade Students in both Title I and Non- Title I Schools.

Table N: Percentage of 3rd Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 3rd Graders	n= 518	n= 251	48%
Total Non-Title I 3rd Graders	n= 1080	n= 833	77%
School 1	n= 68	n= 59	87%
School 2	n= 83	n= 58	70%
School 3	n= 98	n= 84	86%
School 4	n= 83	n= 63	77%
School 5*	n= 81	n= 60	75%
School 6	n= 150	n= 123	82%
School 7	n= 83	n= 65	78%
School 8	n= 67	n= 42	63%
School 9*	n= 73	n= 43	59%
School 10*	n= 91	n= 57	63%
School 11	n= 93	n= 64	69%
School 12	n= 88	n= 57	65%
School 13	n= 80	n= 61	76%
School 14*	n= 115	n= 41	36%
School 15*	n= 52	n= 20	38%
School 16	n= 106	n= 90	85%
School 17	n= 81	n= 67	83%
School 18*	n= 52	n= 14	27%

School 19*	n= 54	n= 16	30%

*= Title I schools

Table N provides the percentage of students that passed the Mathematics content area of the 2017 AzMerit test among third graders in a suburban southwest school district. There are nineteen schools in the district that service third-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Table N shows there was a large difference in the percentage of students that passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 29%.

When conducting the ANOVA analysis in SPSS, the data showed, $F(1, 17) = 2.221$, $p = .154$ which was greater than (>).05 significance level for 3rd-grade students that had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS, the data showed $F(1, 17) = 12.007$, $p = .000$ which was less than (<).05 significance level for 3rd-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state, we would reject the null hypothesis and state there was a significant student achievement gap difference between third-grade students Mathematics scores between Title I schools and Non-Title I schools (See Figure 8 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	1131.789	1	1131.789	2.221	.154
	Within Groups	8662.000	17	509.529		
	Total	9793.789	18			
# Students Passed	Between Groups	4979.174	1	4979.174	12.007	.003
	Within Groups	7049.774	17	414.693		
	Total	12028.947	18			

Figure 8: ANOVA Analysis on 3rd Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 3rd-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -1.490, the degrees of freedom (df) was 17, and finally the significance level/p-value was .154. When looking at the independent t-test the analysis for the difference between 3rd-grade students that had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -3.465, the degrees of freedom (df) was 17, and finally the significance level/p-value was .003 (See Figure 9 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between third-grade students Mathematics scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.334	.571	-1.490	17	.154	-16.00000	10.73549	-38.64990	6.64990
	Equal variances not assumed			-1.457	11.832	.171	-16.00000	10.98277	-39.96707	7.96707
# Students Passed	Equal variances assumed	.082	.779	-3.465	17	.003	-33.55952	9.68501	-53.99312	-13.12593
	Equal variances not assumed			-3.545	13.582	.003	-33.55952	9.46692	-53.92278	-13.19626

Figure 9: Independent T-test on 3rd Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference between third-grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between third-grade students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05.

Research Question 4:

Is there a student achievement gap in third grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o4: There is no significant student achievement gap difference between third grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I Schools.

H_a4: There is a significant student achievement gap difference between third grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

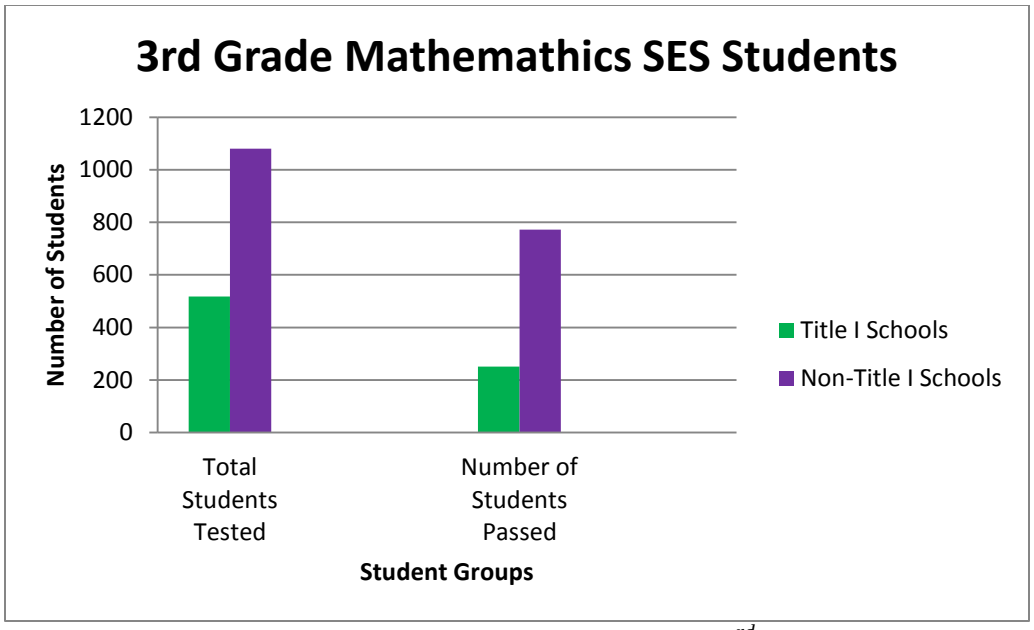


Figure 10: Distribution of Mathematics Scores for SES 3rd Grade Students in both Title I and Non-Title I Schools.

Table 0: Percentage of SES 3rd Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 3rd Graders	n= 393	n= 167	43%
Total Non-Title I 3rd Graders	n= 102	n= 63	62%
School 1	n= 0	n= 0	0%
School 2	n= 14	n= 6	43%
School 3	n= 0	n= 0	0%
School 4	n= 0	n= 0	0%
School 5*	n= 68	n= 50	74%
School 6	n= 16	n= 13	81%
School 7	n= 18	n= 13	72%
School 8	n= 0	n= 0	0%
School 9*	n= 51	n= 29	57%
School 10*	n= 49	n= 25	51%
School 11	n= 19	n= 14	74%
School 12	n= 21	n= 9	43%
School 13	n= 14	n= 8	57%
School 14*	n= 100	n= 30	30%
School 15*	n= 48	n= 16	33%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 30	n= 5	17%

School 19*	n= 47	n= 12	26%

*= Title I schools

Table O provides the percentage of socioeconomic status students that passed the Mathematics content area of the 2017 AzMerit test among third graders in a suburban southwest school district. There are nineteen schools in the district that service third-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Within those twelve schools that are Non-Title I, six of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table O shows there was a large difference in the percentage of students that passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 9%.

When conducting an ANOVA analysis in SPSS, the data showed; $F(1, 17) = 43.947$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 3rd-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, $F(1, 17) = 15.387$, $p = .001$ which was less than (<).05 significance level for socioeconomically disadvantaged 3rd grade students that had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. Since the significance level (p-value) was .001 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between third grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 11 which provides descriptive statistics generated from the ANOVA

analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	10035.090	1	10035.090	43.947	.000
	Within Groups	3881.857	17	228.345		
	Total	13916.947	18			
# SES Students Passed	Between Groups	1530.682	1	1530.682	15.387	.001
	Within Groups	1691.107	17	99.477		
	Total	3221.789	18			

Figure 11: ANOVA Analysis on Socioeconomically Disadvantaged 3rd Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 3rd-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 6.629, the degrees of freedom (df) was 17, and finally, the significance level/p-value is .000. When looking at the independent t-test the analysis for the difference between 3rd-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 3.923, the degrees of freedom (df) was 17, and finally, the significance level/p-value was .001 (See Figure 12 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was the significant student achievement gap difference between third grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	3.333	.086	6.629	17	.000	47.64286	7.18675	32.48014	62.80557
	Equal variances not assumed			5.405	7.184	.001	47.64286	8.81483	26.90668	68.37904
# SES Students Passed	Equal variances assumed	4.905	.041	3.923	17	.001	18.60714	4.74349	8.59925	28.61504
	Equal variances not assumed			3.190	7.141	.015	18.60714	5.83324	4.86878	32.34551

Figure 12: Independent T-Test on SES 3rd Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between third grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between third grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05.

Research Question 5:

Is there a student achievement gap in English Language Arts (ELA) among fourth grade students in Title I schools and Non-Title I schools?

H_o5: There is no significant student achievement gap difference between fourth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a5: There is a significant student achievement gap difference between fourth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

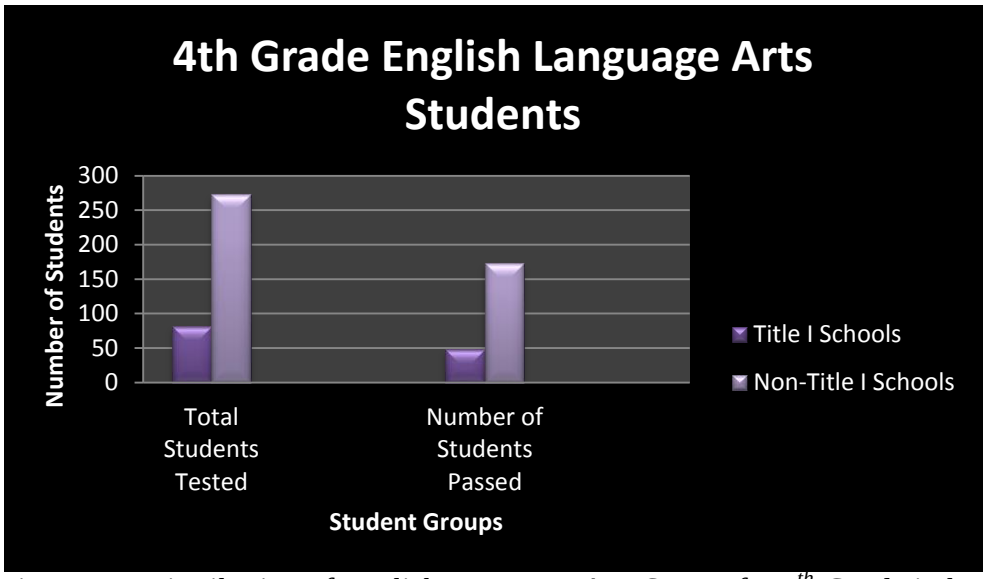


Figure 13: Distribution of English Language Arts Scores for 4th Grade in both Title I and Non-Title I Schools.

Table P: Percentage of 4th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 4th Graders	n= 564	n= 273	48%
Total Non-Title I 4th Graders	n= 1140	n= 931	82%
School 1	n= 109	n= 90	83%
School 2	n= 101	n= 83	82%
School 3	n= 102	n= 83	81%
School 4	n= 81	n= 64	79%
School 5*	n= 81	n= 54	67%
School 6	n= 158	n= 130	82%
School 7	n= 74	n= 61	82%
School 8	n= 71	n= 59	83%
School 9*	n= 77	n= 39	51%
School 10*	n= 95	n= 57	60%
School 11	n= 69	n= 54	78%
School 12	n= 76	n= 58	76%
School 13	n= 80	n= 60	75%
School 14*	n= 128	n= 52	41%
School 15*	n= 63	n= 24	38%
School 16	n= 108	n= 94	87%
School 17	n= 111	n= 95	86%
School 18*	n= 50	n= 21	42%
School 19*	n= 70	n= 26	37%

*= Title I schools

Table P provides the percentage of students that passed the English Language Arts content area of the 2017 AzMerit test among fourth graders in a suburban southwest school district. There are nineteen schools in the district that service fourth-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Table P shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 34%.

When conducting the ANOVA analysis in SPSS the data showed, F (1, 17) = 1.426, p= .249 which was greater than (>).05 significance level for 4th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS, the data showed F (1, 17) = 15.931, p= .001 which was less than (<).05 significance level for 4^{th}-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title schools. Since the significance level (p-value) was .001 which was less than the .05 alpha level/type I error state, we would reject the null hypothesis and state there was a significant student achievement gap difference between fourth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools (See Figure 13 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	920.391	1	920.391	1.426	.249
	Within Groups	10975.714	17	645.630		
	Total	11896.105	18			
# Students Passed	Between Groups	6581.504	1	6581.504	15.931	.001
	Within Groups	7022.917	17	413.113		
	Total	13604.421	18			

Figure 14: ANOVA Analysis on 4th Grade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 4th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -1.194, the degrees of freedom (df) was 17, and finally the significance level/p-value was .249. When looking at the independent t-test the analysis for the difference between 4th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -3.991 the degrees of freedom (df) was 17, and finally, the significance level/p-value was .001 (See Figure 15 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between fourth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.077	.784	-1.194	17	.249	-14.42857	12.08451	-39.92466	11.06752
	Equal variances not assumed			-1.197	12.791	.253	-14.42857	12.05218	-40.50914	11.65199
# Students Passed	Equal variances assumed	1.079	.313	-3.991	17	.001	-38.58333	9.66655	-58.97797	-18.18870
	Equal variances not assumed			-4.411	16.368	.000	-38.58333	8.74732	-57.09299	-20.07367

Figure 15: Independent T-Test on 4th Grade Students in English Language Arts between Title I and Non-Title I Schools

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference between fourth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fourth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05.

Research Question 6:

Is there a student achievement gap in fourth grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o6: There is no significant student achievement gap difference between fourth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a6: There is a significant student achievement gap difference between fourth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

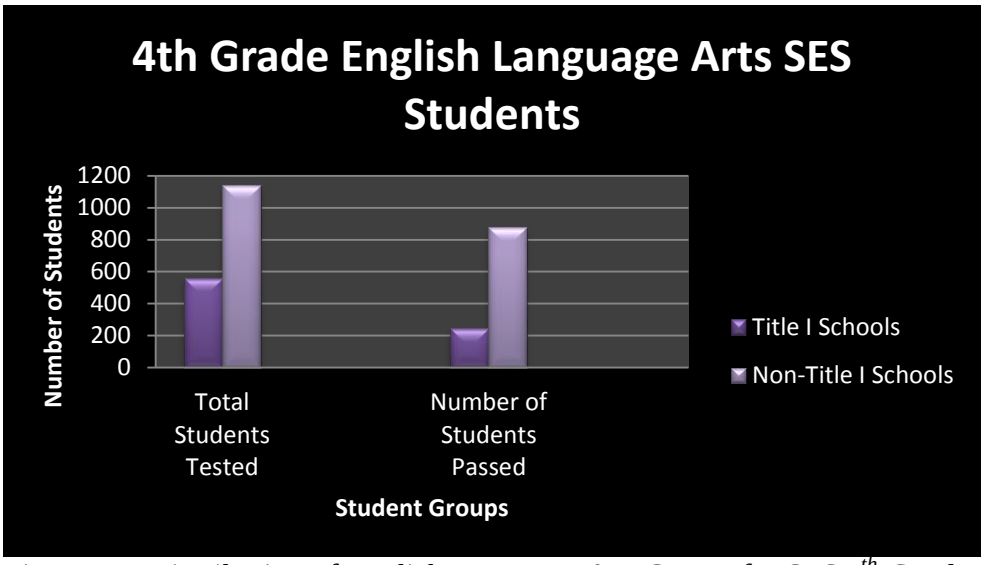


Figure 16: Distribution of English Language Arts Scores for SES 4th Grade Students in both Title I and Non-Title I Schools.

Table Q: Percentage of 4th Grade SES Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 4th Graders	n= 417	n= 173	41%
Total Non-Title I 4th Graders	n= 81	n= 48	59%
School 1	n= 0	n= 0	0%
School 2	n= 0	n= 0	0%
School 3	n= 0	n= 0	0%
School 4	n= 0	n= 0	0%
School 5*	n= 57	n= 34	60%
School 6	n= 24	n= 15	63%
School 7	n= 16	n= 9	56%
School 8	n= 0	n= 0	0%
School 9*	n= 56	n= 28	50%
School 10*	n= 52	n= 23	44%
School 11	n= 17	n= 11	65%
School 12	n= 11	n= 7	64%
School 13	n= 13	n= 6	46%
School 14*	n= 104	n= 36	35%
School 15*	n= 53	n= 20	38%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 33	n= 12	36%
School 19*	n= 62	n= 20	32%

*= Title I schools

Table Q provides the percentage of socioeconomic status students that passed the English Language Arts content area of the 2017 AzMerit test among fourth graders in a suburban southwest school district. There are nineteen schools in the district that service fourth-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Within those twelve schools that are Non-Title I, five of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table Q shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 18%.

When conducting an ANOVA analysis in SPSS, the data showed; $F(1, 17) = 57.139$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 4th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, $F(1, 17) = 42.803$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 4th grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between fourth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 17 which

provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	12335.194	1	12335.194	57.139	.000
	Within Groups	3669.964	17	215.880		
	Total	16005.158	18			
# SES Students Passed	Between Groups	1896.992	1	1896.992	42.803	.000
	Within Groups	753.429	17	44.319		
	Total	2650.421	18			

Figure 17: *ANOVA Analysis on Socioeconomically Disadvantaged 4th Grade Students in English Language Arts between Title I and Non-Title I Schools*

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 4th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 7.559, the degrees of freedom (df) was 17, and finally, the significance level/p-value is .000. When looking at the independent t-test the analysis for the difference between 4th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 6.542, the degrees of freedom (df) was 17, and finally, the significance level/p-value was .000 (See Figure 18 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between

fourth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	1.367	.258	7.559	17	.000	52.82143	6.98785	38.07835	67.56450
	Equal variances not assumed			6.168	7.196	.000	52.82143	8.56447	32.68100	72.96186
# SES Students Passed	Equal variances assumed	2.081	.167	6.542	17	.000	20.71429	3.16617	14.03426	27.39431
	Equal variances not assumed			5.803	8.883	.000	20.71429	3.56987	12.62239	28.80618

Figure 18: Independent T-Test on SES 4th Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between fourth grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fourth grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I Schools was rejected.

Research Question 7:

Is there a student achievement gap in Mathematics among fourth grade students in Title I schools and Non-Title I schools?

H_o7: There is no significant student achievement gap difference between fourth grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a: There is a significant student achievement gap difference between fourth grade students Mathematics scores between Title I schools and Non-Title I schools.

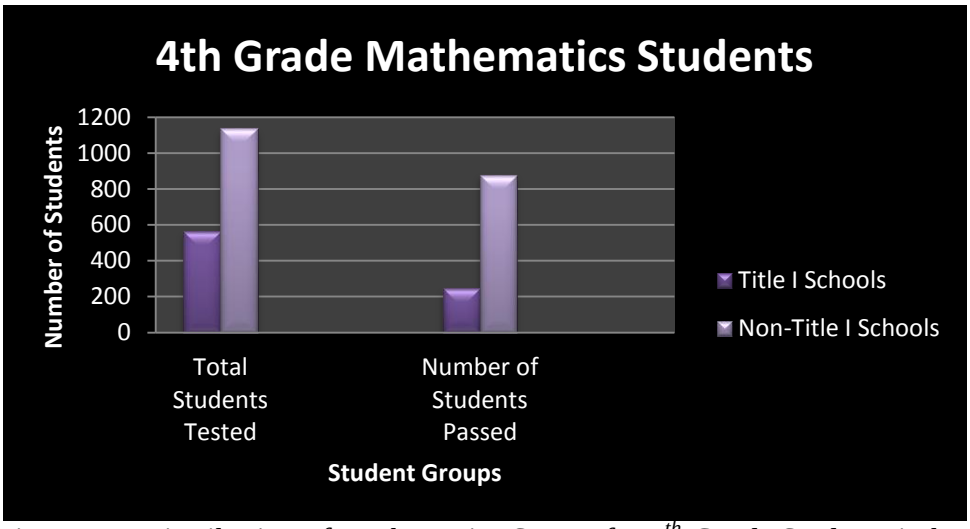


Figure 19: Distribution of Mathematics Scores for 4th Grade Students in both Title I and Non- Title I Schools.

Table R: Percentage of 4th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 4th Graders	n= 562	n= 247	44%
Total Non-Title I 4th Graders	n= 1139	n= 878	77%
School 1	n= 109	n= 74	68%
School 2	n= 101	n= 73	72%
School 3	n= 102	n= 77	75%
School 4	n= 80	n= 74	93%
School 5*	n= 81	n= 53	65%
School 6	n= 158	n= 122	77%
School 7	n= 74	n= 62	84%
School 8	n= 71	n= 55	77%
School 9*	n= 77	n= 37	48%
School 10*	n= 95	n= 47	49%
School 11	n= 70	n= 44	63%
School 12	n= 76	n= 55	72%
School 13	n= 79	n= 64	81%
School 14*	n= 126	n= 45	365
School 15*	n= 63	n= 28	44%
School 16	n= 108	n= 97	90%
School 17	n= 111	n= 81	73%
School 18*	n= 50	n= 16	32%
School 19*	n= 70	n= 21	30%

*= Title I schools

Table R provides the percentage of students that passed the Mathematics content area of the 2017 AzMerit test among fourth graders in a suburban southwest school district. There are nineteen schools in the district that service third-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Table R shows there was a significant difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 33%.

When conducting the ANOVA analysis in SPSS, the data showed, $F(1, 17) = 1.490$, $p = .239$ which was greater than (>).05 significance level for 4th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS, the data showed $F(1, 17) = 18.196$, $p = .001$ which was less than (<).05 significance level for 4th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title schools. Since the significance level (p-value) was .001which was less than the .05 alpha level/type I error state, we would reject the null hypothesis and state there was a significant student achievement gap difference between fourth-grade students Mathematics scores between Title I schools and Non-Title I schools (See Figure 20 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	946.392	1	946.392	1.490	.239
	Within Groups	10798.345	17	635.197		
	Total	11744.737	18			
# Students Passed	Between Groups	6344.063	1	6344.063	18.196	.001
	Within Groups	5927.095	17	348.653		
	Total	12271.158	18			

Figure 20: *ANOVA Analysis on 4th Grade Students in Mathematics between Title I and Non-Title I Schools.*

When looking at the independent t-test the analysis for the difference between 4th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was .738, the degrees of freedom (df) was 17, and finally, the significance level/p-value was .239. When looking at the independent t-test the analysis for the difference between 4th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -4.266, the degrees of freedom (df) was 17, and finally the significance level/p-value was .001 (See Figure 21 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between fourth-grade students Mathematics scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.115	.738	-1.221	17	.239	-14.63095	11.98647	-39.92019	10.65829
	Equal variances not assumed			-1.233	13.069	.239	-14.63095	11.86959	-40.25999	10.99808
# Students Passed	Equal variances assumed	.212	.651	-4.266	17	.001	-37.88095	8.88042	-56.61701	-19.14490
	Equal variances not assumed			-4.735	16.479	.000	-37.88095	8.00102	-54.80238	-20.95952

Figure 21: Independent T-Test on 4th Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference between fourth grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fourth grade students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05.

Research Question 8:

Is there a student achievement gap in fourth grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o8: There is no significant student achievement gap difference between fourth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a8: There is a significant student achievement gap difference between fourth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

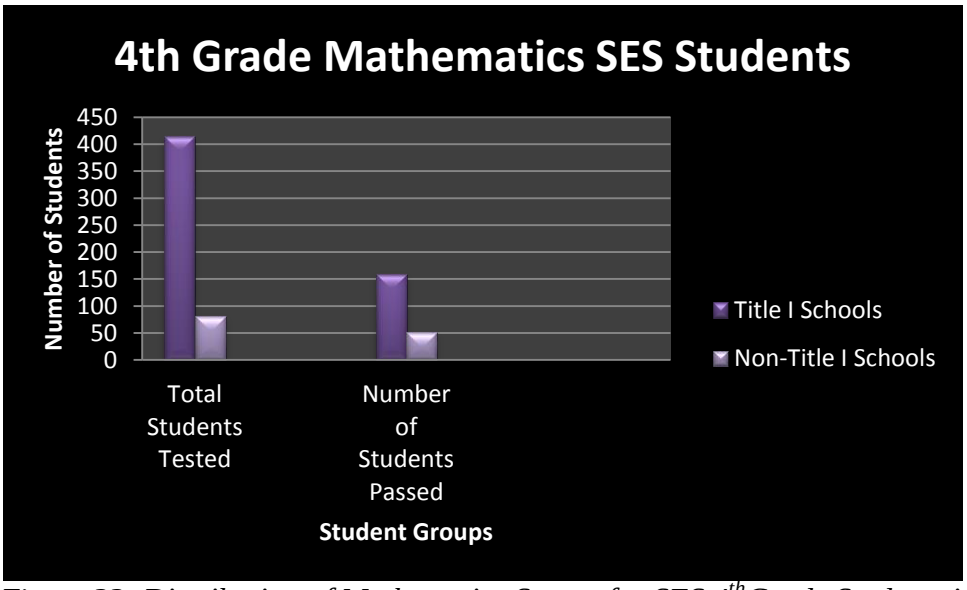


Figure 22: *Distribution of Mathematics Scores for SES 4th Grade Students in both Title I and Non-Title I Schools.*

Table S: Percentage of 4th Grade SES Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 4th Graders	n= 415	n= 159	38%
Total Non-Title I 4th Graders	n= 82	n= 51	62%
School 1	n= 0	n= 0	0%
School 2	n= 0	n= 0	0%
School 3	n= 0	n= 0	0%
School 4	n= 0	n= 0	0%
School 5*	n= 57	n= 34	60%
School 6	n= 24	n= 11	46%
School 7	n= 16	n= 12	75%
School 8	n= 0	n= 0	0%
School 9*	n= 56	n= 26	46%
School 10*	n= 52	n= 20	38%
School 11	n= 18	n= 10	56%
School 12	n= 11	n= 8	73%
School 13	n= 13	n= 10	77%
School 14*	n= 102	n= 29	28%
School 15*	n= 53	n= 26	49%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 33	n= 8	24%
School 19*	n= 62	n= 16	26%

*= Title I schools

Table S provides the percentage of socioeconomic status students that passed the Mathematics content area of the 2017 AzMerit test among fourth graders in a suburban southwest school district. There are nineteen schools in the district that service fourth-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Within those twelve schools that are Non-Title I, five of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table S shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 24%.

When conducting an ANOVA analysis in SPSS, the data showed; $F(1, 17) = 58.792$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 4th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, $F(1, 17) = 33.291$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 4th grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between fourth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 23 which provides descriptive statistics generated from the

ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	12163.431	1	12163.431	58.792	.000
	Within Groups	3517.095	17	206.888		
	Total	15680.526	18			
# SES Students Passed	Between Groups	1507.269	1	1507.269	33.291	.000
	Within Groups	769.679	17	45.275		
	Total	2276.947	18			

Figure 23: ANOVA Analysis on Socioeconomically Disadvantaged 4th Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 4th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 7.668, the degrees of freedom (df) was 17, and finally, the significance level/p-value is .000. When looking at the independent t-test the analysis for the difference between 4th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 5.770, the degrees of freedom (df) was 17, and finally, the significance level/p-value was .000 (See Figure 24 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between third grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	1.196	.289	7.668	17	.000	52.45238	6.84077	38.01963	66.88514
	Equal variances not assumed			6.298	7.308	.000	52.45238	8.32842	32.92590	71.97887
# SES Students Passed	Equal variances assumed	1.997	.176	5.770	17	.000	18.46429	3.20013	11.71261	25.21597
	Equal variances not assumed			5.071	8.666	.001	18.46429	3.64097	10.17925	26.74932

Figure 24: *Independent T-Test on SES 4th Grade Students in Mathematics between Title I and Non-Title I Schools.*

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between fourth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fourth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools was rejected.

Research Question 9:

Is there a student achievement gap in English Language Arts (ELA) among fifth grade students in Title I schools and Non-Title I schools?

H_o9: There is no significant student achievement gap difference between fifth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a9: There is a significant student achievement gap difference between fifth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

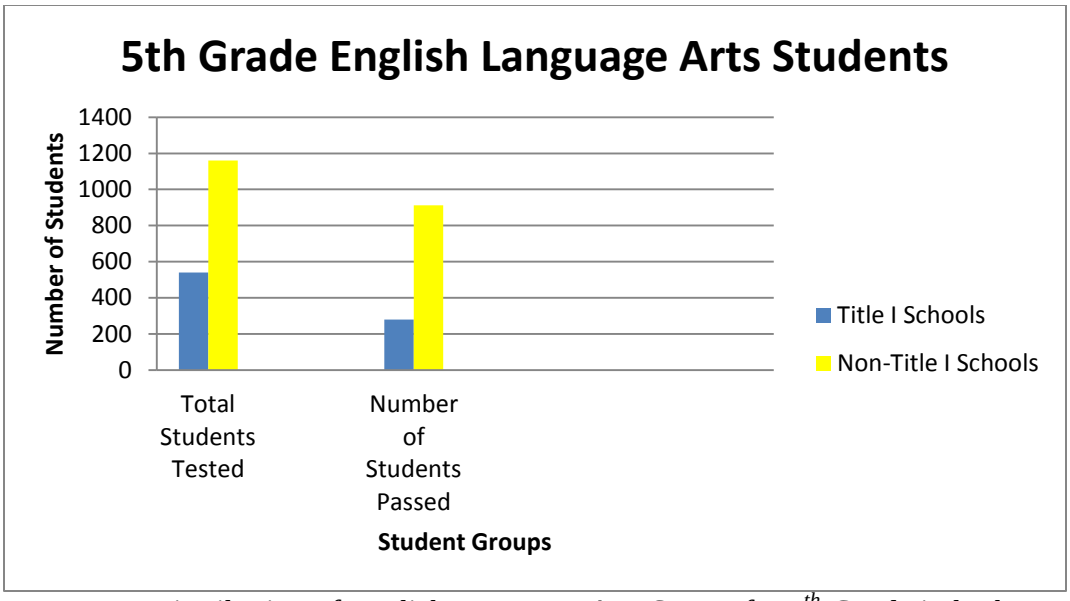


Figure 25: *Distribution of English Language Arts Scores for 5th Grade in both Title I and Non-Title I Schools.*

Table T: Percentage of 5th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 5th Graders	n= 540	n= 279	52%
Total Non-Title I 5th Graders	n= 1161	n= 912	79%
School 1	n= 106	n= 81	76%
School 2	n= 86	n= 72	84%
School 3	n= 107	n= 81	76%
School 4	n= 71	n= 59	83%
School 5*	n= 73	n= 33	45%
School 6	n= 149	n= 109	73%
School 7	n= 86	n= 71	83%
School 8	n= 91	n= 72	79%
School 9*	n= 53	n= 22	42%
School 10*	n= 98	n= 57	58%
School 11	n= 81	n= 61	75%
School 12	n= 81	n= 53	65%
School 13	n= 75	n= 65	87%
School 14*	n= 130	n= 68	52%
School 15*	n= 61	n= 30	49%
School 16	n= 104	n= 93	89%
School 17	n= 124	n= 95	77%
School 18*	n= 58	n= 42	72%

School 19*	n= 67	n= 27	40%

*= Title I schools

Table T provides the percentage of students that passed the English Language Arts content area of the 2017 AzMerit test among third graders in a suburban southwest school district. There are nineteen schools in the district that service fifth-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Table T shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 27%.

When conducting the ANOVA analysis in SPSS, the data showed, F (1, 17) = 2.841, p= .110 which was greater than (>).05 significance level for 5th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS, the data showed F (1, 17) = 20.762, p= .000 which was less than (<).05 significance level for 5th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state, we would reject the null hypothesis and state there was a significant student achievement gap difference between fifth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools (See Figure 26 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	1699.630	1	1699.630	2.841	.110
	Within Groups	10171.107	17	598.300		
	Total	11870.737	18			
# Students Passed	Between Groups	5775.248	1	5775.248	20.762	.000
	Within Groups	4728.857	17	278.168		
	Total	10504.105	18			

Figure 26: ANOVA Analysis on 5th Grade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 5th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -1.685, the degrees of freedom (df) was 17, and finally the significance level/p-value was .110. When looking at the independent t-test the analysis for the difference between 5th grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -4.557, the degrees of freedom (df) was 17, and finally the significance level/p-value was .000 (See Figure 27 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between fifth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.256	.620	-1.685	17	.110	-19.60714	11.63314	-44.15091	4.93663
	Equal variances not assumed			-1.595	10.724	.140	-19.60714	12.29070	-46.74411	7.52983
# Students Passed	Equal variances assumed	.008	.929	-4.557	17	.000	-36.14286	7.93215	-52.87823	-19.40749
	Equal variances not assumed			-4.527	12.442	.001	-36.14286	7.98299	-53.46801	-18.81770

Figure 27: *Independent T-Test on 5th Grade Students in English Language Arts between Title I and Non-Title I Schools.*

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference between third grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fourth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05.

Research Question 10:

Is there a student achievement gap in fifth grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o10: There is no significant student achievement gap difference between fifth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a10: There is a significant student achievement gap difference between fifth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

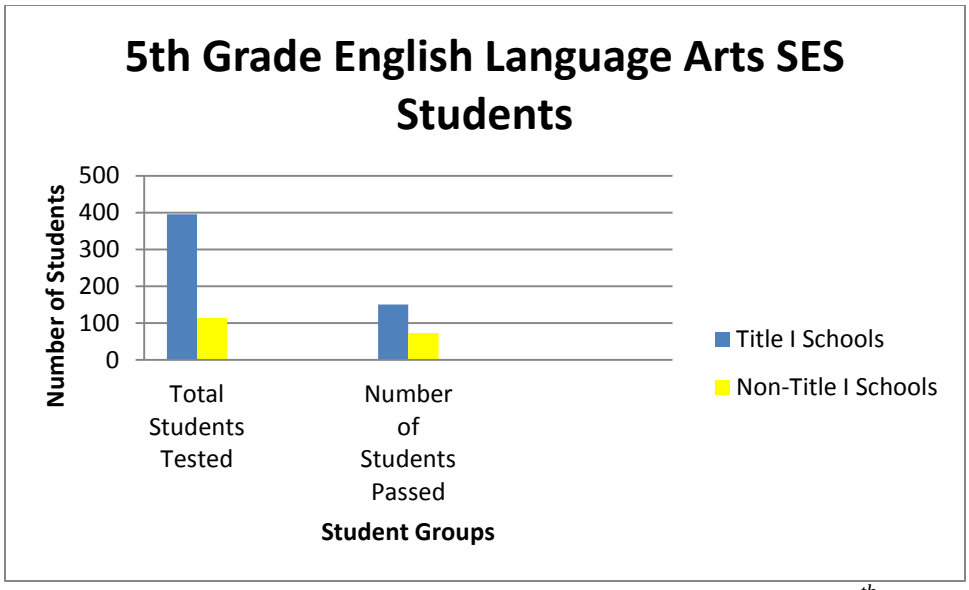


Figure 28: *Distribution of English Language Arts Scores for SES 5th Grade Students in both Title I and Non-Title I Schools.*

Table U: Percentage of 5th Grade SES Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 5th Graders	n=396	n= 151	38%
Total Non-Title I 5th Graders	n= 114	n= 73	64%
School 1	n= 12	n= 7	58%
School 2	n= 0	n= 0	0%
School 3	n= 0	n= 0	0%
School 4	n= 0	n= 0	0%
School 5*	n= 57	n= 23	40%
School 6	n= 17	n= 11	65%
School 7	n= 19	n= 15	79%
School 8	n= 13	n= 9	69%
School 9*	n= 35	n= 11	31%
School 10*	n= 41	n= 16	39%
School 11	n= 15	n= 9	60%
School 12	n= 26	n= 14	54%
School 13	n= 12	n= 8	67%
School 14*	n= 90	n= 36	40%
School 15*	n= 55	n= 27	49%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 23	n= 15	65%
School 19*	n= 62	n= 23	37%

*= Title I schools

Table U provides the percentage of socioeconomic status students that passed the English Language Arts content area of the 2017 AzMerit test among fifth graders in a suburban southwest school district. There are nineteen schools in the district that service fifth-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Within those twelve schools that are Non-Title I, seven of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table U shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 26%.

When conducting an ANOVA analysis in SPSS, the data showed; $F(1, 17) = 35.921$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 5th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, $F(1, 17) = 22.518$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 5th grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between fifth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 29 which

provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	7931.932	1	7931.932	35.921	.000
	Within Groups	3753.857	17	220.815		
	Total	11685.789	18			
# SES Students Passed	Between Groups	1060.527	1	1060.527	22.518	.000
	Within Groups	800.631	17	47.096		
	Total	1861.158	18			

Figure 29: ANOVA Analysis on Socioeconomically Disadvantaged 5th Grade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 5th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 5.993, the degrees of freedom (df) was 17, and finally, the significance level/p-value is .000. When looking at the independent t-test the analysis for the difference between 5th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 4.745, the degrees of freedom (df) was 17, and finally, the significance level/p-value was .000 (See Figure 30 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the.05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between fifth

grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	4.357	.052	5.993	17	.000	42.35714	7.06727	27.44651	57.26778
	Equal variances not assumed			4.912	7.271	.002	42.35714	8.62330	22.11907	62.59521
# SES Students Passed	Equal variances assumed	.768	.393	4.745	17	.000	15.48810	3.26384	8.60199	22.37420
	Equal variances not assumed			4.294	9.396	.002	15.48810	3.60677	7.38117	23.59502

Figure 30: Independent T-Test on SES 5th Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between fifth grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fifth grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I schools was rejected.

Research Question 11:

Is there a student achievement gap in Mathematics among fifth grade students in Title I schools and Non-Title I schools?

H_o11: There is no significant student achievement gap difference between fifth grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a11: There is a significant student achievement gap difference between fifth grade students Mathematics scores between Title I schools and Non-Title I schools.

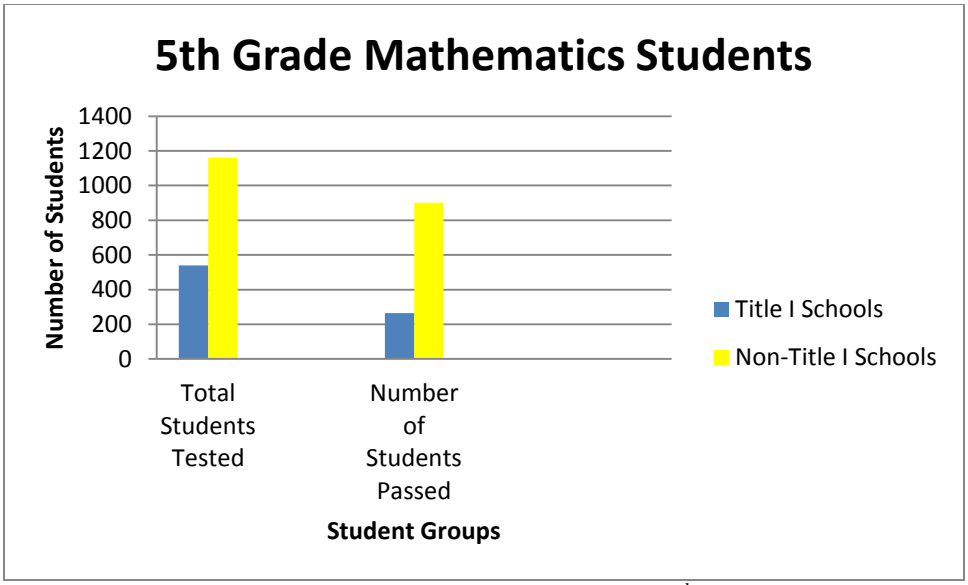


Figure 31: Distribution of Mathematics Scores for 5th Grade Students in both Title I and Non- Title I Schools.

Table V: Percentage of 5th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 5th Graders	n= 540	n= 265	49%
Total Non-Title I 5th Graders	n= 1162	n= 902	78%
School 1	n= 106	n= 72	68%
School 2	n= 86	n= 78	91%
School 3	n= 106	n= 86	81%
School 4	n= 71	n= 61	86%
School 5*	n= 73	n= 48	66%
School 6	n= 150	n= 110	73%
School 7	n= 86	n= 73	85%
School 8	n= 92	n= 68	74%
School 9*	n= 53	n= 24	45%
School 10*	n= 98	n= 62	63%
School 11	n= 81	n= 56	69%
School 12	n= 81	n= 45	56%
School 13	n= 75	n= 66	88%
School 14*	n= 127	n= 51	40%
School 15*	n= 62	n= 36	58%
School 16	n= 104	n= 96	92%
School 17	n= 124	n= 91	73%
School 18*	n= 59	n= 27	46%
School 19*	n= 68	n= 17	25%

*= Title I schools

Table V provides the percentage of students that passed the Mathematics content area of the 2017 AzMerit test among third graders in a suburban southwest school district. There are nineteen schools in the district that service fifth-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Table V shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 29%.

When conducting the ANOVA analysis in SPSS, the data showed, F (1, 17) = 2.958, p= .104 which was greater than (>).05 significance level for 5thgrade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS, the data showed F (1, 17) = 19.895, p= .000 which was less than (<).05 significance level for 5th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state, we would reject the null hypothesis and state there was a significant student achievement gap difference between fifth-grade students Mathematics scores between Title I schools and Non-Title I schools (See Figure 32 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	1714.108	1	1714.108	2.958	.104
	Within Groups	9850.524	17	579.443		
	Total	11564.632	18			
# Students Passed	Between Groups	6154.108	1	6154.108	19.895	.000
	Within Groups	5258.524	17	309.325		
	Total	11412.632	18			

Figure 32: ANOVA Analysis on 5th Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 5th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -1.720, the degrees of freedom (df) was 17, and finally the significance level/p-value was .104. When looking at the independent t-test the analysis for the difference between 5th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -4.460, the degrees of freedom (df) was 17, and finally the significance level/p-value was .000 (See Figure 33 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between fifth-grade students Mathematics scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.152	.702	-1.720	17	.104	-19.69048	11.44834	-43.84435	4.46340
	Equal variances not assumed			-1.651	11.196	.126	-19.69048	11.92493	-45.88099	6.50004
# Students Passed	Equal variances assumed	.020	.889	-4.460	17	.000	-37.30952	8.36459	-54.95726	-19.66178
	Equal variances not assumed			-4.595	13.861	.000	-37.30952	8.11928	-54.74003	-19.87902

Figure 33: Independent T-Test on 5th Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference between fifth grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fifth grade students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05.

Research Question 12:

Is there a student achievement gap in fifth grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o12: There is no significant student achievement gap difference between fifth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a12: There is a significant student achievement gap difference between fifth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

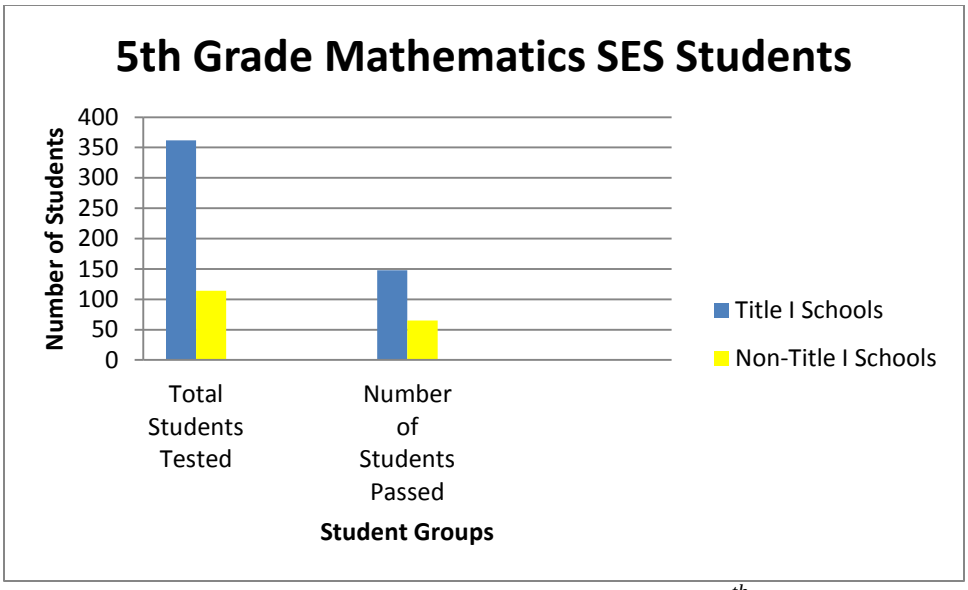


Figure 34: *Distribution of Mathematics Scores for SES 5th Grade Students in both Title I and Non-Title I schools*

Table W: Percentage of 5th Grade SES Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 5th Graders	n= 362	n= 148	41%
Total Non-Title I 5th Graders	n= 114	n= 65	57%
School 1	n= 12	n= 7	58%
School 2	n= 0	n= 0	0%
School 3	n= 0	n= 0	0%
School 4	n= 0	n= 0	0%
School 5*	n= 57	n= 35	61%
School 6	n= 17	n= 10	59%
School 7	n= 19	n= 13	68%
School 8	n= 13	n= 7	54%
School 9*	n= 35	n= 12	34%
School 10*	n= 41	n= 21	51%
School 11	n= 15	n= 8	53%
School 12	n= 26	n= 12	46%
School 13	n= 12	n= 8	67%
School 14*	n= 87	n= 25	29%
School 15*	n= 56	n= 32	57%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 23	n= 8	35%
School 19*	n= 63	n= 15	24%

*= Title I schools

Table W provides the percentage of socioeconomic status students that passed the Mathematics content area of the 2017 AzMerit test among fifth graders in a suburban southwest school district. There are nineteen schools in the district that service fifth-grade students. Of those nineteen schools, seven of them are Title I and the other twelve schools are Non-Title I. Within those twelve schools that are Non-Title I, seven of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table W shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 16%.

When conducting an ANOVA analysis in SPSS, the data showed; $F(1, 17) = 37.596$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 5th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, $F(1, 17) = 20.521$, $p = .000$ which was less than (<).05 significance level for socioeconomically disadvantaged 5th grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between fifth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 35 which provides descriptive statistics generated from the

ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	7878.519	1	7878.519	37.596	.000
	Within Groups	3562.429	17	209.555		
	Total	11440.947	18			
# SES Students Passed	Between Groups	1093.384	1	1093.384	20.521	.000
	Within Groups	905.774	17	53.281		
	Total	1999.158	18			

Figure 35: ANOVA Analysis on Socioeconomically Disadvantaged 5th Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 5th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 6.132, the degrees of freedom (df) was 17, and finally, the significance level/p-value is .000. When looking at the independent t-test the analysis for the difference between 5th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 4.530, the degrees of freedom (df) was 17, and finally, the significance level/p-value was .001 (See Figure 36 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between fifth

grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	4.915	.041	6.132	17	.000	42.21429	6.88471	27.68881	56.73976
	Equal variances not assumed			5.053	7.364	.001	42.21429	8.35485	22.65436	61.77421
# SES Students Passed	Equal variances assumed	5.138	.037	4.530	17	.000	15.72619	3.47154	8.40187	23.05051
	Equal variances not assumed			3.824	7.808	.005	15.72619	4.11197	6.20325	25.24913

Figure 36: Independent T-Test on SES 5th Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between fifth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fifth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools was rejected.

Research Question 13:

Is there a student achievement gap in English Language Arts (ELA) among sixth grade students in Title I schools and Non-Title I schools?

H_o13: There is no significant student achievement gap difference between sixth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a13: There is a significant student achievement gap difference between sixth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

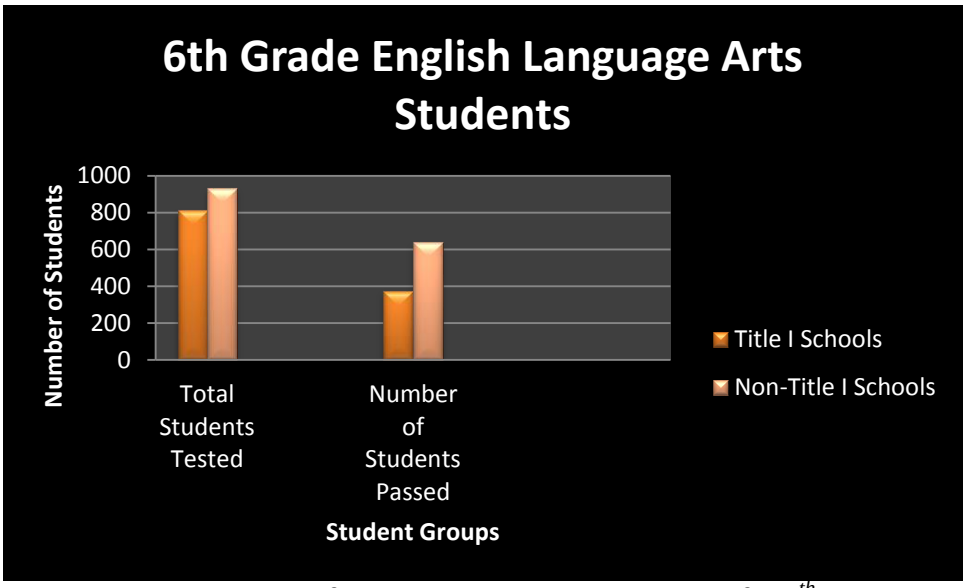


Figure 37: *Distribution of English Language Arts Scores for 6th Grade in both Title I and Non-Title I Schools.*

Table X: Percentage of 6th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 6th Graders	n= 813	n= 375	46%
Total Non-Title I 6th Graders	n= 933	n= 639	68%
School 16	n= 97	n= 80	82%
School 17	n= 142	n= 82	58%
School 18*	n= 67	n= 35	52%
School 19*	n= 193	n= 46	24%
School 20	n= 312	n= 215	69%
School 21	n= 169	n= 113	67%
School 22*	n= 268	n= 134	50%
School 23*	n= 285	n= 160	56%
School 24	n= 213	n= 149	70%

*= Title I schools

Table X provides the percentage of students that passed the English Language Arts content area of the 2017 AzMerit test among sixth graders in a suburban southwest school district. There are nine schools in the district that service sixth-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title I. Table X shows there

was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 22%.

When conducting the ANOVA analysis in SPSS, the data showed, F (1, 7) = .077, p= .790 which was greater than (>).05 significance level for 6th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS the data showed F (1, 7) = .739, p= .418 which was greater than (<).05 significance level for 6th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title schools. Since the significance level (p-value) was .418 which was greater than the .05 alpha level/type I error state, we would reject the alternative hypothesis and except the null hypothesis that there is no significant student achievement gap difference between sixth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools (See Figure 38 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	616.050	1	616.050	.077	.790
	Within Groups	56293.950	7	8041.993		
	Total	56910.000	8			
# Students Passed	Between Groups	2576.450	1	2576.450	.739	.418
	Within Groups	24395.550	7	3485.079		
	Total	26972.000	8			

Figure 38: ANOVA Analysis on 6thGrade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 6th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was .277 the degrees of freedom (df) was 7, and finally, the significance level/p-value was .790. When looking at the independent t-test the analysis for the difference between 6th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -.860, the degrees of freedom (df) was 7, and finally the significance level/p-value was .418 (See Figure 39 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was greater than the .05 alpha level/type I error state we would reject the alternative hypothesis and accept the null hypothesis that there are no significant student achievement gap difference between sixth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.149	.711	.277	7	.790	16.65000	60.15727	-125.59933	158.89933
	Equal variances not assumed			.270	5.850	.796	16.65000	61.64027	-135.12117	168.42117
# Students Passed	Equal variances assumed	.417	.539	-.860	7	.418	-34.05000	39.60158	-127.69286	59.59286
	Equal variances not assumed			-.848	6.193	.428	-34.05000	40.13896	-131.53103	63.43103

Figure 39: Independent T-Test on 6th Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was no statistically significant difference between sixth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the alternative

hypothesis of there was a significant student achievement gap difference between sixth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected. The null hypothesis of there was no significant difference between sixth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05.

Research Question 14:

Is there a student achievement gap in sixth grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o14: There is no significant student achievement gap difference between sixth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a14: There is a significant student achievement gap difference between sixth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

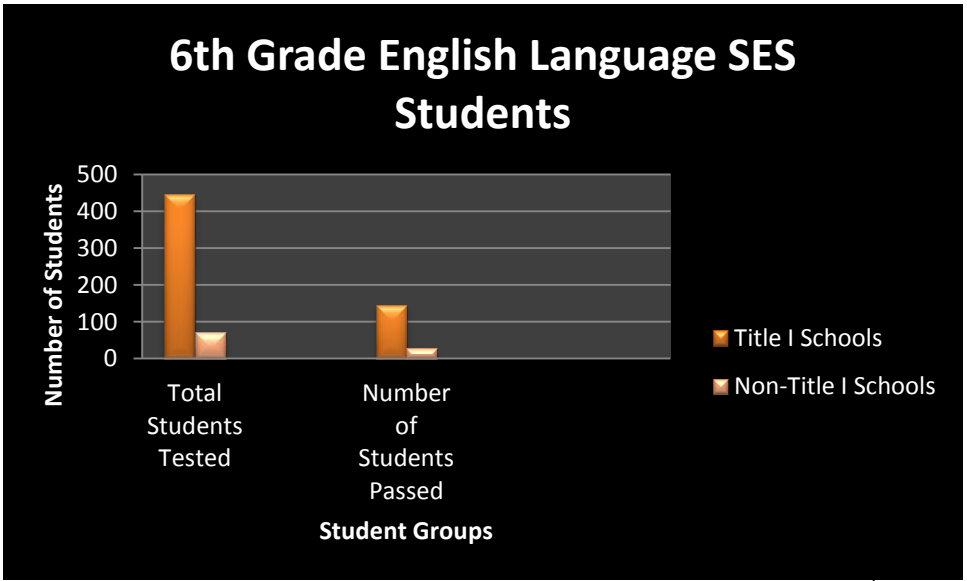


Figure 40: Distribution of English Language Arts Scores for SES 6th Grade Students in both Title I and Non-Title I Schools.

Table Y: Percentage of 6th SES Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 6th Graders	n= 445	n= 144	32%
Total Non-Title I 6th Graders	n= 71	n= 29	41%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 33	n= 14	42%
School 19*	n= 165	n= 35	21%
School 20	n= 27	n= 12	44%
School 21	n= 20	n= 8	40%
School 22*	n= 127	n= 46	36%
School 23*	n= 120	n= 49	41%
School 24	n= 24	n= 9	38%

*= Title I schools

Table Y provides the percentage of socioeconomic status students that passed the English Language Arts content area of the 2017 AzMerit test among sixth graders in a suburban southwest school district. There are nine schools in the district that service sixth-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title I. Within those five schools that are Non-Title I, three of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table Y shows there was a small difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 9%.

When conducting an ANOVA analysis in SPSS, the data showed; $F(1, 7) = 14.602$, $p = .007$ which was less than (<).05 significance level for socioeconomically disadvantaged 6th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and

Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, F (1, 7) = 16.218, p= .005 which was less than (<).05 significance level for socioeconomically disadvantaged 6th grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. Since the significance level (p-value) was .000 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between sixth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 41 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	20930.450	1	20930.450	14.602	.007
	Within Groups	10033.550	7	1433.364		
	Total	30964.000	8			
# SES Students Passed	Between Groups	2026.756	1	2026.756	16.218	.005
	Within Groups	874.800	7	124.971		
	Total	2901.556	8			

Figure 41: ANOVA Analysis on Socioeconomically Disadvantaged 6th Grade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 6th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 3.821, the degrees of freedom (df) was 7, and finally, the significance level/p-value is .007. When looking at the independent t-test the analysis for the difference between 6th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t

observed) was 4.027, the degrees of freedom (df) was 7, and finally, the significance level/p-value was .005 (See Figure 42 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than that .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between sixth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	3.673	.097	3.821	7	.007	97.05000	25.39712	36.99534	157.10466
	Equal variances not assumed			3.404	3.270	.037	97.05000	28.51145	10.40529	183.69471
# SES Students Passed	Equal variances assumed	3.074	.123	4.027	7	.005	30.20000	7.49914	12.46735	47.93265
	Equal variances not assumed			3.639	3.580	.027	30.20000	8.29900	6.05104	54.34896

Figure 42: Independent T-Test on SES 6th Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between sixth grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I Schools therefore the null hypothesis of there was no significant student achievement gap difference between sixth grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I schools was rejected.

Research Question 15:

Is there a student achievement gap in Mathematics among sixth grade students in Title I schools and Non-Title I schools?

H_o15: There is no significant student achievement gap difference between sixth grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a15: There is a significant student achievement gap difference between sixth grade students Mathematics scores between Title I schools and Non-Title I schools.

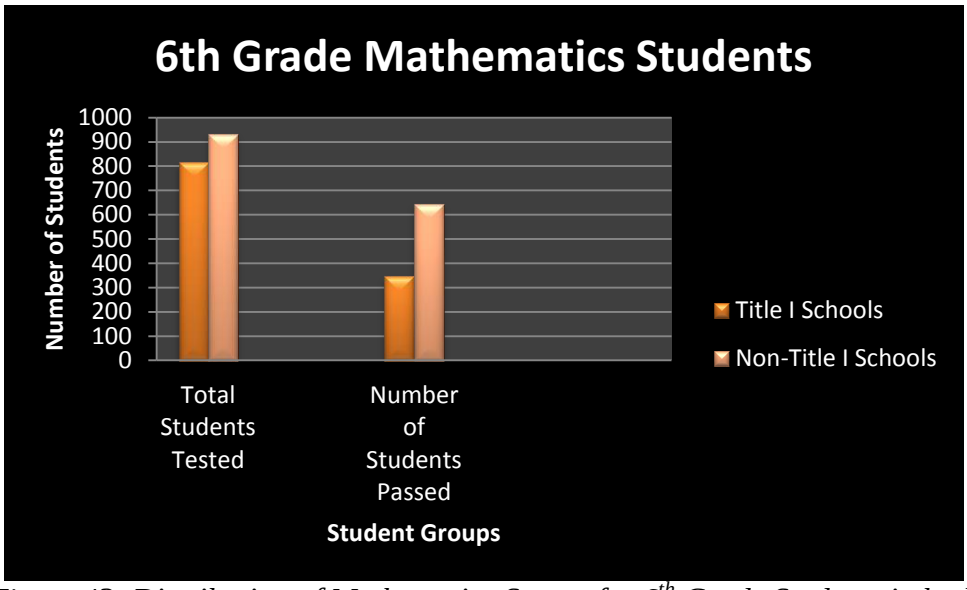


Figure 43: *Distribution of Mathematics Scores for 6th Grade Students in both Title I and Non- Title I Schools.*

Table Z: Percentage of 6th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 6th Graders	n= 814	n= 346	43%
Total Non-Title I 6th Graders	n= 933	n= 644	69%
School 16	n= 97	n= 69	71%
School 17	n= 142	n= 89	63%
School 18*	n= 67	n= 25	37%
School 19*	n= 193	n= 31	16%
School 20	n= 312	n= 228	73%
School 21	n= 169	n= 128	76%
School 22*	n= 269	n= 156	58%
School 23*	n= 285	n= 134	47%
School 24	n= 213	n= 130	61%

*= Title I schools

Table Z provides the percentage of students that passed the Mathematics content area of the 2017 AzMerit test among sixth graders in a suburban southwest school district. There are nine schools in the district that service sixth-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title I. Table Z shows there was a significant difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 26%.

When conducting the ANOVA analysis in SPSS, the data showed, F (1, 7) = .079, p= .787 which was greater than (>).05 significance level for 6th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS the data showed F (1, 7) = .961, p= .360 which was greater than (<).05 significance level for 6th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title schools. Since the significance level (p-value) was .360 which was greater than the .05 alpha level/type I error state, we would reject the alternative hypothesis and except the null hypothesis that there is no significant student achievement gap difference between sixth grade students Mathematics scores between Title I schools and Non-Title I schools (See Figure 44 which provides descriptive statistics generated from the ANOVA analysis which includes sum of squares, degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	634.689	1	634.689	.079	.787
	Within Groups	56424.200	7	8060.600		
	Total	57058.889	8			
# Students Passed	Between Groups	3976.200	1	3976.200	.961	.360
	Within Groups	28951.800	7	4135.971		
	Total	32928.000	8			

Figure 44: ANOVA Analysis on 6th Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 6th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was .281 the degrees of freedom (df) was 7, and finally, the significance level/p-value was .787. When looking at the independent t-test the analysis for the difference between 6th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -.980, the degrees of freedom (df) was 7, and finally the significance level/p-value was .360 (See Figure 45 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was greater than the .05 alpha level/type I error state we would reject the alternative hypothesis and accept the null hypothesis that there is no significant student achievement gap difference between sixth-grade students Mathematics scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.155	.705	.281	7	.787	16.90000	60.22682	-125.51380	159.31380
	Equal variances not assumed			.274	5.841	.794	16.90000	61.72825	-135.14494	168.94494
# Students Passed	Equal variances assumed	.727	.422	-.980	7	.360	-42.30000	43.14148	-144.31339	59.71339
	Equal variances not assumed			-.967	6.188	.370	-42.30000	43.73279	-148.52535	63.92535

Figure 45: Independent T-Test on 6th Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was no statistically significant difference between sixth grade students Mathematics scores between Title I schools and Non-Title I schools, therefore, the alternative hypothesis of there was a significant student achievement gap difference between sixth grade students Mathematics scores between Title I schools and Non-Title I schools was rejected. The null hypothesis of there was no significant difference between sixth-grade students Mathematics scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05.

Research Question 16:

Is there a student achievement gap in sixth grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o16: There is no significant student achievement gap difference between sixth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a16: There is a significant student achievement gap difference between sixth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

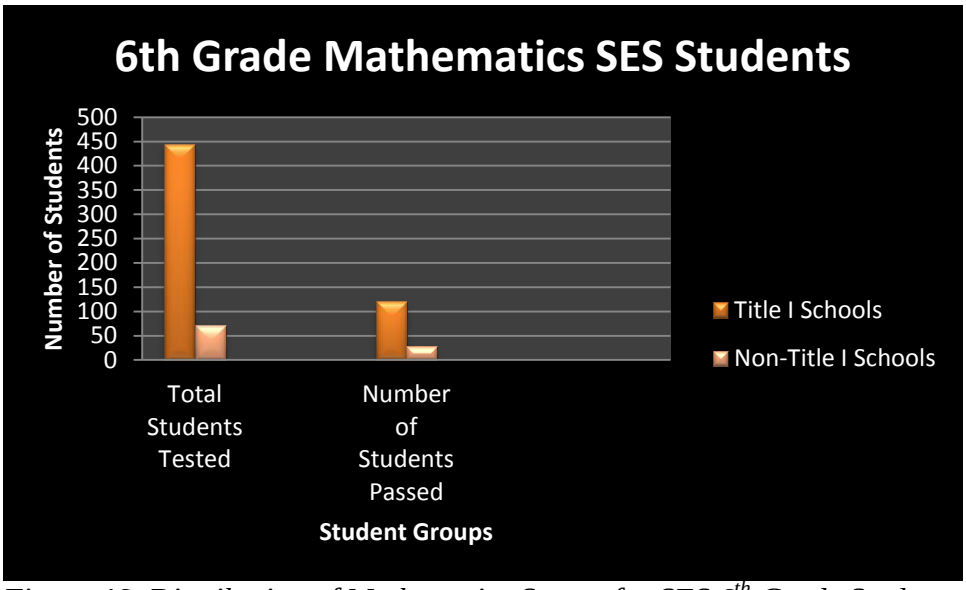


Figure 46: Distribution of Mathematics Scores for SES 6th Grade Students in both Title I and Non-Title I Schools.

Table AA: Percentage of 6th SES Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 6th Graders	n= 445	n= 120	27%
Total Non-Title I 6th Graders	n= 71	n= 28	39%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 33	n= 10	30%
School 19*	n= 165	n= 25	15%
School 20	n= 27	n= 10	37%
School 21	n= 20	n= 13	65%
School 22*	n= 127	n= 53	42%
School 23*	n= 120	n= 32	27%
School 24	n= 24	n= 5	21%

*= Title I schools

Table AA provides the percentage of socioeconomic status students that passed the Mathematics content area of the 2017 AzMerit test among sixth graders in a suburban southwest school district. There are nine schools in the district that service sixth-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title I. Within those five

schools that are Non-Title I, three of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table AA shows there was a small difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students attending Title I schools at about 12%.

When conducting an ANOVA analysis in SPSS, the data showed; F (1, 7) = 14.602, p= .007 which was less than (<).05 significance level for socioeconomically disadvantaged 6th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, F (1, 7) = 8.456, p= .023 which was less than (<).05 significance level for socioeconomically disadvantaged 6th grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. Since the significance level (p-value) was .023 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between sixth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 47 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	20930.450	1	20930.450	14.602	.007
	Within Groups	10033.550	7	1433.364		
	Total	30964.000	8			
# SES Students Passed	Between Groups	1323.022	1	1323.022	8.456	.023
	Within Groups	1095.200	7	156.457		
	Total	2418.222	8			

Figure 47: ANOVA Analysis on Socioeconomically Disadvantaged 6th Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 6th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 3.821, the degrees of freedom (df) was 7, and finally, the significance level/p-value is .007. When looking at the independent t-test the analysis for the difference between 6th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 2.908, the degrees of freedom (df) was 7, and finally, the significance level/p-value was .023 (See Figure 48 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than that .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between sixth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	3.673	.097	3.821	7	.007	97.05000	25.39712	36.99534	157.10466
	Equal variances not assumed			3.404	3.270	.037	97.05000	28.51145	10.40529	183.69471
# SES Students Passed	Equal variances assumed	2.624	.149	2.908	7	.023	24.40000	8.39081	4.55888	44.24112
	Equal variances not assumed			2.621	3.518	.067	24.40000	9.31093	-2.90899	51.70899

Figure 48: Independent T-Test on SES 6th Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between sixth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools, therefore, the null hypothesis of there was no significant student achievement gap difference between sixth-grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools was rejected.

Research Question 17:

Is there a student achievement gap in English Language Arts (ELA) among seventh grade students in Title I schools and Non-Title I schools?

H_o17: There is no significant student achievement gap difference between seventh grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

H_a17: There is a significant student achievement gap difference between seventh grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

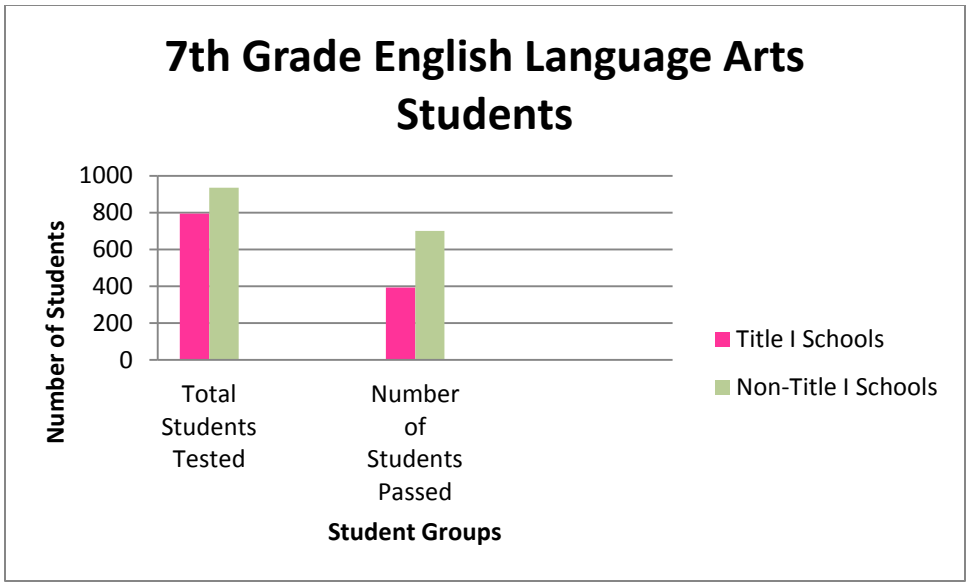


Figure 49: Distribution of English Language Arts Scores for 7th Grade in both Title I and Non-Title I Schools.

Table AB: Percentage of 7th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 7th Graders	n= 794	n= 393	49%
Total Non-Title I 7th Graders	n= 936	n= 701	75%
School 16	n= 106	n= 88	83%
School 17	n= 145	n= 102	70%
School 18*	n= 56	n= 17	30%
School 19*	n= 198	n= 59	30%
School 20	n= 284	n= 224	79%
School 21	n= 200	n= 142	71%
School 22*	n= 284	n= 151	53%
School 23*	n= 256	n= 166	65%
School 24	n= 201	n= 145	72%

*= Title I schools

Table AB provides the percentage of students that passed the English Language Arts content area of the 2017 AzMerit test among seventh graders in a suburban southwest school district. There are nine schools in the district that service seventh-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title I. Table AB shows there

was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 22%.

When conducting the ANOVA analysis in SPSS, the data showed, F (1, 7) = .041, p= .846 which was greater than (>).05 significance level for 7th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS the data showed F (1, 7) = 1.023, p= .345 which was greater than (<).05 significance level for 7th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title schools. Since the significance level (p-value) was .345 which was greater than the .05 alpha level/type I error state, we would reject the alternative hypothesis and except the null hypothesis that there is no significant student achievement gap difference between seventh grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools (See Figure 50 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	283.756	1	283.756	.041	.846
	Within Groups	49021.800	7	7003.114		
	Total	49305.556	8			
# Students Passed	Between Groups	3910.672	1	3910.672	1.023	.345
	Within Groups	26747.550	7	3821.079		
	Total	30658.222	8			

Figure 50: *ANOVA Analysis on 7th Grade Students in English Language Arts between Title I and Non-Title I Schools.*

When looking at the independent t-test the analysis for the difference between 7th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was .201 the degrees of freedom (df) was 7, and finally, the significance level/p-value was .846. When looking at the independent t-test the analysis for the difference between 7th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -1.012, the degrees of freedom (df) was 7, and finally the significance level/p-value was .345 (See Figure 51 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was greater than the .05 alpha level/type I error state we would reject the alternative hypothesis and accept the null hypothesis that there is no significant student achievement gap difference between seventh-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.465	.517	.201	7	.846	11.30000	56.13734	-121.44373	144.04373
	Equal variances not assumed			.192	5.013	.856	11.30000	59.00726	-140.26196	162.86196
# Students Passed	Equal variances assumed	1.587	.248	-1.012	7	.345	-41.95000	41.46668	-140.00311	56.10311
	Equal variances not assumed			-.974	5.407	.372	-41.95000	43.06432	-150.18899	66.28899

Figure 51: Independent T-Test on 7th Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was no statistically significant difference between seventh grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools, therefore, the alternative

hypothesis of there was a significant student achievement gap difference between seventh grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected. The null hypothesis of there was no significant difference between seventh-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05.

Research Question 18:

Is there a student achievement gap in seventh grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o18: There is no significant student achievement gap difference between seventh grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a18: There is a significant difference between seventh grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

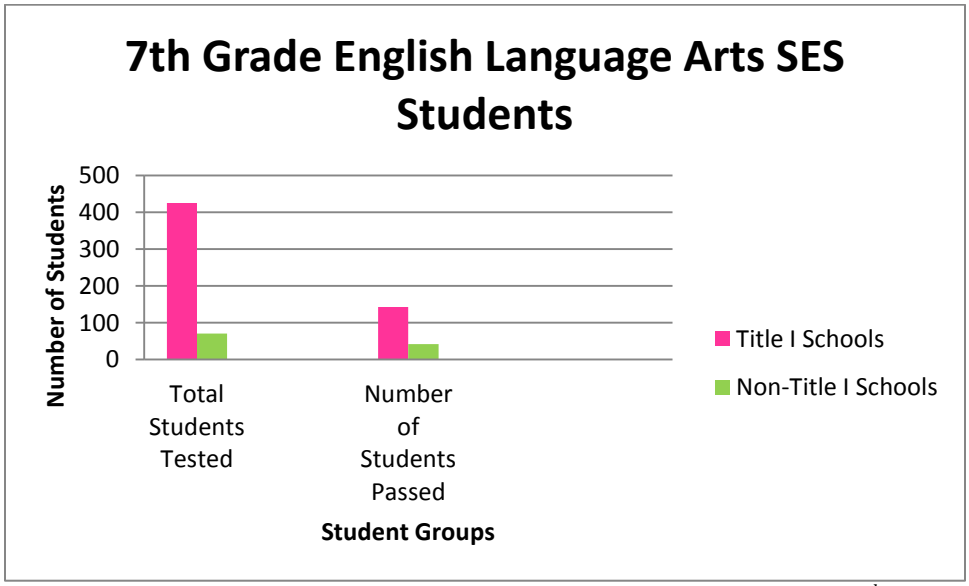


Figure 52: Distribution of English Language Arts Scores for SES 7th Grade Students in both Title I and Non-Title I Schools.

Table AC: Percentage of 7th SES Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 7th Graders	n= 425	n= 143	34%
Total Non-Title I 7th Graders	n= 71	n= 42	59%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 34	n= 9	26%
School 19*	n= 167	n= 45	27%
School 20	n= 24	n= 14	58%
School 21	n= 28	n= 19	68%
School 22*	n= 122	n= 36	30%
School 23*	n= 102	n= 53	52%
School 24	n= 19	n= 9	47%

*= Title I schools

Table AC provides the percentage of socioeconomic status students that passed the English Language Arts content area of the 2017 AzMerit test among seventh graders in a suburban southwest school district. There are nine schools in the district that service seventh-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title I. Within those five schools that are Non-Title I, three of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table AC shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 25%.

When conducting an ANOVA analysis in SPSS, the data showed; $F(1, 7) = 13.328$, $p = .008$ which was less than (<).05 significance level for socioeconomically disadvantaged 7th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and

Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, F (1, 7) = 8.408, p= .023 which was less than (<).05 significance level for socioeconomically disadvantaged 7th grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. Since the significance level (p-value) was .023 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between seventh grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 53 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	18829.339	1	18829.339	13.328	.008
	Within Groups	9889.550	7	1412.793		
	Total	28718.889	8			
# SES Students Passed	Between Groups	1662.272	1	1662.272	8.408	.023
	Within Groups	1383.950	7	197.707		
	Total	3046.222	8			

Figure 53: ANOVA Analysis on Socioeconomically Disadvantaged 7th Grade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 7th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 3.651, the degrees of freedom (df) was 7, and finally, the significance level/p-value is .008. When looking at the independent t-test the analysis for the difference between 7th-grade students who had taken and passed the 2017 AzMerit test in English

Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 2.900, the degrees of freedom (df) was 7, and finally, the significance level/p-value was .023 (See Figure 54 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than that .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between seventh grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	3.316	.111	3.651	7	.008	92.05000	25.21422	32.42785	151.67215
	Equal variances not assumed			3.254	3.281	.042	92.05000	28.29080	6.22228	177.87772
# SES Students Passed	Equal variances assumed	1.557	.252	2.900	7	.023	27.35000	9.43230	5.04616	49.65384
	Equal variances not assumed			2.659	3.936	.057	27.35000	10.28701	-1.39653	56.09653

Figure 54: Independent T-Test on SES 7th Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between seventh grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between seventh grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I schools was rejected.

Research Question 19:

Is there a student achievement gap in Mathematics among seventh grade students in Title I schools and Non-Title I schools?

H_o19: There is no significant student achievement gap difference between seventh grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a19: There is a significant student achievement gap difference between seventh grade students Mathematics scores between Title I schools and Non-Title I schools.

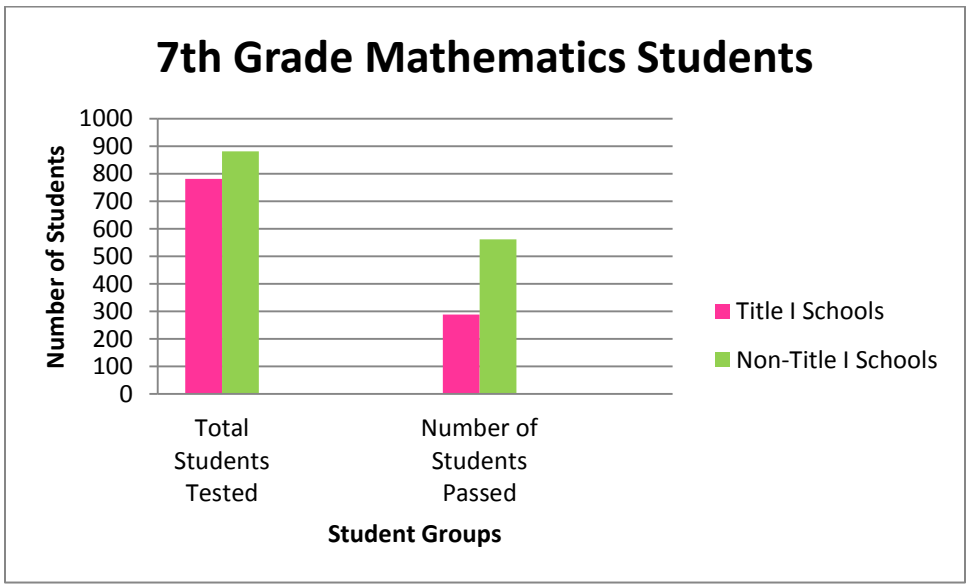


Figure 55: *Distribution of Mathematics Scores for 7th Grade Students in both Title I and Non- Title I Schools.*

Table AD: Percentage of 7th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 7th Graders	n= 781	n= 288	37%
Total Non-Title I 7th Graders	n= 881	n= 561	64%
School 16	n= 98	n= 71	72%
School 17	n= 143	n= 92	64%
School 18*	n= 56	n= 19	34%
School 19*	n= 198	n= 22	11%
School 20	n= 261	n= 167	64%
School 21	n= 187	n= 122	65%

School 22*	n= 275	n= 121	44%
School 23*	n= 252	n= 126	50%
School 24	n= 192	n= 109	57%

*= Title I schools

Table AD provides the percentage of students that passed the Mathematics content area of the 2017 AzMerit test among seventh graders in a suburban southwest school district. There are nine schools in the district that service seventh-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title I. Table AD shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 27%.

When conducting the ANOVA analysis in SPSS, the data showed, F (1, 7) = .129, p= .730 which was greater than (>).05 significance level for 7th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS the data showed F (1, 7) = 1.587, p= .248 which was greater than (<).05 significance level for 7th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title schools. Since the significance level (p-value) was .248 which was greater than the .05 alpha level/type I error state, we would reject the alternative hypothesis and accept the null hypothesis that there is no significant student achievement gap difference between seventh grade students Mathematics scores between Title I schools and Non-Title I schools (See Figure 56 which provides descriptive statistics generated from the ANOVA analysis which includes sum of squares, degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	806.450	1	806.450	.129	.730
	Within Groups	43753.550	7	6250.507		
	Total	44560.000	8			
# Students Passed	Between Groups	3591.200	1	3591.200	1.587	.248
	Within Groups	15840.800	7	2262.971		
	Total	19432.000	8			

Figure 56: ANOVA Analysis on 7th Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 7th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was .359 the degrees of freedom (df) was 7, and finally the significance level/p-value) was .730. When looking at the independent t-test the analysis for the difference between 7th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -.860, the degrees of freedom (df) was 7, and finally the significance level/p-value was .418 (See Figure 57 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I school the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was greater than the .05 alpha level/type I error state we would reject the alternative hypothesis and accept the null hypothesis that there is no significant student achievement gap difference between seventh-grade students Mathematics scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.677	.438	.359	7	.730	19.05000	53.03516	-106.35823	144.45823
	Equal variances not assumed			.339	4.781	.749	19.05000	56.15724	-127.32176	165.42176
# Students Passed	Equal variances assumed	5.410	.053	-1.260	7	.248	-40.20000	31.91140	-115.65846	35.25846
	Equal variances not assumed			-1.187	4.720	.291	-40.20000	33.85617	-128.80657	48.40657

Figure 57: Independent T-Test on 7th Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was no statistically significant difference between seventh grade students Mathematics scores between Title I schools and Non-Title I schools, therefore, the alternative hypothesis of there was a significant student achievement gap difference between seventh grade students Mathematics scores between Title I schools and Non-Title I schools was rejected. The null hypothesis of there was no significant difference between seventh-grade students Mathematics scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05.

Research Question 20:

Is there a student achievement gap in seventh grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o20: There is no significant student achievement gap difference between seventh grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a20: There is a significant student achievement gap difference between seventh grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

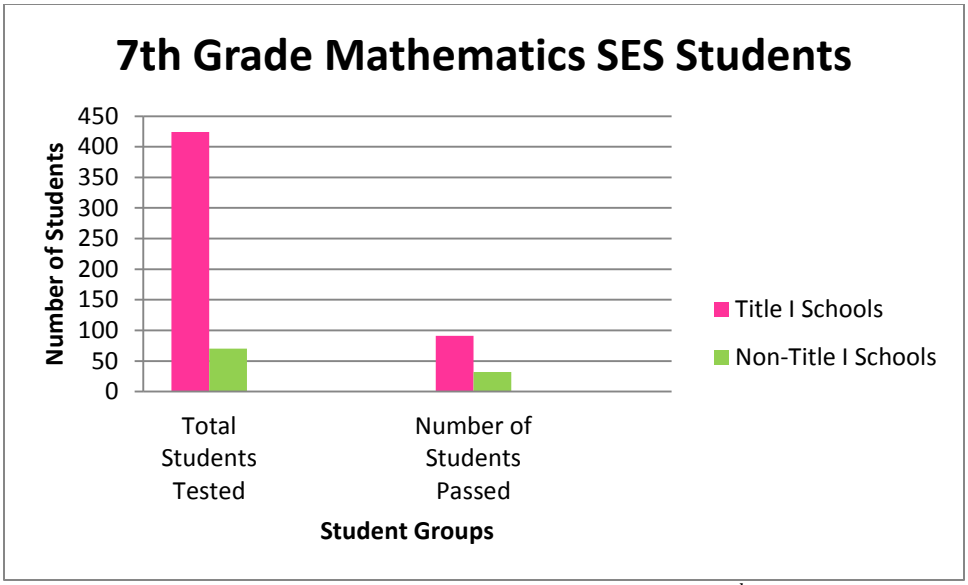


Figure 58: *Distribution of Mathematics Scores for SES 7th Grade Students in both Title I and Non-Title I Schools.*

Table AE: Percentage of 7th Grade SES Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 7th Graders	n= 424	n= 91	21%
Total Non-Title I 7th Graders	n= 70	n= 32	46%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 34	n= 13	38%
School 19*	n= 167	n= 17	10%
School 20	n= 23	n= 11	48%
School 21	n= 28	n= 16	57%
School 22*	n= 121	n= 21	17%
School 23*	n= 102	n= 40	39%
School 24	n= 19	n= 5	26%

*= Title I schools

Table AE provides the percentage of socioeconomic status students that passed the Mathematics content area of the 2017 AzMerit test among seventh graders in a suburban southwest school district. There are nine schools in the district that service seventh-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title

I. Within those five schools that are Non-Title I, three of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table AE shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 25%.

When conducting an ANOVA analysis in SPSS, the data showed ; F (1, 7) = 13.380, p= .008 which was less than (<).05 significance level for socioeconomically disadvantaged 7th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, F (1, 7) = 6.643, p= .037 which was less than (<).05 significance level for socioeconomically disadvantaged 7th grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. Since the significance level (p-value) was .037 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between seventh grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 59 which provides descriptive statistics generated from ANOVA analysis which includes the sum of squares, the degree of freedom (Ddf), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	18808.889	1	18808.889	13.380	.008
	Within Groups	9840.000	7	1405.714		
	Total	28648.889	8			
# SES Students Passed	Between Groups	594.050	1	594.050	6.643	.037
	Within Groups	625.950	7	89.421		
	Total	1220.000	8			

Figure 59: ANOVA Analysis on Socioeconomically Disadvantaged 7th Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 7th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 3.658, the degrees of freedom (df) was 7, and finally the significance level/p-value) is .008. When looking at the independent t-test the analysis for the difference between 7th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 2.577, the degrees of freedom (df) was 7, and finally, the significance level/p-value was .037 (See Figure 60 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than that .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between seventh grade Mathematics scores of economically disadvantaged students between Title I and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	3.251	.114	3.658	7	.008	92.00000	25.15097	32.52740	151.47260
	Equal variances not assumed			3.259	3.274	.042	92.00000	28.22883	6.27432	177.72568
# SES Students Passed	Equal variances assumed	.808	.399	2.577	7	.037	16.35000	6.34347	1.35007	31.34993
	Equal variances not assumed			2.422	4.620	.064	16.35000	6.75198	-1.44435	34.14435

Figure 60: Independent T-Test on SES 7th Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between seventh grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between seventh grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools was rejected.

Research Question 21:

Is there a student achievement gap in English Language Arts (ELA) among eighth grade students in Title I schools and Non-Title I schools?

H_o21: There is no significant student achievement gap difference between eighth grade students ELA scores (all students tested) between Title I schools and Non-Title I schools.

H_a21: There is a significant student achievement gap difference between eighth grade students ELA scores between Title I schools and Non-Title I schools.

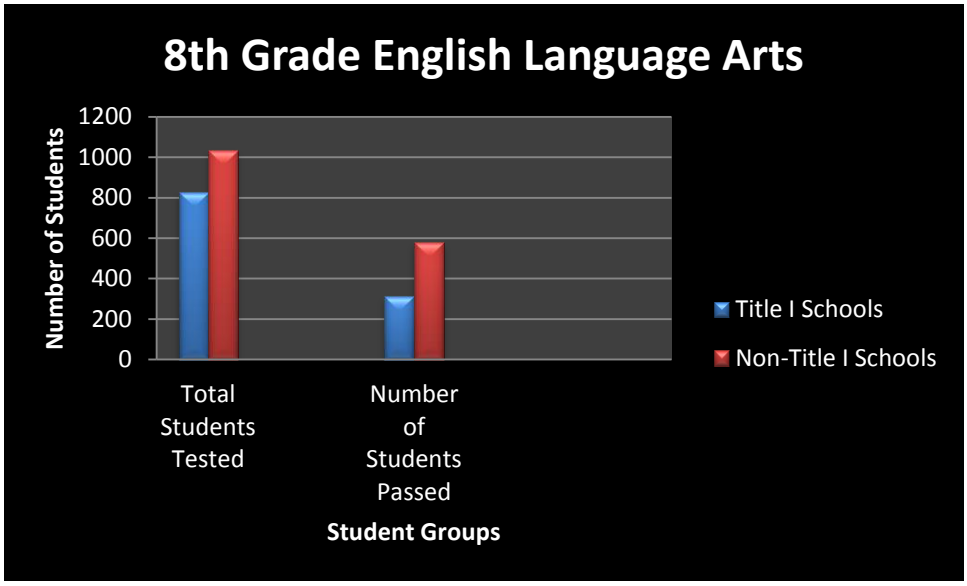


Figure 61: *Distribution of English Language Arts Scores for 8th Grade in both Title I and Non-Title I Schools.*

Table AF: Percentage of 8th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 8th Graders	n= 826	n= 311	38%
Total Non-Title I 8th Graders	n= 1033	n= 580	56%
School 16	n= 111	n= 89	80%
School 17	n= 151	n= 72	48%
School 18*	n= 67	n= 10	16%
School 19*	n= 187	n= 47	25%
School 20	n= 326	n= 183	56%
School 21	n= 171	n= 72	42%
School 22*	n= 300	n= 123	41%
School 23*	n= 278	n= 131	47%
School 24	n= 274	n= 164	60%

*= Title I schools

Table AF provides the percentage of students that passed the English Language Arts content area of the 2017 AzMerit test among eighth graders in a suburban southwest school district. There are nine schools in the district that service eighth-grade students. Of those nine

schools, four of them are Title I and the other five schools are Non-Title I. Table AF shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 18%.

When conducting the ANOVA analysis in SPSS, the data showed, F (1, 7) = .000, p= .999 which was greater than (>).05 significance level for 8th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS the data showed F (1, 7) = 1.043, p= .341 which was greater than (<).05 significance level for 8th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title schools. Since the significance level (p-value) was .341 which was greater than the .05 alpha level/type I error state, we would reject the alternative hypothesis and except the null hypothesis that there is no significant student achievement gap difference between eighth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools (See Figure 62 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	.022	1	.022	.000	.999
	Within Groups	67702.200	7	9671.743		
	Total	67702.222	8			
# Students Passed	Between Groups	3251.250	1	3251.250	1.043	.341
	Within Groups	21812.750	7	3116.107		
	Total	25064.000	8			

Figure 62: ANOVA Analysis on 8th Grade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 8th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -.002 the degrees of freedom (df) was 7, and finally the significance level/p-value) was .999. When looking at the independent t-test the analysis for the difference between 8th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -1.021, the degrees of freedom (df) was 7, and finally the significance level/p-value) was .341 (See Figure 63 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was greater than the .05 alpha level/type I error state we would reject the alternative hypothesis and accept the null hypothesis that there is no significant student achievement gap difference between eighth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.075	.792	-.002	7	.999	-.10000	65.97184	-156.09862	155.89862
	Equal variances not assumed			-.001	5.865	.999	-.10000	67.56683	-166.35713	166.15713
# Students Passed	Equal variances assumed	.107	.753	-1.021	7	.341	-38.25000	37.44660	-126.79715	50.29715
	Equal variances not assumed			-1.009	6.220	.351	-38.25000	37.92004	-130.24694	53.74694

Figure 63: Independent T-Test on 8th Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was no statistically significant difference between eighth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the alternative

hypothesis of there was a significant student achievement gap difference between eighth grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected. The null hypothesis of there was no significant difference between eighth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05.

Research Question 22:

Is there a student achievement gap in eighth grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o22: There is no significant student achievement gap difference between eighth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a22: There is significant student achievement gap difference between eighth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

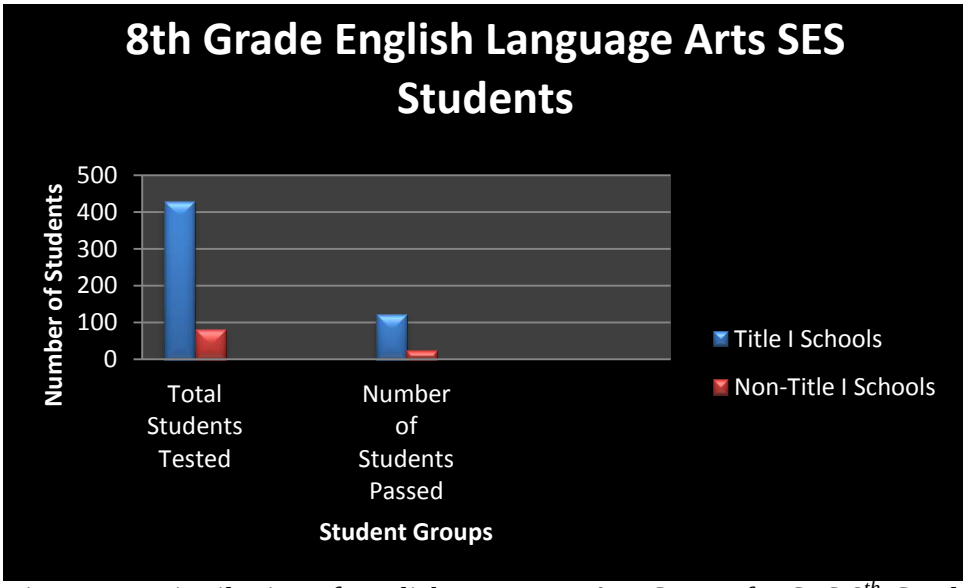


Figure 64: Distribution of English Language Arts Scores for SES 8th Grade Students in both Title I and Non-Title I Schools.

Table AG: Percentage of 8th Grade SES Students Passing AzMerit Test categorized into Title I and Non-Title Schools: English Language Arts

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 8th Graders	n= 429	n= 121	28%
Total Non-Title I 8th Graders	n= 82	n= 24	29%
School 16	n= 0	n= 0	0%
School 17	n= 0	n= 0	0%
School 18*	n= 27	n= 2	7%
School 19*	n= 158	n= 43	27%
School 20	n= 34	n= 10	29%
School 21	n= 24	n= 5	21%
School 22*	n= 138	n= 39	28%
School 23*	n= 106	n= 37	35%
School 24	n= 24	n= 9	38%

*= Title I schools

Table AG provides the percentage of socioeconomic status students that passed the English Language Arts content area of the 2017 AzMerit test among third graders in a suburban southwest school district. There are nine schools in the district that service eighth-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title I. Within those five schools that are Non-Title I, three of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table AG shows there was a small difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 1%.

When conducting an ANOVA analysis in SPSS, the data showed; $F(1, 7) = 11.751$, $p = .011$ which was less than (<).05 significance level for socioeconomically disadvantaged 8th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and

Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, F (1, 7) = 8.585, p= .022 which was less than (<).05 significance level for socioeconomically disadvantaged 8th grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools. Since the significance level (p-value) was .022 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between eighth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 65 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	18341.606	1	18341.606	11.751	.011
	Within Groups	10925.950	7	1560.850		
	Total	29267.556	8			
# SES Students Passed	Between Groups	1439.339	1	1439.339	8.585	.022
	Within Groups	1173.550	7	167.650		
	Total	2612.889	8			

Figure 65: ANOVA Analysis on Socioeconomically Disadvantaged 8th Grade Students in English Language Arts between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 8th-grade students who had taken the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 3.428, the degrees of freedom (df) was 7, and finally the significance level/p-value) is .011. When looking at the Independent t-test the analysis for the difference between 8th-grade students who had taken and passed the 2017 AzMerit test in English Language Arts in Title I and Non-Title I schools as shown below. The data shows that the t (or t

observed) was 2.930, the degrees of freedom (df) was 7, and finally, the significance level/p-value was .022 (See Figure 66 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than that .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between eighth grade English Language Arts (ELA) scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	3.469	.105	3.428	7	.011	90.85000	26.50250	28.18155	153.51845
	Equal variances not assumed			3.065	3.350	.047	90.85000	29.63763	1.86277	179.83723
# SES Students Passed	Equal variances assumed	5.453	.052	2.930	7	.022	25.45000	8.68576	4.91143	45.98857
	Equal variances not assumed			2.614	3.303	.072	25.45000	9.73495	-3.98260	54.88260

Figure 66: Independent T-Test on SES 8th Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between eighth grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between eighth grade English Language Art scores of economically disadvantaged students between Title I schools and Non-Title I schools was rejected.

Research Question 23:

Is there a student achievement gap in Mathematics among eighth grade students in Title I schools and Non-Title I schools?

H_o23: There is no significant student achievement gap difference between eighth grade students Mathematics scores between Title I schools and Non-Title I schools.

H_a23: There is a significant difference between eighth grade students Mathematics scores between Title I schools and Non-Title I schools.

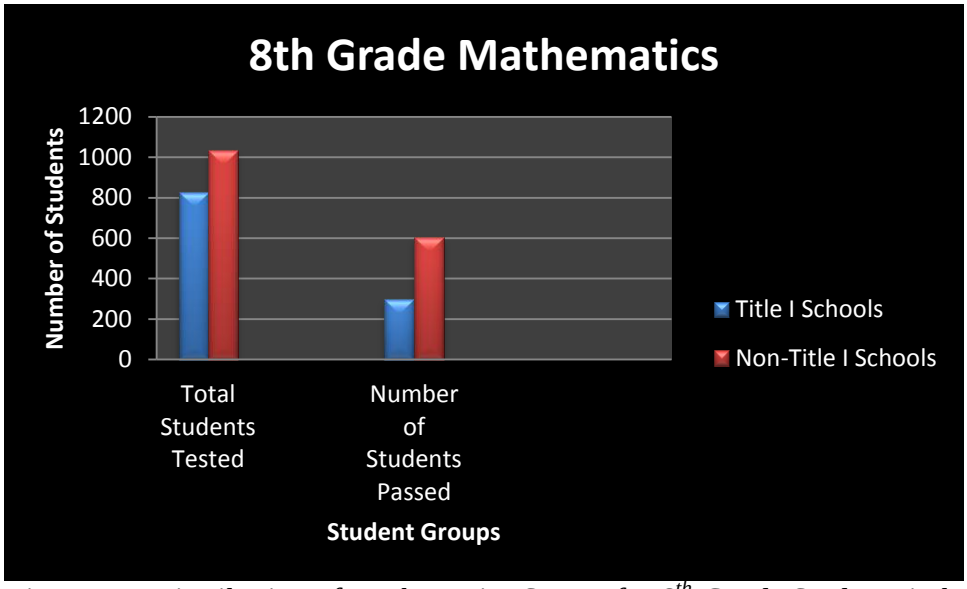


Figure 67: Distribution of Mathematics Scores for 8th Grade Students in both Title I and Non- Title I Schools.

Table AH: Percentage of 8th Grade Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 8th Graders	n= 827	n= 298	36%
Total Non-Title I 8th Graders	n= 1033	n= 603	58%
School 16	n= 111	n= 77	69%
School 17	n= 151	n= 79	52%
School 18*	n= 62	n= 18	29%
School 19*	n= 187	n= 34	18%
School 20	n= 323	n= 181	56%
School 21	n= 171	n= 72	42%
School 22*	n= 300	n= 135	45%
School 23*	n= 278	n= 111	40%

School 24	n= 277	n= 194	70%

*= Title I schools

Table AH provides the percentage of students that passed the English Language Arts content area of the 2017 AzMerit test among eighth graders in a suburban southwest school district. There are nine schools in the district that service eighth-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title I. Table AH shows there was a large difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I schools are outperforming Title I schools at about 22%.

When conducting the ANOVA analysis in SPSS, the data showed, F (1, 7) = .000, p= .998 which was greater than (>).05 significance level for 8th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS the data showed F (1, 7) = 1.330, p= .287 which was greater than (<).05 significance level for 8th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title schools. Since the significance level (p-value) was .287which was greater than the .05 alpha level/type I error state, we would reject the alternative hypothesis and except the null hypothesis that there is no significant student achievement gap difference between sixth grade students Mathematics scores between Title I schools and Non-Title I schools (See Figure 68 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# Students Tested	Between Groups	.050	1	.050	.000	.998
	Within Groups	67117.950	7	9588.279		
	Total	67118.000	8			
# Students Passed	Between Groups	4722.689	1	4722.689	1.330	.287
	Within Groups	24854.200	7	3550.600		
	Total	29576.889	8			

Figure 68: ANOVA Analysis on 8th Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between 8th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was .002 the degrees of freedom (df) was 7, and finally, the significance level/p-value was .998. When looking at the independent t-test the analysis for the difference between 8th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was -1.153, the degrees of freedom (df) was 7, and finally the significance level/p-value was .287 (See Figure 69 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was greater than the .05 alpha level/type I error state we would reject the alternative hypothesis and accept the null hypothesis that there is no significant student achievement gap difference between eighth-grade students Mathematics scores between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# Students Tested	Equal variances assumed	.073	.795	.002	7	.998	.15000	65.68657	-155.17405	155.47405
	Equal variances not assumed			.002	5.863	.998	.15000	67.27845	-165.41034	165.71034
# Students Passed	Equal variances assumed	.349	.573	-1.153	7	.287	-46.10000	39.97212	-140.61903	48.41903
	Equal variances not assumed			-1.163	6.762	.284	-46.10000	39.62588	-140.47322	48.27322

Figure 69: Independent T-Test on 8th Grade Students in English Language Arts between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was no statistically significant difference between sixth grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the alternative hypothesis of there was a significant student achievement gap difference between eighth grade students Mathematics scores between Title I schools and Non-Title I schools was rejected. The null hypothesis of there was no significant difference between eighth-grade students Mathematics scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05.

Research Question 24:

Is there a student achievement gap in eighth grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools?

H_o24: There is no significant student achievement gap difference between eighth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

H_a24: There is significant student achievement gap difference between eighth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

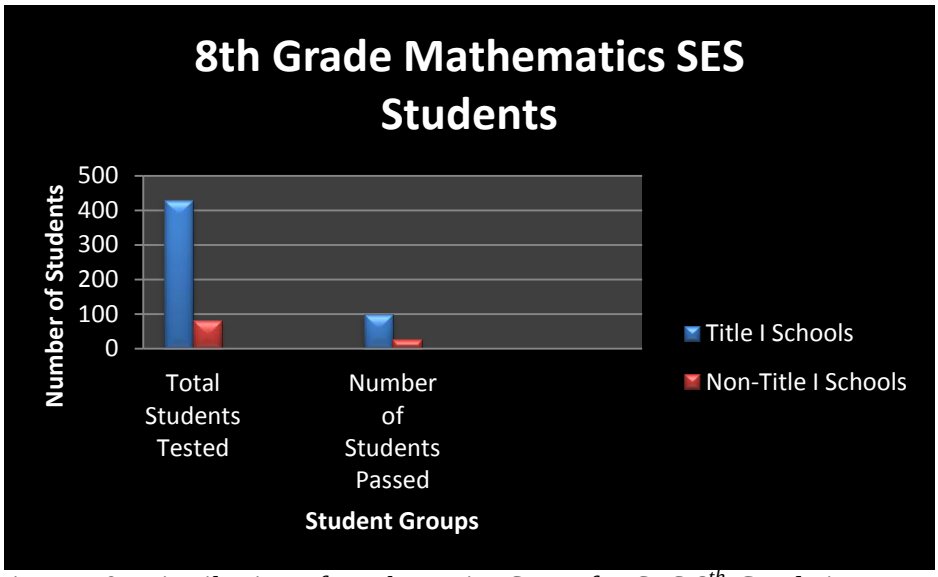


Figure 70: Distribution of Mathematics Score for SES 8th Grade in both Title I and Non-Title I Schools.

Table AI: Percentage of 8th Grade SES Students Passing AzMerit Test categorized into Title I and Non-Title Schools: Mathematics

Tested	Students Tested	Students Passed	Percentage of Students Passed
Total Title I 8th Graders	n= 430	n= 100	23%
Total Non-Title I 8th Graders	n= 82	n= 26	32%
School 16	n= 0	n=0	0
School 17	n= 0	n= 0	0
School 18*	n= 62	n= 18	29%
School 19*	n= 158	n= 28	18%
School 20	n= 34	n= 7	21%
School 21	n= 24	n= 4	17%
School 22*	n= 138	n= 41	30%
School 23*	n= 106	n= 27	25%
School 24	n= 24	n= 15	63%

*= Title I schools

Table AI provides the percentage of socioeconomic status students that passed the Mathematics content area of the 2017 AzMerit test among eighth graders in a suburban southwest school district. There are nineteen schools in the district that service eighth-grade students. Of those nine schools, four of them are Title I and the other five schools are Non-Title

I. Within those five schools that are Non-Title I, three of those schools had students who were considered economically disadvantaged at the time of the AzMerit test. Table AI shows there was a small difference in the percentage of students who passed the AzMerit test in Non-Title I schools as compared to Title I schools. The percentage difference was that Non-Title I socioeconomically disadvantaged students are outperforming socioeconomically disadvantaged students attending Title I schools at about 9%.

When conducting an ANOVA analysis in SPSS, the data showed; F (1, 7) = 11.991, p= .011 which was less than (<).05 significance level for socioeconomically disadvantaged 8th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. When running an ANOVA analysis in SPSS on SES students passing the AzMerit test, the data showed, F (1, 7) = 7.052, p= .001 which was less than (<).05 significance level for socioeconomically disadvantaged 8th grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools. Since the significance level (p-value) was .001 which was less than the .05 alpha level/type I error state we would reject the null hypothesis and state there was a significant student achievement gap difference between third grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools (See Figure 71 which provides descriptive statistics generated from the ANOVA analysis which includes the sum of squares, the degree of freedom (df), mean square, F statistics (f), and significance level (sig)).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
# SES Students Tested	Between Groups	18442.689	1	18442.689	11.991	.011
	Within Groups	10766.200	7	1538.029		
	Total	29208.889	8			
# SES Students Passed	Between Groups	871.200	1	871.200	7.052	.033
	Within Groups	864.800	7	123.543		
	Total	1736.000	8			

Figure 71: ANOVA Analysis on Socioeconomically Disadvantaged 8th Grade Students in Mathematics between Title I and Non-Title I Schools.

When looking at the independent t-test the analysis for the difference between socioeconomically disadvantaged 8th-grade students who had taken the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 3.463, the degrees of freedom (df) was 7, and finally, the significance level/p-value is .011. When looking at the independent t-test the analysis for the difference between 8th-grade students who had taken and passed the 2017 AzMerit test in Mathematics in Title I and Non-Title I schools as shown below. The data shows that the t (or t observed) was 2.656, the degrees of freedom (df) was 7, and finally, the significance level/p-value was .033 (See Figure 72 which provides the SPSS generated data from the independent t-test analysis). Since we are looking at academic student achievement among socioeconomically disadvantaged students within Title I and Non-Title I schools, the number of students did not need to be calculated because it did not show academic student achievement but is important. Thus, since the p-value was less than that .05 alpha level/type I error state we would reject the null hypothesis and state, there was a significant student achievement gap difference between third grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I schools.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
# SES Students Tested	Equal variances assumed	3.487	.104	3.463	7	.011	91.10000	26.30804	28.89138	153.30862
	Equal variances not assumed			3.097	3.355	.046	91.10000	29.41219	2.86357	179.33643
# SES Students Passed	Equal variances assumed	1.690	.235	2.656	7	.033	19.80000	7.45616	2.16899	37.43101
	Equal variances not assumed			2.421	3.788	.076	19.80000	8.17965	-3.42146	43.02146

Figure 72: Independent T-Test on SES 8th Grade Students in Mathematics between Title I and Non-Title I Schools.

After running the ANOVA and the independent t-test, the two analyses showed that there was a statistically significant difference in student achievement gap difference between eighth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between eighth grade Mathematics scores of economically disadvantaged students between Title I schools and Non-Title I Schools was rejected.

Summary

The purpose of this study was to determine if there is a significant difference in student's academic achievement between Title I and Non-Title Schools among third through eighth grade students in both content areas of English Language Arts and Mathematics by analyzing the 2017 AzMeirt test scores of a suburban southwest school district.

First, all twenty-four research questions were evaluated by the researcher looking at the descriptive statistics which was analyzed merely to describe what the data was showing. The researcher ran the mean and standard deviation scores and separated them into grade 3, within Title I and Non-Title school type, students tested and students passed, SES students tested, SES students passed, and then into the content area: English Language Arts and Mathematics (see Tables H-K).

Finally, the researcher used inferential statistics because the researcher was trying to reach conclusions that extend beyond the immediate data alone whereas descriptive statistics were merely used to describe what is or what the data shows (Descriptive and Inferential Statistics). The statistical analysis types used were a one-way ANOVA and an independent t-test. The researcher was able to take the collected data, upload the data into SPSS and run statistical analysis. When looking at the data, if the significance level (p-value) was less than .05 that showed there was a significant difference in the data and the null hypothesis would be rejected. When the significance level (p-value was more significant than .05 then the alternative hypothesis was rejected.

CHAPTER 5: SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

Introduction

Chapter 5, the final chapter, presents the study's conclusions, implications, and recommendations that would correlate with this study to determine whether or not the academic achievement gap between third through eighth grade students among English Language Arts and Mathematics within Title I schools and Non-Title I schools are closing. This section addresses the following: summary of the study, summary of the findings, recommendations for future studies, and finally implications.

Summary of the Study

Chapter 1 gave an introduction to the scholarly research that was being explored. The chapter started off with investigating the three different acts that have impacted the American educational system. Chapter 1 provided an overview of the Elementary and Secondary Act (ESEA) of 1965, No Child Left Behind Act which was signed into law in 2002, and finally our current act Every Student Succeeds Act that was implemented in 2015. Chapter 1 stated the purpose of the study which was to determine if there is a difference in student achievement in the academic content areas of English Language Arts and Mathematics between third through eighth-grade students in Title I schools as compared to Non-Title I schools in a suburban southwest school district. This chapter also stated all twenty-four research questions, all twenty-four null hypotheses, and all twenty-four alternative hypotheses. The significance of the study was also defined in chapter 1. The limitations and delimitations were discussed in this section as well. Finally, the chapter provided a glossary of key terms with definitions to understand better the jargon that was being used along with essential acronyms.

The second chapter was the literature review which examines the current research about the beginning of public schools, the Elementary Secondary Education Act, history of Title I and Non-Title I schools, Title I funding, No Child Left Behind Act (NCLB), Every Student Succeeds Act (ESSA), and finally standardized testing.

Chapter three restated the problem of the study and research questions along with the null and alternative hypotheses. The research design of using a quantitative study was visited and explained. This chapter furthermore looked at the research methodology used, which was a casual comparative model, also known as the ex-post facto design. In chapter three the researcher enlightened the readers about the population and sample that was being used. The population consisted of all students in grades 3-8 in a suburban southwest school district in Arizona, and the total population sampling was used because the researcher chose to examine the whole population of students in grades 3-8 who had taken the 2017 AzMerit test in the suburban southwest school district. Finally, the data analysis procedures were discussed.

The fourth chapter analyzed the data in a narration form, along with charts, tables, figures, and statistical analysis findings of the one-way ANOVA and independent t-test that was conducted in SPSS. In this chapter, the results that were found were interpreted individually along the research question asked. The results of each research question was interpreted among the findings of the one-way ANOVA test and the independent t-test. The results showed whether or not the null hypothesis was rejected if the significance level (p-value) was less than .05. The results showed whether or not the alternative hypothesis was rejected if the significance level (p-value) was greater than .05.

Lastly, chapter 5 concluded with a summary of the findings that was organized by research questions, recommendation for practice and research, implication of the study, and finally a summary of the study.

Summary of Findings and Conclusions

The Every Student Succeeds Act (ESSA) is the new main law for K-12 public education in the United States. Signed into law in 2015 by President Obama to replace the No Child Left Behind Act. The main purpose of the ESSA is to make sure that public schools provide a quality education for all students (Lee, 2018). ESSA gives all states more say in how their schools account for student achievement which includes student's achievement (Lee, 2018).

The purpose of this research study was to determine if there was an academic achievement gap between third through eighth grade students in Title I and Non-Title I schools in the academic content areas of English Language Arts and Mathematics. The study focused on the following subgroup: economically disadvantaged students. The data was gathered from an analysis of a standardized test in English Language Arts and Mathematics of third through eighth grade students. Within the southwest suburban school district that was being studied, the district formation of schools varied: fifteen schools in the district service kindergarten through fifth grade students, four schools in the district service kindergarten through eighth grade students, and five schools in the district service sixth through eighth grade students. The data was collected from the 2017 Arizona's Measurement of Educational Readiness to Inform Teaching (AzMerit) scores. The Arizona's Measurement of Educational Readiness to Inform Teaching (AzMerit) assessment is a yearly standardized assessment test, starting in the third grade, used to evaluate student academic progress in the state of Arizona. The results in chapter 4 provided the adequate data to determine whether the achievement gap is closing within Non-Title I schools

and Title I schools in grades third through eighth in both English Language Arts and Mathematics.

Discussion of Research Questions

The twenty-four research questions presented in this study focused on the whether or not the achievement gap between Title I and Non-Title I schools was closing in the academic content area of English Language Arts and Mathematics within grades third through eighth. A one-way ANOVA and an independent t-test were conducted to determine whether a statistically significant difference in achievement gap occurred between using the significance level .05. The next twenty-four subsections review the findings and conclusions of each research question individually.

Research Question 1

Is there a student achievement gap in English Language Arts (ELA) among third-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between third-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 3rd-grade students in Non-Title I schools are outperforming 3rd-grade students in Title I schools in English Language Arts.

Research Question 2

Is there a student achievement gap in third-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools? The

statistical tests that were executed showed that there was a statistically significant difference between third-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between third-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 3rd-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 3rd-grade socioeconomically disadvantaged students in Title I schools in English Language Arts.

Research Question 3

Is there a student achievement gap in Mathematics among third-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between third-grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between third-grade students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 3rd-grade students in Non-Title I schools are outperforming 3rd-grade students in Title I schools in Mathematics.

Research Question 4

Is there a student achievement gap in third-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between third-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement

gap difference between third-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 3rd-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 3rd-grade socioeconomically disadvantaged students in Title I schools in Mathematics.

Research Question 5

Is there a student achievement gap in English Language Arts (ELA) among fourth-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between fourth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fourth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 4th-grade students in Non-Title I schools are outperforming 4th -grade students in Title I schools in English Language Arts.

Research Question 6

Is there a student achievement gap in fourth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between fourth-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fourth-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-

Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 4th-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 4th-grade socioeconomically disadvantaged students in Title I schools in English Language Arts.

Research Question 7

Is there a student achievement gap in Mathematics among fourth-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between fourth-grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fourth-grade students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 4th-grade students in Non-Title I schools are outperforming 4th-grade students in Title I schools in Mathematics.

Research Question 8

Is there a student achievement gap in fourth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between fourth-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fourth-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 4th-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 4th-grade socioeconomically disadvantaged students in Title I schools in Mathematics.

Research Question 9

Is there a student achievement gap in English Language Arts (ELA) among fifth-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between fifth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fifth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 5th-grade students in Non-Title I schools are outperforming 5th-grade students in Title I schools in English Language Arts.

Research Question 10

Is there a student achievement gap in fifth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between fifth-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fifth-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 5th-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 5th-grade socioeconomically disadvantaged students in Title I schools in English Language Arts.

Research Question 11

Is there a student achievement gap in Mathematics among fifth-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between fifth-grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fifth-grade students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 5th-grade students in Non-Title I schools are outperforming 5th-grade students in Title I schools in Mathematics.

Research Question 12

Is there a student achievement gap in fifth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between fifth-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between fifth-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 5th-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 5th-grade socioeconomically disadvantaged students in Title I schools in Mathematics.

Research Question 13

Is there a student achievement gap in English Language Arts (ELA) among sixth-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was no statistically significant difference between sixth-grade students English

Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between sixth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05. Hence, it can be said that 6th-grade students in Non-Title I schools academic achievement is equal to 6th-grade students in Title I schools in English Language Arts.

Research Question 14

Is there a student achievement gap in sixth-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between sixth-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between sixth-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 6th-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 6th-grade socioeconomically disadvantaged students in Title I schools in English Language Arts.

Research Question 15

Is there a student achievement gap in Mathematics among sixth-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was no statistically significant difference between sixth-grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between sixth-grade students Mathematics scores between

Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05. Hence, it can be said that 6th-grade students in Non-Title I schools academic achievement is equal to 6th-grade students in Title I schools in Mathematics.

Research Question 16

Is there a student achievement gap in sixth-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between sixth-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between sixth-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 6th-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 6th-grade socioeconomically disadvantaged students in Title I schools in Mathematics.

Research Question 17

Is there a student achievement gap in English Language Arts (ELA) among seventh-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was no statistically significant difference between seventh-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between seventh-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05. Hence, it can be said that 7th-grade students in Non-Title I schools academic achievement is equal to7th-grade students in Title I schools in English Language Arts.

Research Question 18

Is there a student achievement gap in seventh-grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between seventh-grade socioeconomically disadvantaged students English Language Arts scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between seventh-grade socioeconomically disadvantaged students English Language Arts scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 7^{th}-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 7^{th}-grade socioeconomically disadvantaged students in Title I schools in English Language Arts.

Research Question 19

Is there a student achievement gap in Mathematics among seventh-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was no statistically significant difference between seventh-grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between seventh-grade students Mathematics scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05. Hence, it can be said that 7^{th}-grade students in Non-Title I schools academic achievement is equal to7^{th}-grade students in Title I schools in Mathematics.

Research Question 20

Is there a student achievement gap in seventh-grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that

were executed showed that there was a statistically significant difference between seventh-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between seventh-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 7th-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 7th-grade socioeconomically disadvantaged students in Title I schools in Mathematics.

Research Question 21

Is there a student achievement gap in English Language Arts (ELA) among eighth-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was no statistically significant difference between eighth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between eighth-grade students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05. Hence, it can be said that 8th-grade students in Non-Title I schools academic achievement is equal to 8th-grade students in Title I schools in English Language Arts.

Research Question 22

Is there a student achievement gap in eighth grade English Language Arts (ELA) of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between eighth-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there

was no significant student achievement gap difference between eighth-grade socioeconomically disadvantaged students English Language Arts (ELA) scores between Title I schools and Non-Title I schools was rejected since the significance levels were less than .05. Hence, it can be said that 8th-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 8th-grade socioeconomically disadvantaged students in Title I schools in English Language Arts.

Research Question 23

Is there a student achievement gap in eighth grade Mathematics among eighth-grade students in Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was no statistically significant difference between eighth-grade students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between eighth-grade students Mathematics scores between Title I schools and Non-Title I schools was accepted since the significance levels were greater than .05. Hence, it can be said that 8th-grade students in Non-Title I schools academic achievement is equal to8th-grade students in Title I schools in Mathematics

Research Question 24

Is there a student achievement gap in eighth grade Mathematics of economically disadvantaged students between Title I schools and Non-Title I schools? The statistical tests that were executed showed that there was a statistically significant difference between eighth-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I Schools, therefore, the null hypothesis of there was no significant student achievement gap difference between eighth-grade socioeconomically disadvantaged students Mathematics scores between Title I schools and Non-Title I schools was rejected since the significance levels

were less than .05. Hence, it can be said that 8th-grade socioeconomically disadvantaged students in Non-Title I schools are outperforming 8th-grade socioeconomically disadvantaged students in Title I schools in Mathematics.

Discussion of the Results

The results of each statistical test showed almost that there was a statistically significant difference between academic achievements of third grade through eighth grade students in English Language Arts and Mathematics in both Title I schools and Non-Title I schools. The outcome of this study was compelling in many different ways. When you look at the statistical test results, grades third through fifth showed that there was a significant difference in the academic achievement gap among students in Title I and Non-Title I schools in both English Language Arts and Mathematics. When you looked at the subcategory of socioeconomically disadvantaged, the results were similar showing that there was a significant difference in the academic achievement gap among students in Title I and Non-Title I schools in both English Language Arts and Mathematics. However, the surprise came when you looked at grades sixth through eighth in both English Language Arts and Mathematics. The statistical tests results showed that there was no significant difference in the academic achievement gap among students in Title I and Non-Title I schools in both English Language Arts and Mathematics. But, there was a different result when you looked at socioeconomically disadvantaged students in grades sixth through eighth. The outcome was that there was a significant difference in the academic achievement gap among students in Title I and Non-Title I schools in both English Language Arts and Mathematics.

Recommendation for Practice

When it comes to education, the most prominent concern in schools and for educators is support and funding which affect academic achievement. In 1965 through today, Title I funds provided schools with high populations of socioeconomically disadvantaged students with financial resources to provide students with programs, resources, and opportunities to help improve their student's achievement.

A continuation of using Title I funding to close the academic achievement gap between students who are socioeconomically disadvantaged and those who are not socioeconomically disadvantaged needs to continue in all grades and subject content areas. From this study, it shows Title I funding has helped with closing the academic achievement gap between sixth through eighth grade students in both English Language Arts and Mathematics.

Administration of school districts, teachers, parents, and government officials should be alarmed with the results of this study and those of other researchers that question the success of Title I funding and are they being used to close the achievement gap.

Recommendation for Future Research

Within the Every Student Succeeds Act (ESSA), all students must meet high academic standards. All students in Arizona in third through twelfth grade are required to take Arizona's Measurement of Educational Readiness to Inform Teaching (AzMerit) test in spring each year. The AzMerit is an annual statewide criterion-referenced test that measures how students are performing in English Language Arts and Mathematics (What is AzMerit, 2017). The AzMerit is the accountability assessment test for all public schools in Arizona. Data that was collected from this test is disaggregated by race, gender, socioeconomically disadvantaged, homeless, students

with disabilities, and limited English proficiencies in making sure that all students are mastering proficiency of the year's academic standards.

It seems like Title I funding has helped with building the academic achievement gap between Title I and Non-Title schools, but there still needs a lot of growth to go. Even though there was no significant difference among sixth through eighth grade students in English Language Arts (ELA) and Mathematics among Title I and Non-Title I schools, there still is an academic gap between grades third through fifth in Title I and Non-Title I schools in English Language Arts and Mathematics.

If this study was replicated, a suggestion could be to study another school district in Arizona and do a comparative analysis of those districts findings to the suburban southwest school district. The researcher could study another school district in another state and do a comparative analysis between districts and states. This study could be replicated using different subcategories such as gender, race, and disabilities.

Implication of the Study

Overall, the study revealed Title I funding had not made a significant impact on AzMerit test scores of students who attend Title I schools. Title I funds are provided to local school districts so the schools could improve the education of disadvantaged students from birth through 12th grade. Today the purpose of Title I- Improving the Academic Achievement of the Disadvantaged of the Every Student Succeeds Act is to, "provide all children significant opportunity to receive a fair, equitable, and high-quality education, and to close the education achievement gaps" (Welcome to Title I, 2017). Title I is the most extensive federal program supporting students in elementary and secondary education. Title I was designed to provide technical assistance, service, and support to local educational agencies and schools to help ensure

that every student has access to an excellent quality education. A school needs to have at least forty percent of the school's student population to be eligible for free or reduce lunch to operate a schoolwide Title I program. The overall goal of Title I funding is to increase the academic achievement of students and make them equal to Non-Title I students.

Another implication of this study was to help the district to understand the growth among Title I schools as well as all students within the district. The district needs to pay more attention to Title I schools as a whole, but also on socioeconomically disadvantaged students in both Title I and Non-Title I schools. The results of this study should not be used to look damagingly against the achievement of students, the quality of teachers in the schools, or the quality of the schools. Before the results of the study are publicized, it is important to understand the affect the results could have on the district, the schools, teachers, parents, and students. Indeed there needs to be more resources for all schools that service economically disadvantaged students, so they are receiving additional resources. Title I schools need to be looked at by the district and see if they are generally using the allocated funds for the best interest of academic success of students.

Conclusion

This study took a closer look at the academic achievement in Title I and Non-Title I schools in grades third through eighth within two content areas: English Language Arts and Mathematics. Through the data that was collected, analyzed, and interpreted, the academic achievement gap is closing but at a small pace and not enough to validate to say the gap is closing. The results of this study suggest the Every Student Succeeds Acts (ESSA) along with Title I funding have failed its goal in closing the achievement gap among third through eighth graders. Academic student achievement is measured based on the students' performance on state

assessment tests, either by mastery of standards or form set grade-level expectations (Douglas, 2013).

The federal government needs to raise the education level of Title I schools by providing them with additional funding and support, so they provide their students with extra curriculum resources and other support services. Currently, Title I funds are being allocated in many ways in district schools: instructional specialists, professional development for teachers, technological service and support to schools, providing before and after school tutoring for students as well as summer school. Title I funds also provide parenting classes for parents because it takes all hands on deck to raise a student.

Many people believe that since Title I schools receive federal funding that those funds will help with closing the achievement gap between Title I and Non-Title schools. But, the findings of this study showed that to be inaccurate. While Title I schools are steadily improving their academic test scores, Non-Title I schools overall scored higher on the 2017 AzMerit test in grades third through eighth. However, the surprise of the study showed that in grades sixth through eighth that there was no academic achievement gap between Title I and Non-Title I schools in both English Language Arts and Mathematics. Lastly, when you look at the subcategory of socioeconomically disadvantaged students, the data showed that across all grades third through eighth that there was a significant difference between Title I and Non-Title I schools showing that the academic achievement gap is still present within this subcategory.

Appendix A:

Northern Arizona University IRB Consent to Study

NORTHERN ARIZONA UNIVERSITY | Office of Regulatory Compliance

Institutional Review Board
Human Research Subjects Protection Program

805 S Beaver St
Building 22, Room 215
PO Box: 4062
Flagstaff AZ 86011
928-523-9551
http://nau.edu/Research/Compliance/Human-Subjects/Welcome

To:	Paula Slamowitz, Doctorate of Educational Leadership
From:	NAU IRB Office
Date:	February 26, 2018
Project:	The Achievement Gap of 3rd-8th Graders in Title I and Non-Title I Schools
Project Number:	1190879-1
Submission:	New Project
Review Level:	Administrative Review
Action:	NOT RESEARCH
Project Status:	Not Research

The project listed above does not require oversight by the Northern Arizona University Institutional Review Board because the project does not meet the definition of 'research' and/or 'human subject'.

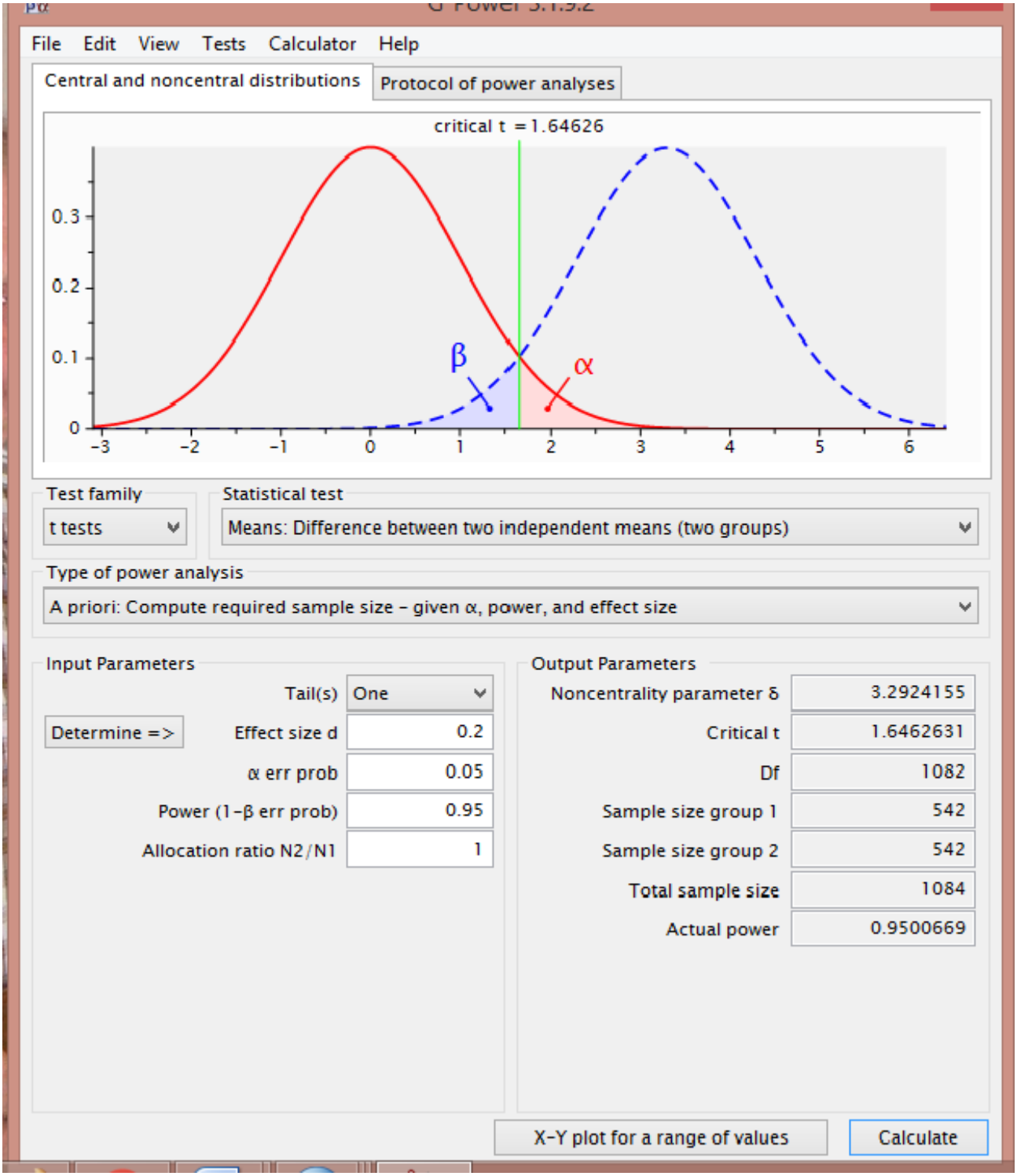
- **Not Research as defined by 45 CFR 46.102(d):** As presented, the activities described above do not meet the definition of research as cited in the regulations issued by the U.S. Department of Health and Human Services which state that "research means a systematic investigation, including research development, testing and evaluation, designed to contribute to generalizable knowledge".
- **Not Human Subjects Research as defined by 45 CFR 46.102(f):** As presented, the activities described above do not meet the definition of research involving human subjects as cited in the regulations issued by the U.S. Department of Health and Human Services which state that "human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains data through intervention or interaction with the individual, or identifiable private information".

Note: Modifications to projects not requiring human subjects review that change the nature of the project should be submitted to the Human Research Protection Program (HRPP) for a new determination (e.g. addition of research with children, specimen collection, participant observation, prospective collection of data when the study was previously retrospective in nature, and broadening the scope or nature of the research question). Please contact the HRPP to consult on whether the proposed changes need further review.

Northern Arizona University maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #0000357).

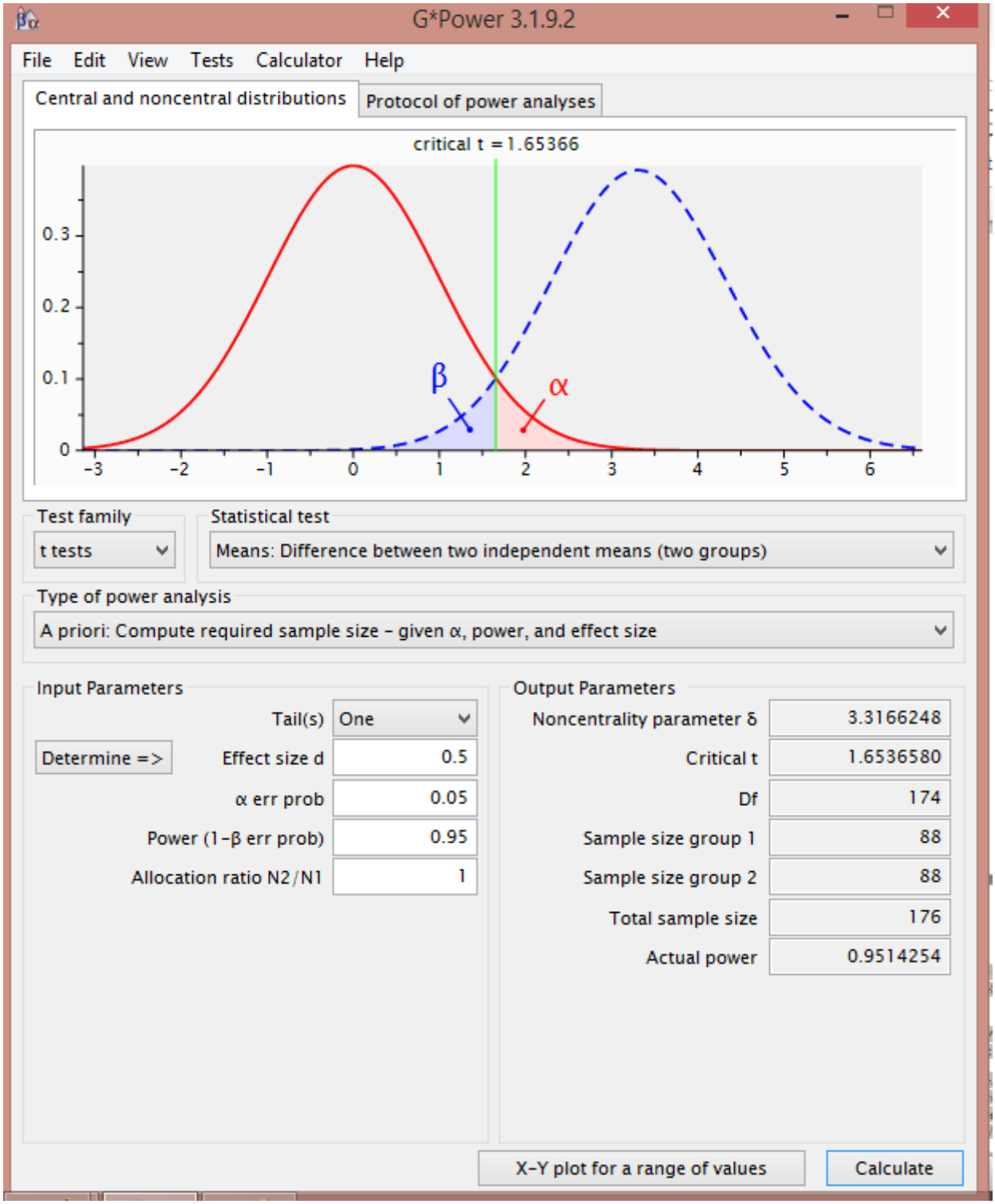
Appendix B:

G-Power .20 Small Effect



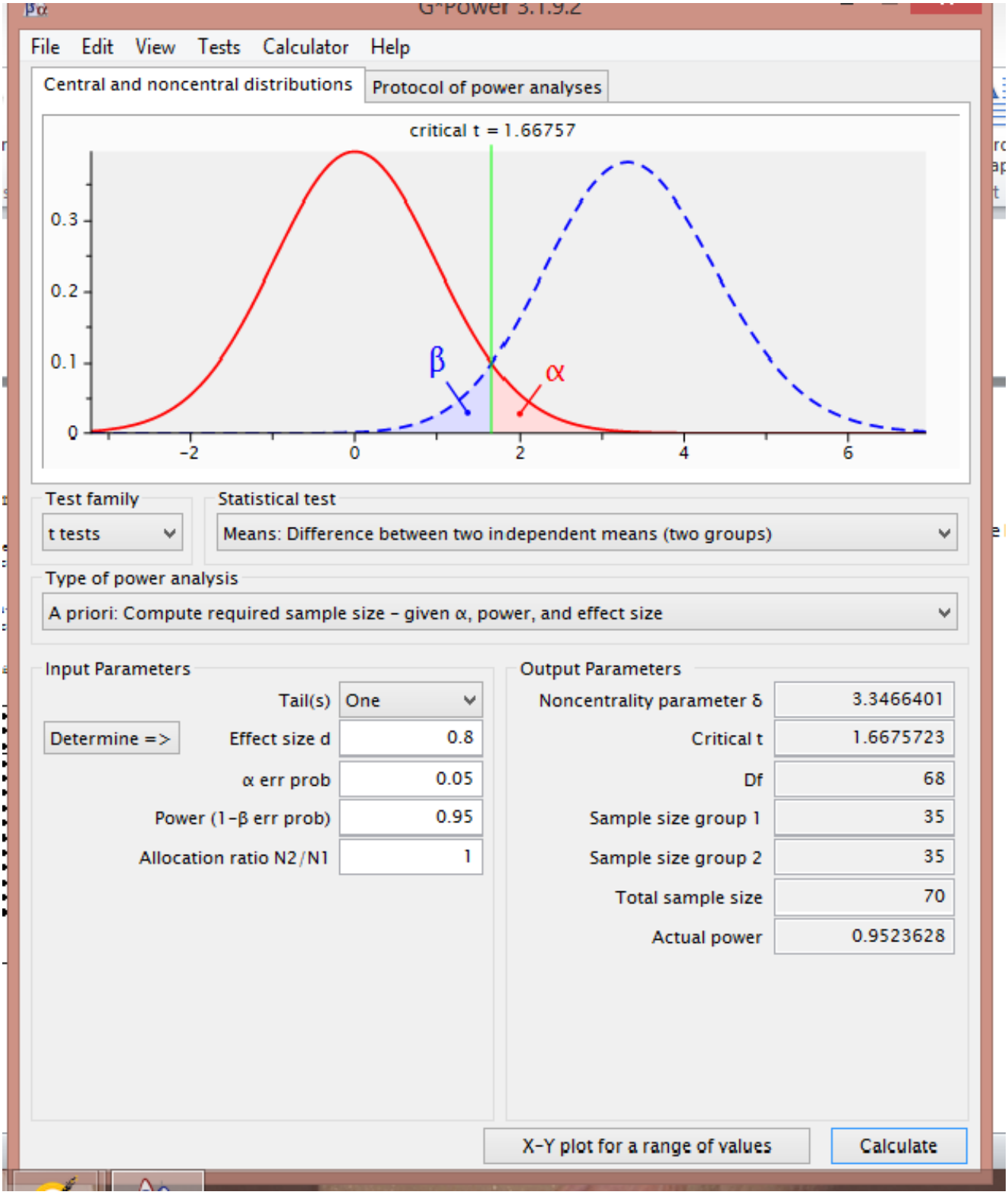
Appendix C:

G-Power .50 Medium Effect



Appendix D:

G-Power .80 Large Effect



REFERENCE

Adequate Yearly Progress. (2011, July 18). Retrieved October 26, 2017, from Education Week: https://www.edweek.org/ew/issues/adequate-yearly-progress/index.html

Arizona Aims Higher. (2017). Retrieved October 17, 2017, from Expect More Arizona: https://www.expectmorearizona.org/arizona-aims-higher/assessments/

Arizona Teachers Express Concern Over New ESSA Requirements. (2017, March 2). Retrieved October 19, 2017, from Understanding ESSA: http://understandingessa.org/arizona-teachers-express-concern-over-new-essa-requirements/

Assessment. (2017). Retrieved October 28, 2017, from Arizona Department of Education: http://www.azed.gov/assessment/

AzMerit. (2017). Retrieved October 26, 2017, from Arizona Department of Education: http://www.azed.gov/assessment/azmerit/

AzMerit Reporting Guide. (n.d.). Retrieved March 11, 2018, from Arizona's Statewide Achievement Assessment for English Language Arts and Mathematics: https://cms.azed.gov/home/GetDocumentFile?id=583c6026aadebe13d87d4234

Barton, P., & Coley, R. (2010). *The Black-White Achievement Gap: When Progress Stopped.* Princeton, NJ: Policy Information Center.

Bland-Washington, R. (2009). *Are Title 1 Schools Helping Students Make the Grade? A Comparison of Grade 4 Standardized test Scores in Title 1 and Non-Title 1 Schools in West Georgia.* Retrieved October 10, 2017, from Pro Dissertations and Theses.

Borman, G., & D'Agostino, J. (1996). Title I and Student Achievement: A Meta-Analysis of Federal Evaluation Results. *Educational Evaluation and Policy Analysis*, *18*(4), 309-326.

Brouillette, M. (1999, July 16). *The 1830s and 40s: Horace Mann, the End of Free-Market Education, and the Rise of Government School.* Retrieved September 17, 2017, from Mackinac Center for Public Policy: https://www.mackinac.org/2035

Camera, L. (2016, June 1). *How the Title I Money is Distributed*. Retrieved November 13, 2017, from US News: https://www.usnews.com/news/articles/2016-06-01/how-the-title-i-money-is-distributed

Check, J., & Schutt, R. (2012). *Research Methods in Education.* Los Angeles: SAGE.

Children with Disabilities Definitions. (1998-2017). Retrieved October 28, 2017, from Oregon Department of Education : http://www.ode.state.or.us/search/page/?id=3719

Civic Issues: No Child Left Behind Act. (2013, April 23). Retrieved November 9, 2017, from Penn State: http://sites.psu.edu/civicissuesandrewkim/2013/04/23/no-child-left-behind-act/

Conclusion Validity. (n.d.). Retrieved September 14, 2017, from Research Methods Knowledge Base: https://www.socialresearchmethods.net/kb/concval.php

Considine, G., & Zappala, G. (n.d.). *Factors Influencing the Educational Performance of Students from Disadvantaged Backgrounds.* Retrieved October 19, 2017, from Pro Dissertations and Theses: https://www.sprc.unsw.edu.au/media/SPRCFile/NSPC01_7_Considine_Zappala.pdf

Crossman, A. (2017, March 2). *Understanding Purposive Sampling*. Retrieved from Thought Co.: https://www.thoughtco.com/purposive-sampling-3026727

Cunningham, J. (2012, June). *Student Achievement*. Retrieved October 28, 2017, from Charter School Student Achievement: http://www.ncsl.org/documents/educ/CharterSchoolStudentAchievement.pdf

Descriptive and Inferential Statistics. (n.d.). Retrieved March 11, 2018, from Laerd Statstics: https://statistics.laerd.com/statistical-guides/descriptive-inferential-statistics.php

Descriptive Statistics. (n.d.). Retrieved September 14, 2017, from Research Methods Knowlede Base: https://www.socialresearchmethods.net/kb/statdesc.php

Development Process. (2017). Retrieved December 11, 2017, from Common Core State Standards Initative: http://www.corestandards.org/about-the-standards/development-process/

Di Carlo, M. (2014, November 17). *Rethinking The Use of Simple Achievemnet Gap Measures In School Accountability Systems*. Retrieved October 28, 2017, from Shanker Blog: http://www.shankerinstitute.org/blog/rethinking-use-simple-achievement-gap-measures-school-accountability-systems

Disaggregated Data. (2015, July 23). Retrieved October 28, 2017, from The Glossary of Education Reform: http://edglossary.org/disaggregated-data/

Don Kauchak, P. (2011). *Introduction to Teaching.* Upper Saddle River, NJ: Pearson Education.

Douglas, E. (2013, February 22). *Achievement vs. Growth: What K-12 Talent Managers Need to Know*. Retrieved April 20, 2018, from Education Week: http://blogs.edweek.org/topschooljobs/k-12_talent_manager/2013/02/achievement_vs_growth_k-12_talent_managers.html

Education and Socioeconomic Status. (2017). Retrieved December 9, 2017, from American Psychological Association: http://www.apa.org/pi/ses/resources/publications/education.aspx

Elementary and Secondary Education Act of 1965. (2017, October 9). Retrieved October 17, 2017, from VCU Libraries Social Welfare History Project: https://socialwelfare.library.vcu.edu/programs/education/elementary-and-secondary-education-act-of-1965/

Elementary and Secondary Education Act of 1965. (2017). Retrieved October 28, 2017, from Social Welfare History Project: https://socialwelfare.library.vcu.edu/programs/education/elementary-and-secondary-education-act-of-1965/

Elementary and Secondary Education Act: NCLB. (n.d.). Retrieved October 22, 2017, from idea Partnership: http://www.ideapartnership.org/topics-database/elementary-and-secondary-education-act-nclb/882-esea-the-law-and-nclb-titles.html

(1988). *Elementary and Secondary Education: A Summary of the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988, Public Law 100-297. CRS Report for Congress.* Washington, DC. Congressional Research Service: Library of Congress.

Essex, N. (2012). *School Law and the Public Schools.* Boston: Allyn and Bacon.

Every Student Succeeds Act (ESSA). (2017). Retrieved October 17, 2017, from U.S. Department of Education: https://www.ed.gov/esea

Every Student Succeeds Act: A New Day in Public Education. (n.d.). Retrieved November 13, 2017, from American Federation of Teachers: https://www.aft.org/sites/default/files/essa_faq.pdf

Ferrell, J. (2016, July 5). *Chapter 12 Ex Post Facto Research*. Retrieved October 31, 2017, from YouTube: https://www.youtube.com/watch?v=fU8zcYUl-Os

Fisanick, C. (2008). *Has No Child Left Behind been good for education?* Farmington Hills, MN: Greenhaven Press.

Fiscal Year 2017 Budget Summary and Background Information. (2017). Retrieved October 23, 2017, from U.S. Department of Education: https://webcache.googleusercontent.com/search?q=cache:sUZ4Y1xidE4J:https://www2.ed.gov/about/overview/budget/budget17/summary/17summary.pdf+&cd=1&hl=en&ct=clnk&gl=us

*G*Power: Statistical Power Analyses for Windows and Mac.* (2017, March 1). Retrieved March 15, 2018, from Heinrich Heine Universitat Dusseldorf: http://www.gpower.hhu.de/fileadmin/redaktion/Fakultaeten/Mathematisch-Naturwissenschaftliche_Fakultaet/Psychologie/AAP/gpower/GPowerManual.pdf#page49

Gershon, L. (2015, May 12). *A Short History of Standardized Tests*. Retrieved November 13, 2017, from JSTOR Daily: https://daily.jstor.org/short-history-standardized-tests/

Graham, E. (2013, April 25). *'A Nation at Risk' Turns 30: Where Did it Take Us?* Retrieved November 4, 2017, from neaToday: http://neatoday.org/2013/04/25/a-nation-at-risk-turns-30-where-did-it-take-us-2/

Harris, S., & Neiman, D. (n.d.). *Only a Teacher*. Retrieved November 5, 2017, from PBS: https://www.pbs.org/onlyateacher/timeline.html

Headen, R. A. (2014). *A Quantitative Examination of Title I and Non-Title I Elementary Schools in District 8 of Northern Alabama using Fourth Grade Math and Reading.* Retrieved October 10, 2017, from Pro Dissertations and Theses.

Henry Barnard Facts. (n.d.). Retrieved September 17, 2017, from Your Dictionary: http://biography.yourdictionary.com/henry-barnard

Heier, S. (2011). *The Relationship between Standardized Test Scores of Socioeconomically Disadvantaged Students in Title 1 and Non-Title 1 schools*. Retrieved October 10, 2017, from Pro Dissertations and Theses.

Horace Mann (1796-1859). (n.d.). (PBS, Producer, & PBS) Retrieved September 17, 2017, from Arizona PBS: https://www.pbs.org/onlyateacher/horace.html

H.R. 3941 (97th): Education Consolidation and Improvement Act of 1981. (2004). Retrieved November 3, 2017, from Govtrack: https://www.govtrack.us/congress/bills/97/hr3941/summary

Hypothesis Test Chapter 6. (n.d.). Retrieved November 20, 2017, from Tennessee Tech: https://math.tntech.edu/e-stat/DALS/Chapter6a.pdf

Improving Basic Programs Operated by Local Educational Agencies (Title I, Part A). (n.d.). Retrieved October 20, 2017, from U.S. Department of Education: https://www2.ed.gov/programs/titleiparta/index.html

Introduction to Research . (2009, July 27). Retrieved October 30, 2017, from Illinois State University: http://my.ilstu.edu/~eostewa/497/ART497%20EXPQUASIEXPO.html

Jennings, J. F. (2000). Title I : Its Legislative History and Its Promise. *Phi Delta Kappan, 81*(7), 516-523.

Klein, A. (2015, April 5). *No Child Left Behind: An Overview*. Retrieved October 16, 2017, from Education Week: http://www.edweek.org/ew/section/multimedia/no-child-left-behind-overview-definition-summary.html

Kolodziej, T. (2011). The Benefits and Detriments of the No Child Left behind Act. *ESSAI, 9*(21), 59-62.

Lee, A. (2018). *Every Student Succeeds Act (ESSA): What You Need to Know*. Retrieved March 20, 2018, from Understood: https://www.understood.org/en/school-learning/your-childs-rights/basics-about-childs-rights/every-student-succeeds-act-essa-what-you-need-to-know

Liu, G. (2007, March 20). *Improving Title I Funding Equity Across States, Districts, and Schools*. Retrieved November 6, 2017, from School Finance Redesign Project:

Lohman, J. (2010, June 4). *Comparing NO Child Left Behind and Race to the Top*. Retrieved February 6, 2018, from OLR Research Report: https://www.cga.ct.gov/2010/rpt/2010-R-0235.htm

Jennings, J. F. (2000). Title I : Its Legislative History and Its Promise. *Phi Delta Kappan, 81*(7), 516-523.

Kolodziej, T. (2011). The Benefits and Detriments of the No Child Left behind Act. *ESSAI, 9*(21), 59-62.

Maleyko, G., & Gawlik, M. A. (2011). No Child Left Behind: What We Know and What We Need to Know. *Education, 131*(3), 600-624.

Marx, J. (2016, November 28). *American Social Policy in the 1960's and 1970's*. Retrieved October 29, 2017, from Social Welfare History Project: https://socialwelfare.library.vcu.edu/war-on-poverty/american-social-policy-in-the-60s-and-70s/

Mathews, J. (2006, November 14). *Just Whose Idea Was All This Testing?* Retrieved November 13, 2017, from Washington Post: http://www.washingtonpost.com/wp-dyn/content/article/2006/11/13/AR2006111301007_2.html

Matthews, D. (2014, January 8). *Everything you need to know about the War on Poverty*. Retrieved October 29, 2017, from The Washington Post: https://www.washingtonpost.com/news/wonk/wp/2014/01/08/everything-you-need-to-know-about-the-war-on-poverty/?utm_term=.d336b1d7cf43

McCann, C. (2017). *Title I Distribution Formulas*. Retrieved November 13, 2017, from Ed Central: http://www.edcentral.org/edcyclopedia/no-child-left-behind-act-title-i-distribution-formulas/

NAEP Overview. (2017, May 10). Retrieved November 5, 2017, from NCES (National Center for Education Statistics: https://nces.ed.gov/nationsreportcard/about/

New No Child Left Behind Flexibility: Highly Qualified Teachers. (2004, March). Retrieved October 26, 2017, from U.S. Department of Education: https://www2.ed.gov/nclb/methods/teachers/hqtflexibility.html

NCLB Executive Summary. (2004, Febuary 10). Retrieved October 16, 2017, from U.S. Department of Education : https://www2.ed.gov/nclb/overview/intro/execsumm.html

NCLB: Standards, Assessments and Accountability. (2017, July 24). Retrieved November 6, 2017, from U.S. Department of Education: https://www2.ed.gov/admins/lead/account/saa.html#plans

No Child Left Behind. (n.d.). Retrieved from education.com: https://www.education.com/reference/article/no-child-left-behind-NCLB/

No Child Left Behind Act of 2001: Background Information. (2017). Retrieved October 16, 2017, from FindLaw: http://education.findlaw.com/curriculum-standards-school-funding/no-child-left-behind-act-of-2001-background-information.html

No Child Left Behind is Working? (n.d.). Retrieved October 19, 2017, from U.S. Department of Education: https://www2.ed.gov/nclb/overview/importance/nclbworking.html

Noguera, P. (2009). Achievement Gap: Public Education in Crisis. *New Labor Forum, 18*(2), 61-69.

Nonprobability Sampling. (2017). Retrieved October 11, 2017, from Research Methods Knowledge Base: https://www.socialresearchmethods.net/kb/sampnon.php

One-way ANOVA in SPSS Statistics. (n.d.). Retrieved March 13, 2018, from Laerd Statstics: https://statistics.laerd.com/spss-tutorials/one-way-anova-using-spss-statistics.php

Proficiency. (2014, July 14). Retrieved October 28, 2017, from The Glossary of Education Reform: http://edglossary.org/proficiency/

Puma, M., Karweit, N., Price, C., Ricciuti, A., & Thompson, W. V.-K. (1997). *Prospects: Final Report on Student Outcomes.* Cambridge, Massachusetts: Abt Associates Inc.

Ready, D. D. (2010). Socioeconomic Disadvantage, School Attendance, and Early Cognitive Development: The Differential Effects of School Exposure. *Sociology of Education, 83*(4), 271-286Reese, W. (2005). *America's Public Schools: From the common school to "No Child Left Behind"*. Baltimore, MD: John Hopkins University Press.

Roberts, C. (2010). *The Dissertation Journey.* Thousand Oaks, CA: SAGE.

Rosenberg, M., Westling, D., & McLeskey, J. (2010, June 20). *No Child Left Behind*. Retrieved November 6, 2017, from education.com: https://www.education.com/reference/article/no-child-left-behind-NCLB/

Salkind, N. J. (2010). *Causal-Comparative Design.* Thousand Oaks, CA: SAGE.

Schneider, M. (2016, December 12). *Original ESEA: Only 32 Pages*. Retrieved October 29, 2017, from HuffPost: https://www.huffingtonpost.com/mercedes-schneider/the-original-esea-only-32_b_8797342.html

Scott, A. (2005). *An Quantitative Examination of Title I and Non-Title I Elementary Schools in East Tennessee using Fourth-Grade Math and Reading Standardized Test Scores.* Retrieved October 10, 2017, from ProQuest Disserations and Theses.

Simon, M., & Goes, J. (2003). *Ex Post Facto Research* . Seattle, WA: Dissertation Success LLC.

Smith, G. H. (2012, April 3). *Thomas Jefferson on Public Education, Part 1*. Retrieved November 5, 2017, from Libertarianism: https://www.libertarianism.org/publications/essays/excursions/thomas-jefferson-public-education-part-1

Spring, J. (2014). *The American School: A Global Context.* New York, NY: McGraw Hill Education.

Standards in Your State. (2017). Retrieved December 11, 2017, from Common Core State Standards Initiative: http://www.corestandards.org/standards-in-your-state/

Stull, J. C. (2013). Family Socioeconomic Status, Parent Expectations, and a Child's Achievement. *Research in Educaion, 90*(1), 53-67.

The ABC's of ESEA, ESSA and No Child Left Behind. (2017). Retrieved October 17, 2017, from Education Post: http://educationpost.org/the-abcs-of-esea-essa-and-no-child-left-behind/

The American Recovery and Reinvestment Act of 2009 (ARRA). (2009, September 2). Retrieved October 24, 2017, from U.S. Department of Education: https://www2.ed.gov/programs/titleiparta/index.html.

The Glossary of Education Reform. (2014, July 14). Retrieved October 28, 2017, from Proficiency: http://edglossary.org/proficiency/

The National Commission on Excellence in Education. (1983, April). *A Nation at Risk: The Imperative for Educational Reform*. Retrieved November 5, 2017, from EDreform: https://www.edreform.com/wp-content/uploads/2013/02/A_Nation_At_Risk_1983.pdf

Thomas, S., Cambron-McCabe, N., & McCarthy, M. (2009). *Public School Law: Teachers' and Students' Rights.* San Francisco: Pearson.

Title I — Improving The Academic Achievement Of The Disadvantaged. (2017). Retrieved October 22, 2017, from U.S. Department of Education: https://www2.ed.gov/policy/elsec/leg/esea02/pg1.html

T-Test. (2017). Retrieved October 11, 2017, from Investopedia: http://www.investopedia.com/terms/t/t-test.asp

Types of t-test. (2016). Retrieved November 5, 2017, from Minitab: http://support.minitab.com/en-us/minitab-express/1/help-and-how-to/basic-statistics/inference/supporting-topics/tests-of-means/types-of-t-tests/

U.S.Department of Education. (2002). *No Child Left Behind: A Desktop Reference.* Washington, DC: Office of Elementary and Secondary Education.

US Department of Education. (2017). *NCLB: Becoming a "Highly Qualified Teacher*. Retrieved November 6, 2017, from Teaching Commuity Where Teachers Meet and Learn: http://teaching.monster.com/benefits/articles/1829-nclb-becoming-a-highly-qualified-teacher

U.S. Department of Education. (2009, December). *Race to the Top*. Retrieved February 9, 2018, from U.S. Department of Education: https://www2.ed.gov/programs/racetothetop/factsheet.html

U.S. Department of Education. (2009, November). *Race to the Top Program Executive Summary*. Retrieved February 9, 2018, from U.S. Deptment of Education: https://www2.ed.gov/programs/racetothetop/executive-summary.pdf

Welcome to Title I. (2017). Retrieved November 13, 2017, from Arizona Department of Education: http://www.azed.gov/titlei/

What is AzMerit. (2017). Retrieved November 5, 2017, from Expect More Arizona: https://www.expectmorearizona.org/arizona-aims-higher/assessments/faq/

Wiggins, G. (2017). *10 Theories On The Relationship Between Socioeconomic Status & Academic Achievement*. Retrieved December 9, 2017, from TeachThought: https://www.teachthought.com/learning/10-theories-on-the-relationship-between-socioeconomic-status-and-academic-achievement/

Wiley, R. W. (1995, September). *The Improving America's Schools Act of 1994: Reauthorization of the Elementary and Secondary Education Act* . Retrieved November 4, 2017, from U.S. Department of Education: https://www2.ed.gov/offices/OESE/archives/legislation/ESEA/brochure/iasa-bro.html

Yalgun, A., & Karaman, I. (2015). What Are The Factors Reducing the Academic Achievement in a Primary School Located in a Neighborhood With a Low Socioeconomic Status? *Education and Science, 40*(179), 251-268.

Yell, M. (2010). The Purpose of No Child Left Behind. In M. Yell, *The Law and Special Education* (pp. 180-181). Pearson Allyn Bacon Prentice Hall.