WHAT ARE THE EFFECTS OF AN AFTERSCHOOL INTERVENTION PROGRAM ON STRUGGLING THIRD-, FOURTH-, AND FIFTH-GRADE STUDENTS’ ENGLISH LANGUAGE ARTS AND MATH ACHIEVEMENT?

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WHAT ARE THE EFFECTS OF AN AFTERSCHOOL INTERVENTION PROGRAM ON STRUGGLING THIRD-, FOURTH-, AND FIFTH-GRADE STUDENTS’ ENGLISH LANGUAGE ARTS AND MATH ACHIEVEMENT?

A Dissertation

by

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SPRING 2013
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I certify that this student has met the requirements for format contained in the University format manual, and that this dissertation is suitable for shelving in the library and credit is to be awarded for the dissertation.

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Abstract

WHAT ARE THE EFFECTS OF AN AFTERSCHOOL INTERVENTION PROGRAM ON STRUGGLING THIRD-, FOURTH-, AND FIFTH-GRADE STUDENTS’ ENGLISH LANGUAGE ARTS AND MATH ACHIEVEMENT?

By

Baljinder Dhillon

This study examined the effects of an afterschool intervention program on struggling third-, fourth-, and fifth-grade students. Struggling students in this study are students who performed below grade level on the STAR testing and beginning-of-the-year Benchmark assessments. The afterschool intervention was provided by credentialed teachers trained to teach math and English language arts. Much research has been done on afterschool tutoring using volunteers, parents, and college students. However, none of the extant research detailed what happens when credentialed teachers are used to implement an afterschool intervention program. Teachers used the adopted curriculum for English language arts and math the afterschool intervention program.

A mixed-methods approach was used by the researcher to collect and analyze both quantitative and qualitative data. Quantitative data were collected from an Independent Samples t-Tests to compare students who received English language arts and math interventions after school to students who did not take benchmark assessments in English language arts and math. Qualitative data were collected from 12 classroom
observations using the opportunity to view students in the afterschool program through the lenses of Systems Theory, Universal design for Learning Theory, and the Appreciative Inquiry Theory. The analysis studied the afterschool intervention program for the effects from the following: teacher training, positive relationships with teachers, structured for one hour (lessons were made for one hour), students empowered in some decision making in their learning, curriculum meeting the students’ needs, and student engagement in the program.

This research adds to the body of knowledge that already exists by documenting an afterschool intervention program taught by trained credentialed teachers. Having credentialed teachers teaching makes an enormous difference in the results of the student’s progress in the program. Student progress was measured using benchmark assessments for math and English language arts.
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Chapter 1

INTRODUCTION

Albert Einstein once defined insanity as “doing the same thing over and over again and expecting different results.” If his assertion is true, then the recent history of California’s school-improvement efforts paints a picture of sheer madness. (The Education Trust-West, 2010, p. 1)

Tutoring, as a supplement to classroom teaching, is commonly considered the most powerful form of instruction for increasing student achievement. Afterschool tutoring has become a common tool schools use to reinforce classroom teaching and improve student achievement (Henderson, 2011). This research study sought to understand the effects of afterschool interventions, the achievement gap, student-teacher relationships, professional development, and student access to curricula. There are an estimated 49,700 public elementary schools in the nation, and 56% of these schools report having afterschool programs physically located in the school (Parsad & Lewis, 2009). Afterschool programs have traditionally focused on academic instruction or tutoring to improve student performance in core subjects.

This study used a mixed-methods approach, incorporating both qualitative and quantitative data (Creswell, 2009). This method offers a potential for greater understanding of the complex nature of educational research. First, it explores the extent to which a quality afterschool intervention program can benefit underperforming students in third, fourth, and fifth grades in English language arts and math using Benchmark assessments. Secondly, classroom observations were conducted looking for the strategies used in the classroom with the students who attended afterschool intervention. More
detailed discussions about the research questions, purpose, and methodology are addressed in Chapter 3.

Billions of dollars are spent annually on afterschool intervention programs at the elementary school level, yet a significant number of students still cannot read or perform math at their grade levels. What measurable academic differences does an afterschool program make in regard to performance in English language arts and math? This research sought out the type of training the teachers need to serve the needs of these students. Additionally, when teachers are working with students on the interventions, what strategies and skills do they focus on in the classroom?

**How Do We Fund This Effort?**

Afterschool funding in districts that are the bottom 20% of schools based on their API ranking on the California Standards Test are given more to help the students at these schools. These districts are given $500 for each K-3 student, $900 for each student in grades four through eight, and $1000 for each student in grades 9-12 to improve student academics in many different ways (The Education Trust-West, 2010). School districts not classified as “School Improvement Program,” but that want to give all their students every resource possible to be successful, use monies from the general fund of the school district. At Gold Elementary School, this allotment for afterschool intervention comes from the district’s general funds because school goals and the mission statement dictate that each child succeeds in school. At Gold Elementary School District, approximately
$50 for each student is spent on the afterschool curriculum, and the credentialed teacher is paid based on hourly wages, ranging from $28 to $63.

Educational funding in California is calculated so each district is assigned a revenue limit per student based on a formula decided long ago (with adjustments for inflation and equalization). A combination of local property taxes and state aid makes up the revenue limit. The local property revenue limits were determined in the 1970s by the passage of Proposition 13. If the property tax revenue exceeds the revenue amount of the school district, the district does not receive funding from the state but keeps all the property tax revenue. The revenue limit goes into the district’s general fund, which the district can use as it wishes.

All other funding the school districts receive comes from myriad categorical programs depending on how they are identified, such as class-size reduction, English learners, Special Education, and Gifted and Talented programs. Categorical funds are used for a specific purpose. Districts can raise additional funds by putting a bond measure on the ballot. Bond measures put parcel taxes on property.

Statement of the Problem

Studies have shown that Hispanic, African American, English learner, and low socio-economic students are on the lower end of the well-documented achievement gap. The gap begins with poor access to high-quality preschool programs that have been proven to advance academic readiness, increase achievement, and improve other educational outcomes such as foundational learning in early literacy and numeric
awareness. Without high-quality preschool programs, such students begin kindergarten at an educational disadvantage compared with white students, and the disadvantage increases during the first two years of school (California Department of Education [CDE], 2010; EdSource, 2010; Gándara, 2010; Rand Report, 2007; Rumberger & Anguiano, 2003).

Afterschool intervention programs need to be examined because many students are not reading or accomplishing math at their grade levels. Additionally, school districts around the United States spend large sums of money on these programs. The money allocated to intervention programs is among the most significant factors school administrators consider when calculating site budget efficiency. This research project will assist districts in considering what types of training the teachers need and the skills on which they work in afterschool interventions. This study will also help school administrators see if the funds allocated for the afterschool program are well spent. Data are provided to show per-pupil spending and benefits and weaknesses of the program.

Research regarding the effects of afterschool intervention is especially important among elementary level students, as not much research has been done at this school level. There are gaps in the literature at the elementary school level regarding afterschool intervention programs taught by credentialed teachers for nine- and 11-year-old students. The social implication of this problem affects our society as a whole because if these students are not making the gains they need in elementary school, they will be behind their peers in high school or in danger of failing. Failure to graduate from high school
affects a dropout’s earnings, puts a strain on state and national economics, and increases the need for special programs to support adults with lower education levels (Rumberger, 2008). Very limited data support the fact that afterschool intervention works for the students enrolled. However, if specific learning needs are identified and met, student achievement will be measurably affected.

**Research Questions**

1) To what extent does the afterschool intervention program in this study reflect the principles of Universal Design or Learning Theory, Systems Theory, and Appreciative Inquiry Theory?

2) Is there a significant difference in language arts and math performance as measured by the Benchmark Assessments for academically underperforming third-, fourth-, and fifth-grade students who participate in an afterschool intervention program compared to those who do not?

3) Is there a change in the level of absenteeism among elementary students after participating in afterschool intervention programs?

4) Are previously underperforming students scoring grade-level proficient in ELA and mathematics on standardized tests after participating in afterschool intervention programs?

**Methodology**

To understand the problem further, STAR test scores, Benchmark Assessments, CELDT tests, and beginning-of-the-year assessments of students attending the
afterschool intervention in the study were used. The above measures were used because students in third, fourth, and fifth grades have to be proficient to show they have mastered the skills they were taught and to have a smooth transition to the next grade level. Data for this research were collected from September 2012 through December 2012. A quasi-experimental comparative study was performed. An independent sample t-test was conducted to evaluate the difference between the means of the two independent groups as follows:

- Group 1: students who attended three days of English language arts intervention a week;
- Group 2: students invited to attend the English language arts intervention program but chose not to attend;
- Group 1: Students who attended three days of math intervention;
- Group 2: Students invited to attend the afterschool math intervention but chose not to attend.

Each case had scores on two variables (the grouping variable and the test variable). The grouping variable divided students into two mutually exclusive groups. The test variable described each case with regard to reading and math achievement. The t-test evaluated the mean value of the California Standards Test and the District Benchmark Assessment. Who attended an intervention program differed significantly from the mean value of the achievement of students who do not attended an afterschool program. Effects of maturation were not a major concern in this research, as data were
compared over a one-year period. Secondly, part of the research was classroom observation based on the following: student engagement, teacher expectations, student-teacher relationship, curriculum, and alternative ways for student to access curriculum. My hypothesis was the research will demonstrate that when afterschool interventions are taught by credentialed teachers, trained to teach reading to struggling students in a systematic way, students are likely to improve in their academics and their performance on assessments. For math, if the concepts are retaught using small group instruction, students will improve their math skills. For math, if the students have gaps with their concepts, they are retaught using small-group instruction so students will improve their math skills.

The setting for this project was Gold Elementary School (Pseudonym), located in a small school district in Northern California. Nearly 500 students attend this elementary school, and the population breakdown is: approximately 26.40% Hispanics, 3.50% Asians, 3.50% African Americans, 0.70% American Indians, 1.80% Filipinos, 1.20%
Pacific Islanders, 54.50% Caucasians, and 8.40% with two or more races.

**Figure 1. Golden Elementary School ethnicity.**

Students who participated in this study were third, fourth, and fifth graders, ages 9-11. Students performing below grade level in mathematics and/or language arts, according to the district periodic benchmark assessments and the STAR test, were in the control group. The comparison group was students also performing below grade level in mathematics and/or language arts who were invited to attend the afterschool intervention program but did not attend. Students were given the beginning-of-the-year assessments in math and English language arts in their homeroom classes by the teachers in third, fourth, and in fifth grades. The teachers were expected to follow the district pacing guide for each grade level. The students had their progress monitored in math through chapter
tests and overall periodic assessment every two months. English language arts was tested every six to eight weeks on the concepts taught during that period.

Since each state automatically tracks student data and reports to elementary schools the specific academic findings of student growth, the unique growth for participating students is provided. During the year, data on all unit tests in reading and math were collected to see if the intervention has improved academics in students enrolled in the afterschool program. Data from previous years were analyzed to provide additional evidence on student performance. Additionally, STAR test data results were used to track repeat students and trends in growth if applicable. Additionally, teacher training provided to the teachers teaching the English language arts intervention was considered. Classroom observations were examined to see what strategies and skills were used and how they related to the theoretical frameworks.

**Theoretical Base**

Universal Design for Learning Theory, Systems Theory, and Appreciative Inquiry Theory will frame this study. The unique life experiences of each participating student make it difficult to quantify the connections between regular day education and afterschool learning programs. Through the application of theories used in the fields of professional development, educational psychology, and science, there will be a greater understanding of how afterschool programs influence student achievement.
Universal Design

The concept and language of Universal Design for Learning Theory (UDL) was inspired by the universal design movement in architecture and product development, originally formulated by Ronald L. Mace at North Carolina State University. Universal Design calls for designing and constructing buildings, homes, products, and so forth that, from the outset, accommodate the widest spectrum of users. UDL applies this general idea to learning: that curriculum should from the outset be designed to accommodate all kinds of learners. Educators have to be deliberate in the teaching and learning processes in the classroom (e.g., preparing class learning profiles for each student; this practice enables grouping by interest). Students with challenges will be given special assistance.

Appreciative Inquiry

Another theoretical framework that will help students have full access is the Appreciative Inquiry (AI). Appreciate Inquiry was developed in 1980 by a doctoral student at Case Western Reserve University who was studying organizational change models. David Cooperrider developed a model that focuses more on the positive outcomes in organizations (Cooperrider, Whitney, & Stravos, 2003). AI is an approach to change based on discovering core strengths as a base for innovation and growth. The core strengths are derived from the word appreciate, “the act of recognizing the best in people or the world around us,” or affirming past and present strengths, successes, and potentials (Cooperrider, 1986, p. 693). These factors are put together, called the positive core, and are used as a base point for change.
When Cooperrider developed this theory, he had a framework including the following: Appreciative inquiry is structured around four D's – Discover, Dream, Design and Destiny. Each stage has a unique and specific learning objective. However, what makes appreciative inquiry unique is not the four D's; rather, it is what is at the core of this approach, the value teachers place on students. AI focuses on the positives in student successes and building learning on their accomplishments. Essentially, this approach searches for the best in students.

**Systems Theory**

Systems Theory (ST) is helpful for understanding how systems that strengthen achievement during the school day, or in other instructional programs, can be applied to afterschool programs. It is also an important way to keep the students’ needs at the center of all decisions made within the system. Urie Bronfenbrenner (1979), in *The Ecology of Human Development: Experiments by Nature and Design*, discussed ecological systems theory as it pertains to education. His work emphasizes the importance of ensuring student development and relationships are considered when making systemic change.

**Operational Definitions**

**Achievement Gap**

Achievement gap in education refers to the differences in academic performance between groups of students. The achievement gap is evident in grades, standardized test scores, course selection, dropout rates, and college completion.
rates (Contreras, 2010; EdSource, 2005; Education Week, 2004; Gándara, 2010; Gándara & Contreras, 2009; Rand Report, 2007; Warikoo & Carter, 2009).

Afterschool Intervention

Education that happens after the school closes for the regular school day.

Appreciative Inquiry (AI)

AI deliberately seeks to discover people’s exceptionality, their unique gifts, strengths, and qualities. It is a tool for actively searching and recognizing people for their specialties – their essential contributions and achievements (Cooperrider, 2001).

Credentialed Teachers

Teachers who finished their BA and teaching credential to teach in California.

CST

California Standards Assessment is an examination to test standards learned during the year and second- to 11\textsuperscript{th}-grade students are administered the test. The state of California uses the CST assessment to measure student learning in schools.

Ecological Systems Theory

Ecological Systems can be understood as a perspective of viewing the word. A universal assumption about the systems can be purpose, relationships, and productivity of the entities of a system, with a clear emphasis on the instrumentality of systemic values and beliefs for the sustainability and
development of systems. Systems can also be understood as theory, or systemic claims we may have about the nature and behavior of systems we study or in which we operate. Additionally, systems can be perceived as methodology, or possible concrete applications of systems theory to the constant challenges and opportunities of our particular systems, often in an attempt to facilitate systems design and/or systemic change.

Hispanic

Hispanic is used to describe both males and females identified as being Hispanic or Latino. In 2010, the U.S. Census Bureau (2011) defined a Hispanic or Latino as a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin. Approximately 86% of Hispanics in the Sacramento, California region are of Mexican descent (Pew Hispanic Center, 2011).

Periodic Benchmark Assessments

Assessments that happen every six to eight weeks in the area of math and ELA to drive instruction for the next six to eight weeks (Golden Elementary Pacing Guide, 2010).

Universal Design for Learning (UDL)

UDL applies this general idea to learning: curriculum should from the outset be designed to accommodate all kinds of learners.
Assumptions, Limitations, Scope, and Delimitations

Due to the researcher having past experience in educational leadership, two assumptions can be made regarding the research: 1) Schools can only control what they do for the 6.5 the students are in school with us and 2) only 75% of students invited to attend afterschool interventions for an hour afterschool will attend; about 25% will not attend.

This study used a comparative design. An underlying assumption of comparative design is that the groups for the study are already intact. In this study, the groups compared were students enrolled in the afterschool program and students not enrolled in the afterschool program. Students may have different classroom teachers during the school day, but all students came from the same school with the same administration.

The teachers taught to the same California English language arts and math content standards and used the same district-adopted English language arts and math curriculum. Also, all the teachers used a district pacing guide outlining what needs be taught to students during that particular week.

This study is limited to the instruction and learning at one elementary school, in one afterschool program in Northern California. Given this, research findings will be difficult to generalize to other populations because of the small size of the school.

The tests for determining student achievement were the California Standards Test and benchmark assessments. Unit benchmarks are district standardized tests incrementally placed throughout the year to measure student understanding of standards
and growth toward mastery. The CST is a standards-based, criterion-referenced test assessing the California content standards in ELA, and mathematics, science, and history-social science. Students in grades 2-11 are tested using the CST.

Assumptions on the researcher’s part for using the CST test results for this project follow. Standardized testing gives teachers guidance to help them determine what to teach students and when to teach it. The net result is less wasted instructional time and a simplified way to manage timelines.

Standardized testing gives parents a good idea of how their children are doing as compared to students across the country and locally. This can also indicate how a local area is doing compared against the national landscape. Likewise, since all students are taking the same test, standardized tests provide an accurate comparison across groups. (For example, this makes it easy to see how boys are performing as compared to girls in a particular school or district.) Over the years, great improvements have been made with regard to test bias, which has led to more accurate assessments and comparisons.

A limitation of using the STAR test as one of the measurements in this study is that teaching for the standardized tests limits the way the information is presented. A free society needs people who are able to think outside the box and in new and innovative ways. This type of education is by design teaching children to think only about those things test makers deemed important a decade ago when the test was being constructed.

Another way standardized tests are used does not measure the learning ability of the student; it only measures whether the school system is able to write curriculum that
produces good test takers. Forty years ago, these tests were used to see if students were balanced in their abilities to learn the various types of materials presented. Test scores were going to reflect comprehension more than targeted testing. What that would mean is the test scores would be lower overall because the tests should challenge top students while letting the less gifted young people still be able to show what they had learned. Scores were used to determine learning level and not teacher evaluation.

Who is most hurt by these practices? Students from low-income and minority group backgrounds are more likely to be retained in grade, placed on a lower track, or put in special or remedial education programs when it is not necessary. They are more likely to be given a watered-down, “dumbed-down” curriculum based heavily on rote drill and test practice. This practice only ensures they will fall further and further behind their peers.

In many districts, raising test scores has become the single most important indicator of school improvement. As a result, teachers and administrators feel enormous pressure to ensure that test scores go up. Schools narrow and change the curriculum to match the test, and teachers teach only what is covered on the test. Methods of teaching conform to the multiple-choice format of the tests. Teaching more and more resembles testing.

The researcher who conducted this study was the principal at Gold Elementary School. The researcher had biases, such as all students would do well in the afterschool program because the principal had credentialed teachers conducting the interventions.
Another bias was the curriculum used for the intervention was targeted curriculum to fill in the student’s gap in fluency, comprehension, and phonics. The researcher only selected participants within a group of students who were not proficient on their California Standard Test and were doing poorly on the beginning-of-the-year assessments. The researcher did not control for race, SES, and other possible factors. Being a site principal helped with the relationships with the families whose children participated in the study. Since the parents had known the researcher for approximately six years now, they trusted her with regard to their children’s education. If, as a site principal, the researcher invited their children to an afterschool intervention, the parents allowed these students to attend. Having a relationship with the students, teachers, and the technology department allowed easy access to the data.

**The Significance of the Study**

The efficacy of an afterschool intervention program needs to be verified to make sure school leaders are doing everything in their power to make all students successful in the school system. If students are attending the afterschool intervention, it must be known whether the teachers are filling in the skill gaps students have such as fluency, comprehension, and decoding. If they are not, what else can leaders of the school do for those students? School leaders need to have various skill sets so all students can be successful in school.

A substantial amount of money is spent on afterschool intervention programs at the elementary school level. However, a significant number of students continue to
struggle with reading and mathematics and perform below grade level. The effectiveness of afterschool intervention programs needs to be verified in order to substantiate future funding. If this problem is not addressed, the United States could continue to lose trillions of dollars each year in what McKinsey & Co. (2009) refer to as output potential – the loss of money from the country because workers are not as skilled and productive as they could be. Despite this economic argument, student achievement is still the most pertinent factor affected by ineffective afterschool interventions; improvement in student performance will be the focus of this study.

There is a limited amount of data on the effectiveness of afterschool interventions at the elementary level. The research on elementary tutoring that has been examined by the researcher indicates most interventions are done by volunteers, college students, and senior citizens and not by credentialed teachers. This research study was aimed at trying to fill this gap in the literature.

The researcher addressed the effectiveness of afterschool interventions, a significant issue, by applying a theoretical framework to a problem in a way not currently documented by other researchers. This study will contribute valuable information that can shape programs and policies for a variety of stakeholders including students, teachers, program staff, parents, families, and the community.
Conclusion

This study includes five chapters. Chapter 1 introduced the study and contains the Problem Statement; Nature of the Study; Theoretical Base; Operational Definitions; and Assumptions, Limitations, Scope, and Delimitations.

Chapter 2 provides a review of recent peer reviewed literature as well as selected seminal works in the field of afterschool intervention. More specifically, it is a review of studies focusing on factors impacting students who attend the three-day afterschool intervention program. It presents the theoretical frames of Universal Design Learning, Appreciate Inquiry, and the System’s Theory.

Chapter 3 details the study’s methodology, including specific information about the sampling procedures, data collection, data analysis, and issues of validity and reliability. Data were collected from September 2012 through December 2012. A quasi-experimental comparative study was performed. An independent sample t-test was conducted to evaluate the difference between the means of the two independent groups. Each case had scores on two variables (the grouping variables and the test variable). The grouping variable divided students into two mutually exclusive groups (Group 1: students attending an afterschool program three days a week; Group 2: students not enrolled in the afterschool intervention program). The test variable described each case on reading and math achievement.

Chapter 4 is a presentation, interpretation, and explanation of the data. The t-test evaluated whether the mean value of the achievement of students who attended an
intervention program differs significantly from the mean value of the achievement of students who did not attend an afterschool program. Means and standard deviation tables are presented.

Chapter 5 summarizes the findings and addresses implications for future research. Limitations of the study and implications for future research are also discussed. Finally, the chapter concludes with recommendations for action.
Chapter 2

REVIEW OF RELATED LITERATURE

Introduction

The purpose of this study is to examine the afterschool English language arts and math intervention program provided for third-, fourth- and fifth-grade students at Gold Elementary School. The common challenge for an elementary school leader is to ensure all students are proficient on the District Benchmark Assessments and California Standards Test and that students are ready with skills to be successful as they proceed into middle school. The literature on afterschool intervention is extensive for middle school and high school; however, research studies that have been done on elementary school afterschool intervention programs suggest these programs are often conducted by volunteers, college students, and other community members instead of qualified teachers. Not a single state has provided data to show that students enrolled in these programs have made appreciable gains (Lewis, 2006). This study seeks to fill the gap in the existing literature on effective afterschool intervention taught by credentialed teachers.

The review of the literature includes a history of the afterschool intervention programs and how they have evolved over time with funding. The second section explores the student-teacher relationships in the classroom and determines which strategies work with struggling students and which ones do not. The third section examines effective training for teachers who work with afterschool intervention programs. The fourth section seeks to understand the curriculum and students’ access to
that curriculum in public schools, and, finally, the last section focuses on the achievement gap in California public schools as it relates to African American and Latino students.

Because of the No Child Left Behind Act and the pressure of high-stakes testing, many school districts are looking for ways to raise test scores and gain or maintain adequate yearly progress. Tutoring and afterschool interventions have become a familiar tool schools use to reinforce classroom teaching and improve student achievement. Funding interventions to assist struggling students have been provided for years under different names; however, no data was kept on these interventions to show their success. Though, when the No Child Left Behind Act was put into place, districts had to measure student results on the interventions.

**Assistance to Public Schools**

Federal assistance to public schools did not begin until there was a national interest in improving public schools in the United States. In 1958, the influence of *Sputnik* placed school improvement on top of the national agenda (Boyer, 1983). The Soviet Union's successful launch of the satellite *Sputnik* into space in 1957 highlighted the need for the United States to improve in mathematics and science. The federal government responded by introducing the National Defense Education Act of 1958. The Elementary and Secondary Education Act was passed in 1965 and included support for socioeconomically disadvantaged youth. After 1965, federal funding to schools expanded to several categories of students including special education students, gifted
and talented students, and English learners (Elementary and Secondary Education Act [ESEA], 1965).

**Funding Interventions**

State and local governments largely fund public schools in the United States. In many states, including California, federal funds account for less than 10% of the revenues for public schools. During the 2010-11 school year, California public schools received 7% of its funding from the federal government. Federal funds, also known as categorical funds, were used to support specific kinds of students or programs (Timer, 2006).

**Title I**

The purpose of Title I of the Elementary and Secondary Education Act (ESEA) of 1965 was to improve the academic achievement of disadvantaged students. Recognizing the lack of achievement among a number of students, Title I was created to ensure all students have a fair, equal, and significant opportunity to earn a high-quality education. Title I aimed to ensure that disadvantaged students achieved a minimum level of academic proficiency on state academic assessments (ESEA, 1965). Title I, by way of the federal government, provided over $25 billion to states throughout the nation in the 2007 fiscal year (United States Department of Education, 2010a). The National Association of Secondary School Principals (NASSP; 2010) reported that annually, approximately 85% of Title I funds go to elementary and middle schools. While ESEA provided states and local school districts additional financial resources to support student
learning, it did not explicitly address the need to improve academic achievement for Latino and African American students.

Schools qualify for Title I by having 48% or more of the student population on free or reduced lunch. As the school population moves in or out of school, the Title I funding changes depending on how many students eligible for free and reduced meals. Additionally, when a school receives Title I monies, it comes with separate rules on how these monies can be spent.

The regulation states that the funds should meet the educational needs of low-achieving students in the nation's highest poverty schools, including limited English proficient students, migratory students, children with disabilities, American Indian children, neglected or delinquent students, and young children in need of reading assistance (ESEA, 1965). Title I language mentions Native American students, but does not mention Latino and African American students.

**Comprehensive School Reform**

In addition to Title I, federal categorical funding support for public schools continued into the late 1990s and 2000s. In 1998, the federal government initiated the Comprehensive School Reform (CSR) program through the Elementary and Secondary Education Act. The CSR program was signed into law in 2002 and provided $308 million to public schools (United States Department of Education, 2010b). The intent of the CSR program was to provide funds to schools in order to enact whole school reform so all students, and particularly low-performing students, could be proficient in a state's
academic standards. To receive CSR funds, school districts had to apply to the state on behalf of schools in the district.

The percentage of funding from the CSR depends on how many classes a school site has practicing class-size reduction. During the 2012-2013 school year, many districts have not been utilizing the CSR due to the budget woes. Instead, the districts are laying off teachers, leaving bigger class sizes. Hence, the monies coming from CSR into the district depends on the school and what methods they are using to reduce their budget.

The CSR program was put into place to help underperforming students; however, this program did not hold school districts accountable. With the No Child Left Behind Act, districts were responsible for students making progress on state standards. Therefore, school districts began offering programs like afterschool tutoring so their low-performing students could meet these standards. If students are not meeting the state standards, the school ends up in improvement programs where another set of rules apply to budgeting for the district.

The No Child Left Behind Act

Before the No Child Left Behind Act of 2001, California passed the Public Schools Accountability Act (PSAA) in 1999. The PSAA established a results-based accountability system for California schools. Some critical components of the PSAA were:

a) Standardized Testing and Reporting (STAR),

b) California Standards Test (CST), and
c) Academic Performance Index (API).

The STAR consists of a series of common assessments given to students in grades 2-11 and common standards-based assessments for selected special education students. STAR is the overall group of achievement test Standardized Testing and reporting the state of California is gives to all their students in grades 2-11. The CST is the portion of these tests based on California standards called California Standards Tests. The CSTs include common standards-based assessments in English language arts, mathematics, science, and social science at the high school level. In elementary school, students are tested only in English language arts and mathematics. Results of the CSTs are the number one factor in determining a school's and district's API. Every public school and district receives an API based on how well students do on standards-based assessments.

In 2001, the Immediate Interventional Underperforming Schools Program (IIUSP) was established as part of PSAA to provide funding assistance to the state's lowest performing schools. In the mid-2000s, the High Priority Schools Grant Program (HPSGP) replaced the IIUSP and continued to provide funding support for low-performing schools (Harr, Parrish, Socias, & Gubbins, 2007). As a part of the HPSGP, the state's lowest ranked schools, as determined by the API, were provided $400 per student per year over a three-year period to implement improvement strategies. The schools were provided $50,000 a year for developing an action plan for the school's improvement efforts. Many school districts offered assistance to students during the regular day to help students quickly move up to grade level standards. The school
districts also offered support to students through an afterschool program, where help was provided to small groups. Through these groups, students received more support from their teachers in target subject areas. Schools that did not make expected progress after three years were subject to sanctions. It is likely many schools affected by the state's accountability system were also affected by federal accountability. Schools were challenged to meet goals established by both the state and federal accountability systems.

While the accountability systems affected all schools, it truly was a way to focus more resources on the lowest performing students. California students are placed in one of five performance bands in tested subjects based on the CST results. The levels are: a) Advanced, b) Proficient, c) Basic, d) Below Basic, and e) Far Below Basic. The state accountability system awarded schools more points for improving students who initially scored at a far below basic level than improving a student who scored at the basic level and demonstrated measurable growth. The improved scores of the most challenged students would be a significant benefit to a school's API. Also, the federal accountability system required schools to make Adequate Yearly Progress (AYP).

Each elementary school's goal is to have every second- through fifth-grade student at proficient level in English language arts and math. However, the reality in public schools is that not every child is meeting that benchmark. Who is most hurt by these practices? Students from low-income and minority group backgrounds are more likely to be retained in grade, placed on a lower track, or put in special or remedial education programs when it is not necessary. They are more likely to be given a watered-
downed, “dumbed-down” curriculum based heavily on rote drill and test practice. This practice only ensures they will fall further and further behind their peers. The CST testing graphs (see Figure 2) shows groups, such as Hispanic and African American students, do not make as much progress as other students. The state and federal governments realize this fact; consequently, they have provided funding to schools for students who are not proficient in both subjects.

![Figure 2. API scores by subgroup.](image)

**Achievement Gap**

The achievement gap is not an event that suddenly appears at a specific point in a child’s educational career, but rather starts early and persists or grows with the child as he or she ages. Research has shown that a gap in achievement between white and minority students is already present before students enter kindergarten (Chapin, 2006); this gap often persists into adulthood (Jencks & Phillips, 1998). Supporting these findings are
data from the National Assessment of Educational Progress (NAEP), which show a statistically significant difference in achievement scores between black and white students at nine years of age, as well as at 17 years of age (National Center for Educational Statistics [NCES], 1997). This data also suggest that interventions put into place by school districts throughout the primary and secondary years are ineffective for minority students (Kulm, 2007; Roach, 2001; Rodriguez, 1997).

The achievement gap exists not only between white and black students but has also been documented between white students and most other minority groups on almost every achievement level (Olszewski-Kubilius, Lee, Ngoi, & Ngoi, 2004). The gap begins with poor access to high-quality preschool programs that have been proven to advance school readiness, increase achievement and improve other educational outcomes. Without high-quality preschool programs, minority students begin kindergarten at an educational disadvantage when compared with white peers. The disadvantage is the increase in the achievement gap during the first two years of school (CDE, 2010; EdSource, 2010; Géndara, 2010; Rand Report, 2007; Rumberger & Anguiano, 2003).

The achievement gap is also evident in English language arts and mathematics as demonstrated by standardized test scores. Proficient level is the goal for student performance on the National Assessment of Educational Progress (NAEP) (NCES, 2009). Third- and fourth-grade reading scores are useful tools as they are important predictors of lifetime earnings (McKinsey & Co., 2009). According to the National Assessment of Educational Progress (NAEP) results, only 24% of California’s third-grade students are
performing at or above the proficient level in English language arts. This problem is important to everyone from educators to the general public because the achievement gap between students in the United States and students in higher performing countries cost the United States an estimated $1.3 trillion to $2.3 trillion in the Gross Domestic Product in the year 2008 (McKinsey & Co., 2009). Left unchanged, the United States could continue to lose trillions of dollars each year in what McKinsey & Co. refer to as output potential, the loss of money to the country because workers are not as skilled and productive as they could be. Failure to read by third grade is a societal problem, as well as a personal crisis for the non-reader.

According to the National Research Council (NRC; 2002), “Reading is essential to success in our society. Ability to read is highly valued and important for social and economic advancement” (p. 10). The National Research Council (2002) found that unless a person is at least a “moderately skilled reader” by the end of grade three, he or she is unlikely to graduate from high school. The Annie E. Casey Foundation confirms the NRC’s find, noting that millions of American students will not graduate because they cannot read proficiently by fourth grade. Further, less than proficient low-income readers are, “all too likely to become our nation’s lowest-income, least-skilled, least–productive, and most costly citizens” (Annie E. Casey Foundation, 2010, p. 7).

Addressing this issue is even more difficult because no one has been able to determine what factor, or factors, causes this gap between minorities and whites. The possible causes proposed by researchers and educators have run the gamut, with blame
placed everywhere, including on social factors (Barlow, 1999; Olszewski-Kubilius et al., 2004; Ramirez & Carpenter, 2005). One of the potential problems with trying to determine the cause of the achievement gap is that, even when discovered, there may be nothing that can be done to change the situation. For example, many home-based variables have been studied as possible causes, including the income level of a student’s family (Blair & Legazpi 1999), home language (Derwing, DeCorby, Ichikawa, & Jamieson, 1999), parent involvement (Jeynes, 2003), and overall cognitive potential of the student (Murray, 2007). Of these, the only variable that often shows a relationship with achievement is socioeconomic status, but even so, not all researchers agree upon it (White, 1993). As a school leader, the researcher disagrees with the research about the achievement gap because many programs can be put in place to ensure numerous successful students. Schools cannot change what happens in the student’s home; however, teachers and administrators can monitor what the student does the 6.5 hours they are at school. One school-based variable extensively researched is teacher quality; the findings, however, have been inconclusive.

**Afterschool Intervention Programs**

Currently, there are an estimated 49,700 public elementary schools in the nation, 56% of which report that one or more of their afterschool programs were physically located in the school (Parsad & Lewis, 2009). These programs have traditionally focused on academic instruction or tutoring to improve student performance in core subjects. One-tenth of public elementary schools provide supplemental educational services
because they are required to do so when they do not make Adequate Yearly Progress under the No Child Left Behind. State and federally funded programs have provided billions of dollars to schools for afterschool programs that draw primarily from minority and low-income populations. In addition, in 2006, the U.S. Department of Education’s Title I report indicated that the number of Title I schools identified as “in need of improvement” nearly doubled between 2005 and 2006 (Davis, 2006).

Tutoring has been documented as a reliable method to improve student achievement (Slavin, 1999). Tutoring, as a supplement to classroom teaching, is commonly considered the most powerful form of instruction for increasing student achievement. According to Gordon, Morgan, O’Malley, and Ponticell (2007), when educators arrange tutoring for their students, five practical recommendations can be applied immediately to make school tutoring programs successful.

**Use a Diagnostic/Developmental Tutoring Program**

Research indicates that when a student is diagnosed and placed into a structured tutoring program, the student’s achievement increases over time. One effective way of monitoring tutoring is having the tutor observe and record student learning skills at each session. Precise observation can guide the tutor in selecting short diagnostic tests and exercises to better detail individual learning issues. Using a diagnostic/developmental approach will help the tutor discover underlying, perhaps subtle, student cognitive processing issues, such as learning disabilities (i.e., dyslexia, visual/auditory perceptual issues, attention-span limitations, etc.) (Gordon, Morgan, Ponticell, & O’Malley, 2004).
After the student has attended the afterschool intervention program and not made any significant progress, they are recommended for Special Education testing. The data collected in the classroom during the day and the afterschool data with the precise observation helps students move forward in the Special Education testing process. School districts cannot recommend Special Education testing until they have shown that teachers have tried many different intervention methods with the students and reasoned why these methods did not work.

2. Structure the Tutoring Programs

School leaders need to design and implement a highly structured tutoring program catered to the specific needs of the students in the school. Such catering helps the tutors implement more precise individualized tutoring, rather than generic "homework helper" or "drill-and-practice" that does not provide much assistance in improving students’ classroom achievement. Precise tutoring can be done in a way in which the afterschool intervention program implements a researched-based curriculum to build competencies at different levels. When the curriculum is researched-based, utilizing the script method, (script method – the teacher’s edition tells the tutor what to say and how to say it word for word) as well as tutoring observations, students receive adequate help in the area in which they are weak. Another advantage to the tutoring program being structured this way is students are receiving help with their unique problem areas rather than being tested all the time. Advantages for the tutor in this type of program are the tutors follow a more thoughtful, sequentially arranged, and systematic tutoring program and
achievement is based on and measured with a written record, rather than on informal
guesswork. Hence, the risk that an individual tutor will overlook significant student
learning issues is minimized. Also, diagnosis becomes an ongoing process throughout
the session.

3. Use Your Most Experienced Teachers as Tutors and Training Them

Tutors need to have appropriate training to consistently produce better tutoring
results. On the whole, tutors are effective because they give students more personalized
attention in a smaller setting. However, over time this effect tends to fade and students
resume their earlier learning habits. The tutors need to be credentialed teachers because
they have the specialized training needed to get results (Mathes & Fuchs, 1994; Shanahan
& Barr 1995). In most cases, the tutors are not credentialed teachers; however, the
researcher in this study evaluated a tutoring program taught only by credentialed
teachers.

A study conducted by Grubb (2007) examined the schools in Finland and their
effective tutoring systems. The study showed Finland has highly effective tutoring
intervention systems supporting all students. There is one trained tutor for every seven
classes. During any given year, 30% of all elementary and high school students are
tutored every time they are at risk for falling behind their peers. Lastly, Finnish tutors
spend an extra year at the university specializing in tutoring methods.

The research directly links highly qualified master tutors to the vision that they
themselves are coaches and mentors rather than homework helpers. According to the
study, the most effective tutors are classroom teachers because they see the students struggling in their classrooms. The teachers have the personal motivation to help these students move along in their classroom. According to Gordon et al. (2007), the teachers know how to use the diagnostic approach to prepare developmental tutoring classes concentrating on helping students understand how to learn rather than just do the immediate assignment.

4. The Site of the Tutoring Can Maximize Long-term Results

The location of tutoring sessions seems to play an important role in the results. Many school tutoring programs are marginalized by poor student attendance or family mobility problems (Shanahan, 1998). Longitudinal research compared tutoring provided in different locations: schools, public libraries, community learning centers, and students' homes. The most promising results in improving long-term student achievement were seen in home-based tutoring programs. A number of factors seem to have contributed to these results. When tutoring students in their homes, tutors were more effective in establishing a better learning environment. This occurred because the tutors were trained not only on more effective instructional methods, but also on how to coach parents on ways to support daily learning in the home.

5. Encourage the Use of Peer Tutoring in the Classroom

Barksdale-Ladd and Thomas (2000) found that peer tutoring can help teachers reduce some of the negative effects of high-stakes testing on classroom instruction. According to their study, when teachers implement peer tutoring in their classrooms, the
students spend more time on test preparation and less time on learning activities. Peer tutoring may not only help increase student mastery of subject knowledge and general learning skills, but it may also improve students’ motivation and their sense of empowerment as learners.

Another reason tutoring is critical is to help close the achievement gap that seems to exist for Latino and African American students in the United States. Many minority students do not start with the same advantages as other students, and tutoring helps these students get caught up with their peers academically.

**Review of Prior Research on Afterschool Programs**

Numerous studies have shown increases in student achievement through the use of a variety of instructional strategies. The strategies include, but are not limited to, small class sizes (Konstantopoulos & Chung, 2009), use of standards-based practices in English language arts and math (Johnson, 2009; Thompson, 2009), de-tracking students (Burris & Welner, 2005), teacher expectations (Moses-Snipes & Snipes, 2005; Johnson, 2009), use of mentors (Hrabowski, 2002; Moses-Snipes & Snipes, 2005), focusing on achievement and college preparation (Konstantopoulos & Chung, 2006; Reeves, 2003), and providing extra support (Burris & Welner, 2005; Konstantopoulos & Chung, 2006).

Cirino et al. (2009) conducted a study examining English and Spanish performance one year after interventions. The interventions were provided in Spanish or English for separate groups of English learners in an elementary school, and the researchers wanted to learn whether the effects were still measureable one year later. The
researchers touted the study as, “A positive step in demonstrating the effectiveness of intervention with ELLs in either language over time” (p. 777). The researchers used explicit instruction in core reading competencies, controlled for task difficulty through systematic scaffolding, taught students individually or in small groups, modeled, taught students when and where to apply strategies, provided ongoing and systematic feedback, and used ongoing progress monitoring (Foorman & Torgesen, 2001; Lyon, Fletcher, Fuchs, & Chhabra, 2006; Swanson, Hoskyn, & Lee, 1999; Swanson, Harris, & Graham, 2003; Vaughn, Gersten, & Chard, 2000).

In research published in *Intervention in School and Clinic*, Saddler and Staulters (2008) presented a successful afterschool reading project using university graduate students as tutors for struggling readers. The project provided tutoring for fourth-grade students and opportunities for students in a university master’s degree program in special education and literacy to work in the classroom. Many tutored students improved in reading ability on measurable objectives throughout the course of the year. The students were considered low-ability and at-risk. Test results after one academic year showed that many students significantly improved their word attack skills, comprehension, and social studies knowledge compared with students of similar abilities not in the program. On average, the students improved at least one grade level in reading ability according to the results from the end-of-year test.

Much of the research on elementary school tutoring has been done on volunteers, college students, and peers. In a study carried out by Elbaum in 2000, tutoring
interventions done by certificated teachers yielded larger effects than those implemented by volunteer tutors. Teachers in the study already knew what gaps the students had, and they were able to fill in those holes quicker than the volunteers.

**Student-teacher Relationship**

“On one hand, students need master teachers who can bring the material alive. But for me there's no denying that to successfully cultivate a child's mind, a teacher must simultaneously connect with the student's heart” (Holt, 1982, p. 1). The quote declares that the most important relationship between a student and a teacher is the supportive relationship teachers have with their students. A variety of studies have found that supportive relations with teachers are related to greater academic achievement, higher levels of student engagement, fewer behavior problems, and more positive peer relations (Birch & Ladd, 1997; Hamre & Pianta, 2001; Skinner, Furrer, Marchand, & Kindermann, 2008).

Research has long recognized that the most important school-related factor in raising achievement for all students is the teacher. Some evidence even suggests a high-quality teacher can help decrease the achievement gap between low socioeconomic and wealthy students. Research conducted by (Goe & Stickler, 2008) agreed the teachers were important; however, there is very little consensus about what attributes in a teacher bring about high achievement for all students.

Factors such as teacher experience, education level, and readiness to teach are consistently related to student achievement. The literature on education illustrated some
consistent findings that teacher experience, teachers’ classroom test scores, and other measures of teacher knowledge that they bring to the classroom makes a difference in their teaching (Ferguson, 1991). The newest research in this area also supports the idea that the teacher’s knowledge of the subject matter contributes positively to the academic achievement of students (Hill, Rowan, & Loewenberg Ball, 2005).

Researchers have found that students in schools fostering student-teacher relationships perform higher in math and have a high graduation rate from high school. Positive student-teacher relationships foster students’ sense of belonging in a school, making the school climate warm and facilitating student academic success. Research by Vieno, Perkins, Smith, and Santinello (2007) suggested that when students are more involved in their educational experiences, including participating in school practices such as making classroom rules and organizing school events, the students feel more connected to their school. Most of the research on student-teacher relationships suggests the more opportunities the students have to make sure their voices are heard, the greater the likelihood for positive relationships, which in turn may lead to greater academic success.

A longitudinal study done by Clotfelter, Ladd, and Vidgor (2007) found that a teacher’s experience, test scores, and licensure effected student achievement in a positive manner, especially in math. In contrast to their study, Harris and Sass (2009) found it did not make any difference in student academics if teachers were National Board Certified. There is minimal research with regard to teacher-student relationships involving (a)
teachers' perceptions of students, (b) students' perceptions of teachers, and (c) the observable social interactions between teachers and students (Pianta, 1999). Researchers tend to emphasize and measure only one of these components in individual studies. For example, the majority of studies on teacher-student relationships have relied on teacher reports of support (Hamre & Pianta, 2001; Skinner et al., 2008) and some have included student perceptions of teacher support (Demaray & Malecki 2002; Dubow, Tisak, Causey, & Hryshko, 1991). One study included observations of actual supportive interactions in the classroom (Hamre & Pianta, 2005).

Hamre and Pianta’s (2005) study demonstrated that classrooms and teachers matter. The findings were that classrooms are more often not the greatest source of variations in what students learn and gain as a function of attending school. Work largely motivated by NCLB’s focus on highly qualified teachers and concerns related to classroom teacher and professional development. All stakeholders agree teachers need professional development. However, professional development typically occurs in the absence of a direct link to actual teaching. According to Hamre and Pianta, a system should be developed in which classroom observations provide a standard way of measuring and figuring out teachers’ strengths and weaknesses and then evaluating to see if professional development is actually helping to improve classroom interactions between teachers and students.

Altogether, positive relations between teacher reinforcement and student outcomes have been found across studies regardless of the operationalization of support;
however, some researchers have argued that students' perceptions of support may be better predictors of psychological adjustment and resiliency than actual levels of support (Murray et al., 2008).

Murray looked at the relationship between Kindergarten teachers and their students. The findings were that the teacher’s reports of relational support and conflict were more highly correlated with each other, for example, showing less independence compared to what the students reported. Students had different perceptions of teacher support and conflict than did teachers.

It may be difficult for teachers to provide support to children who require high levels of teacher correction. Conversely, children’s perceptions of relational support are less dependent on their perceptions of relational conflict. Children who perceive high levels of conflict in their relationships with teachers may also perceive the teacher as emotionally supportive and as liking the student. Because perceptions of the relationship reflect each individual’s mental representations of relationships, differences in how perceptions are organized are not unexpected.

Both the above studies were used to show how important relationships between teachers and students are. Also teachers have a different perception of the relationships, and they do things according to their perceptions in the classroom. Students, on the other hand, are very perceptive about their teachers and the relationship.
Effective Training for Teachers Who Work with Struggling Readers

Teaching students who struggle with reading is one of the greatest challenges a teacher faces in the classroom. And the problem does not reside in the children. Teaching must be designed to meet the needs of each child. Effective teaching can change the reader from struggling reader to a successful reader. Children who fall behind in the first years of school do not benefit fully from the classroom instruction (Pinnell & Fountas, 2008). The gap widens over the years for students falling behind as they experience confusion and failure. To close the achievement gap, schools must consider specific things: a) Good classroom teaching, b) Multiple layers of intervention, c) Short-term intensive tutoring, and d) Ongoing development of highly qualified teachers (Pinnell & Fountas, 2008).

Effective intervention places students in a position to engage in successful processing. According to the article, “When Readers Struggle: Teaching That Works,” the first step is to analyze students’ current reading competencies and place them in a level in which they can read successfully and comprehend with high accuracy with teacher support. It is teaching happening in the classroom that makes the critical difference in student progress (Pinnell & Fountas, 2008). Certain characteristics and structures need to be in place for the intervention teaching to be powerful for those students in the intervention.

Pinnell and Fountas described 15 keys to an effective intervention:
Provide supplementary lessons. Interventions need to supplement not supplant effective classroom instruction. Students who fall behind need something “extra” to make faster progress and catch up to their peers.

Provide frequent lessons. Readers who struggle need a predictable, consistent schedule of instruction. Students need daily supplemental instruction that will help them gain momentum. Teachers can reinforce and build on what was learned the day before.

Keep the teacher/student ratio low. According to Pinnell and Fountas (2008), when working with small groups, a one to three teacher/student ratio is ideal. Three students provide varied conversation and teachers are able to match their reading levels more closely and interact with individuals as needed.

Provide highly effective short-term services. If the intervention is early and effective, children will not need many years of intervention instruction. The layers of intervention should be flexible enough so teachers can group and regroup students or move from group to individual intervention.

Provide highly structured and systematic lessons. Effectiveness and efficiency depend on the careful design of the instructional frameworks in which all the participants know what to expect and what is expected of them. Teachers need to make sure to use a sequence of texts that build on each skill students have learned before moving to the next skill, for example, concepts, complexity, word difficulty, and other relevant skills. The lesson structure should include phonics principles, be built systematically, but also emphasize comprehension and a great deal of work with continuous text.
Provide fast-paced lessons. For many struggling readers, lessons involve “slowed down” work and great deal of boring drill teachers have students do over and over again thinking that is the best way to help students. A fast-paced lesson will engage learners and keep their attention focused on reading and writing.

Focus on comprehension strategies and vocabulary. Many times, for struggling readers, reading becomes a mechanical and tedious task because they are asked to read tests that are too hard. These students need supportive teaching to help them think about texts and talk about their thinking. These students also need some explicit vocabulary instruction to support their understanding of the content of increasingly challenging texts.

Combine reading and writing. Using writing in combination with reading is a highly effective way of supporting the growth of both reading and writing skills. Writing can help students extend their understanding of texts they read. During the process of writing, they learn much about letters, sounds, and how words work.

Make systematic use of phonics. Very often, struggling readers need to learn the building blocks of words – how words work. Phonics principles should be explicitly introduced and students given the opportunity for “hands-on” or kinesthetic practice and application. Students need to meet the same principles again and again and be prompted and reinforced as they apply them in reading and writing.

Develop fluency in reading and writing. Fluency must be an important goal of intervention lessons. Lessons should include explicit attention to elements of fluency such as phrasing, pausing, appropriate stress on words, and intonation.
Center instruction around high-quality texts. Texts should be matched to readers’ current abilities, but they must also engage learners. Too often, texts for struggling readers are inferior or just boring and unappealing. Readers who struggle need the same variety and quality as proficient readers.

Assess difficulties and monitor progress in valid and reliable ways. Teachers not only need initial and final assessments, but it is important to systematically and continuously monitor progress and keep practical records that inform day-to-day teaching. Assessment involving close observation and recording and analyzing reading behaviors will be most helpful.

Connect the intervention to the classroom. The more the intervention lessons are connected to the students’ work in the classroom, the more effective it will be. However, this does not mean reading the same books as expected in classroom instruction or helping the student complete assigned work that is too difficult. This means working closely with the classroom teacher, communicating about the child, and providing some work the student can do independently in the classroom.

Connect intervention instruction to students’ homes. Students need opportunities to share successes with their families at home to demonstrate their new learning with competence. Taking books home, and also some well-designed phonics work or writing about reading, will create a link between school and home and promote literacy in homes.

Include high quality professional development. Teaching makes the greatest difference, and this means supporting teachers to help them learn from their teaching. Professional
development should be centered on the problems of practice and offer very specific guidance for teacher decision making.

Two years ago, Golden Elementary School and the school District started to follow the above philosophy whereby all the elementary teachers were trained on how to teach reading in the classroom and to offer help to students via after school intervention. More information regarding the school’s program is in Chapter 3.

Research done by Baker (2006) looked at math tutoring done by University teacher educators. According to this study, whether gains in students achievements are moderate or profound, the key factors that need to be place are: a) preparation for mentors, b) long-term commitment, and c) specific goals for the after school math program.

The mentors in this study were tutors who were partially through their teacher training and were highly motivated to work with students. These tutors provided better quality experiences for children than tutors without such training. Also, these tutors communicated weekly with the child’s teacher so they were aware of the student’s gap in skills.

If tutors stayed with their assigned elementary student throughout the semester, they had a better relationship with the student. Students were observed to have a bond with their university tutors and vice versa. Students enjoyed the one-on-one tutoring instruction. According to the study, the majority of teachers reported an increase in
achievement, a positive attitude toward math, increased participation in math, and higher rates of student completing homework in a timely manner.

Baker’s (2006) research indicated program organization is vital. All the teachers in this study believe someone needs to be in charge of the program, for the organizational success was largely due to having someone in charge. This person’s job is to a) recruit and train tutors, check their qualifications, and assign tutors to specific schools; b) train and support supervising teachers; c) coordinate the calendar with university instructors; d) copy materials; e) write the year-end summary reports for the district; and f) act as a liaison between the district and the university.

In Baker’s (2006) study, in order to have a successful program, many things need to be in place such as a) an overall person in charge, b) having a 2:1 or child-tutor ratio, c) scheduling less-structured snack and game times, d) Getting tutors who are doing it as part of the university coursework, e) keeping the student with the same tutor, and f) having strong support from the district for the program.

**Access to Curriculum**

Another factor on which the researcher wanted to get more information was the curriculum used in public schools. Is the curriculum material helpful for all students? Do students do better in school when the school curriculum takes the students’ culture into account? Who is in charge of curriculum adoption and what is the process to adopt these materials?
As America’s public school population becomes more diverse, selecting culturally appropriate instructional materials becomes increasingly important. The U.S. population includes 28.4 million (or about 1 in 10) foreign-born residents (U.S. Census, 2000). Moreover, about 16% of the total population is Hispanic or Latino. Additionally, 6.8 million people reported belonging to more than one race (U.S. Census, 2010).

Enrollment in U.S. public schools reflects the country’s growing diversity. As a result, schools are increasingly challenged to understand and deliver an educational experience meeting the cultural needs of a diverse student body. Transforming curricula for an ethnically diverse society requires thoughtful deliberation on all aspects of school practice, including how schools influence student perception and responses within and outside school. Because of the growing diversity in public schools, educators must ensure curricula appeal to a diverse student population and determine whether a curriculum is taught with fidelity.

Many factors, including federal and state policy, public and private non-profit sectors, the role and ethics of the education workplace, parents/community engagement, and stakeholder accountability, must be considered in the discussion of the adoption of 21st-century curriculum. The public school curriculum is currently decided by the Instructional Materials Adoption Panel (IMAP), which makes a recommendation on whether to adopt or not. The IMAP consists of a wide variety of constituents, including college professors, parents, teachers, curriculum specialists, community representatives, business owners, and other stakeholders. Elected political leaders have the authority and
the final determination with regard to the nature and provision of public services. This leads to tension between the notions of public control of standards and the curriculum and professional control. “Narratives, policies, and programs that might be seen to serve public, collective goods are all too often in conflict with than narratives and policies that are seen to serve private/and or subgroup goods” (Connelly, He, & Phillon, 2008, p. 52). The interesting fact is that educators are supposed to follow rules and procedures; however, when elected government officials are in an election year, they will do whatever it takes to obtain the most votes regardless of what is right for education. The role of the public, private, and non-profit sectors is another place where political power comes into education, in deciding which values and history are chosen to be passed on to our students. There is always a debate over who can decide the appropriate knowledge in schools. The debate continues when the curriculum gets to the teachers and students who have their own interests based on their life histories; sometimes, the teachers do their own reinterpretation of the curriculum.

Currently, public schools teach students using the state standards, state adopted curriculum, and state assessments. However, the way the system is currently set up is not working for all students, especially minority students. At the present time, the curriculum is offered to students in textbooks with supplemental materials. The materials in the textbook are state-mandated, and in the United States, the book-adoption committees are powerful because they decide what books will be adopted and which ones will not.

Who has the right to decide what is to be taught, about whose knowledge is official, and about who has the right to decide what is to be taught, how it is
organized, and how teaching and learning are to be evaluated. (Apple, 2004, p. 25)

According to the reviewed literature, curriculum needs to be decided by committees experienced in classrooms, successful at coming up with curriculum drafts, and successful with getting public input on those drafts; these committees are more effective than politicians who have never stepped into the classroom. This could be very costly for school districts because they would have to release teachers to serve on these committees. However, in return, the districts would obtain a curriculum that works for all students who attend public school.

“Too much education policy and a good deal of contemporary research has lost sight of the important insight that education policy and curriculum studies need to be informed by a sensitivity to the nature of the wider society” (Whitty, 2004, p. 8). In the United States, diversity is needed in a curriculum for students who are different than the mainstream. Given the political climate in the United States regarding accountability for all students, this diversity seems unlikely since the emphasis is on assessment over instruction. At this time, the social and political environment is such that everyone is blaming each other for the achievement gap.

Curriculum is loaded with legal context and the 21st-century curriculum will be no different. The 1983 publication of a Nation at Risk recommended, “Schools, colleges, and universities offer more rigorous and measurable standards, and higher expectations for academic performance and student conduct” (U.S. Department of Education, 1983, p. 59). Ladson-Billings and Brown (2008) said the publication of A Nation at Risk
generated responses including attempts by governors and business leaders to influence state legislators to enact legislation and/or education policy that would lead to increased academic standards, more standardized assessment, and increased teacher accountability.

In the United States, we have no systematic work developed to fundamentally change the work the curriculum does in our schools. According to Banks (2004), schools never go beyond the contributions and additive approaches. Banks believes the value and significance of the body of work addresses the need for the curriculum to reflect the knowledge and perspectives of all of the constitutive groups of society. However, these types of efforts are seen as special pleadings with limited intellectual or scholarly value and the “diverse” and “multicultural” curricula has nothing to offer to the mainstream (Banks, 2004). More importantly, Banks echoed Woodson (2000) who asserted all curricula are cultural artifacts and many educators have a vested interest in promoting that culture.

Almost every student in the United States gets three formal exposures to the United States History curriculum. Most of this history is provided via textbook (Apple, 1988), and it tells the story of the United States being a White nation built by White people and civilized by White people. The Epstein (2000) study revealed that African American and White students in the same class take away very different understandings about the meaning and content of curriculum. According to Woodson (2000), the curriculum is simultaneously valorizing one group while destroying another. To fill the achievement gap plaguing our low socio-economic and minority students, afterschool
intervention and tutoring programs must be taught by high-quality educators invested in the development of student-driven curriculum.

**Theoretical Frames**

The remainder of the chapter examines the theoretical frameworks upon which this study was built: Universal Design for Learning Theory, Systems Theory, and Appreciative Inquiry Theory. In Chapter 5, these theories are used as a lens through which to examine the study’s following guiding questions:

1. To what extent does the afterschool intervention program in this study reflect the principles of Universal Design for Learning Theory, Systems Theory, and Appreciative Inquiry Theory?

2. Is there a significant difference in language arts and math performance for Benchmark assessments for academically underperforming fourth- and fifth-grade students who participate in an afterschool intervention program compared to those who do not?

3. Is there a change in the level of absenteeism among elementary students after participating in afterschool intervention programs?

4. Are previously underperforming students scoring grade level proficient in ELA and mathematics on standardized tests after participating in afterschool intervention programs?
Universal Design

The concept of Universal Design for Learning (UDL) is relatively new in education even though it has mature roots in other fields. The application of UDL in education is to create environments designed from the beginning to be open and accessible to all (Rose & Gravel, 2010). The key principles of UDL are a) Represent – different ways to represent essential core concepts, b) Engagement – how students participate in class, and c) Expression – how students are asked to demonstrate what they have learned.

Universal Design for Learning Theory framework guides education practices that provide flexibility in the ways the information is presented, in the ways students respond and demonstrate knowledge and skills, and in ways students are engaged. Educators are fostering expert learners with instructional environment: inflexible, “one size fits all” curricula. It is inflexible curricula raising unintentional barriers to learning. Learners “in the margins,” such as gifted and talented learners, second language students, and students with learning disabilities are all vulnerable. However, each average learner may not have his or her learning needs met due to poor curricular design.

In the learning environments such as the school systems, individual variability is the norm, not the exception. Currently, curricula are designed to meet the needs of an imaginary “average,” learner; they do not address the reality learner variability (Bowe, 2000). School systems fail to provide all individuals with fair and equal opportunities to
learn by excluding learners with different abilities, background, and motivations who do not meet the illusive criteria of “average.”

Universal Design for Learning or UDL can help school districts meet the needs of their diverse learners by removing barriers from the learning process. In a classroom, a teacher provides alternative ways that allow students to access and engage in learning by reducing the need for individualized accommodations. UDL helps address learner variability by suggesting flexible goals, methods, materials, and assessments that empower educators to meet these varying needs. Curricula created using UDL is designed from the beginning to meet the needs of every learner, making costly, time consuming, and after-the-fact changes unnecessary. This framework encourages beginning with creating flexibly designed curricula with customized options, which allows all learners to progress from where they are to where society would like them to be.

According to the Universal Design for Learning (UDL), the curriculum from the outset needs to be designed to accommodate the widest spectrum of users. Currently, public schools have diverse populations attending schools; however, the curriculum adopted is still meeting the needs of an imaginary “average,” learner and they do not address the reality learner variability (Bowe, 2000). The first thing educators need to do is be deliberate in choosing curriculum matching their school population.

The second item that needs to take place in schools, according to the UDL, is when the teaching and learning process takes place in the classroom, the educators in the room need to know about their student’s learning profiles by interest. Likewise, students
with learning challenges will be given special assistance. Thus, the school is able to meet the needs of all students.

The researcher of this study practiced pieces of UDL at Gold Elementary School where each child’s learning profile is created at the beginning of the school. After the initial assessment and the CST test results, the students are placed in groups. If the student is a high achiever, the student is placed in a learning group with a teacher trained in the gifted and Talented Program to teach these students. The middle group is taught by teachers trained to differentiate curriculum for their group. The most challenging group academically is placed with a teacher who is strong academically and also specifically trained to work with low-achieving students. If this does not work for these students, they are referred to the afterschool intervention programs where they work in small groups with a credentialed teacher.

The concept of UDL is very new in education; however, the districts can put certain things in place starting in Kindergarten, so from the beginning, the environment is set up so all students have access. For the diverse students, it is removing all barriers from the learning process. Also, if a teacher is able to provide alternative ways allowing access and engagement for the student in the learning process, it reduces the need for Special Education for students.

Presently, the way the school systems are set up, they fail to provide all individuals with fair and equal opportunities to learn. If a student does not meet the imagined criteria of “average,” then something is wrong with the student rather than the
system. If UDL is adopted by the school districts, it would allow all learners to progress from where they are to where they need to be per each grade level.

**Appreciative Inquiry**

Another framework that will be used in this research is the Appreciative Inquiry, which focuses on the value teachers places on their students. Instead of focusing on what is not working for the student, teachers start valuing what is working well while moving the group into a positive direction. This approach is very student-centered; however, our education system is currently set up very adult-centered in which teachers believe they, as experts, know what is best for students.

APPRECIATE: Valuing and recognizing the best in people and the world around us. INQUIRY: Exploring and discovering new potentials and possibilities. The DISCOVERY stage is an understanding of the "what is and what has been." This forms an appreciation and value for the topic one is studying and helps create a conversation about what is working well while moving the group into a positive interaction. The DREAM stage involves identifying "what might be," as well as possibilities for improvement or potential outcomes. The DESIGN stage engages individual contributions to identify "what should be." Individuals create possibilities or suggest positive changes to be implemented. Finally, the DESTINY stage continues ongoing learning and innovation of "what will be." At the center of appreciative inquiry is the POSITIVE CORE or positive question. This four-phase cycle begins with a positive question, critical to the outcomes of the classroom. It creates hope and momentum around a
meaningful purpose. The 4-D cycle provides a framework for continual learning and cycles back to the beginning of the process to discover what is working best.

This process celebrates and even seeks out the students’ own positive experiences and successes. Students are capable and educators as leaders can encourage them to be successful as the focus is on bringing their experiences to class. This entire process must be guided by the belief that all students bring their own varied roles to work, classes, organizations, relationships, and teams. This means the concepts and insights are more personally meaningful because they are based on personal experiences and are, therefore, easily relatable for the students (Yballe & O'Connor, 2000).

By building this positive and inquisitive environment, a rapport begins to develop that encourages trust and safety between teachers and students. This process may provide students with an opportunity to learn in a new and exciting way. Appreciative Inquiry is a tool all teachers should have in their toolbox in the future. It is a student-centered approach that increases interpersonal and team-building skills, as well as higher order thinking skills. Students become responsible for their own learning, while the teacher has interested, invested students.

In education, Appreciate Inquiry work is about helping students find and build on their unique abilities and aptitudes by providing positive, supportive feedback with a focus on capabilities and possibilities. Focusing on an individual’s abilities enables that person to move ahead in a positive manner. True Appreciative Inquiry employs narrative discourse around good experiences from which to solicit data.
Thus, positive stories and anecdotes about best learning practices are the order of the day when implementing appreciative assessment principles in the classroom. When this practice is applied to teaching, educators feel upbeat about the power of their work to effect positive change. This feeling, in turn, reaffirms their commitment to the profession. When it is applied to learning, students feel good about their focusing on the positive. AI empowers people and can create lasting change. The last thing a student learner needs is empty praise, but a heartfelt compliment can touch even the toughest student. Appreciative Inquiry reaffirms the power of relationships to motivate, inspire, and ignite passion for learning.

It facilitates authentic dialogue between teacher and learner, thus engaging the student, strengthening the learning experience, and perhaps illuminating otherwise overlooked aptitudes. Teachers can readily implement appreciative assessment in classrooms because it is a student-centered approach to teaching, learning, and developing human potential. (Cooperrider, 2001, p. 12)

This theory works in the afterschool intervention program because when teachers are at a 10:1 ratio in the afterschool program, they get to know their students. Once they understand where the student is coming from, the relationship tends to work in a positive manner. Appreciative Inquiry is a tool all teachers need in their toolbox to increase interpersonal and team-building skills, as well as higher order thinking skills.

In Elementary school, Appreciative Inquiry would be about helping students build on their unique abilities and aptitudes by providing positive and supportive feedback with a focus on what the students are capable of now and the possibilities of what they can
become. Teachers can implement this theory into their classrooms because it is a very student-centered approach to teaching, learning, and developing human potential.

**Systems Theory**

Bronfenbrenner (1979) discussed the term “the ecology of human development” as it pertains to Systems Theory. He described it as the scientific study of a growing person (student) and the relationship between the student and the changing properties of the setting in which the student lives, as well as “the larger context in which the settings are embedded” (p. 21). Changes to the setting and relations between settings impact the growing student. Layers of relationships exist within, and impact, students’ daily lives. Bronfenbrenner (1979) imagined these layers as “a nested arrangement of concentric structures” each within another – like nesting dolls (p. 32).

The first layer, the microsystem, is the setting in which the student has “activities, roles and interpersonal relationships” (Bronfenbrenner, 1979, p. 18) with significant people such as parents, friends, and teachers. The student lives, works, plays, and develops within this layer. For a student in an afterschool program, the school day classroom and the afterschool classroom, as well as the relationships with the teachers and students, would lie within the microsystem.

Cross-relationships exist within microsystems, and they create a second layer. The student’s significant people formally or informally communicate with each other, as in when the student’s afterschool program teacher speaks with parents or with the school
day teacher. These cross-relationships are called the mesosystem (Bronfenbrenner, 1979, p. 25).

The third layer is the exosystem (Bronfenbrenner, 1979, p. 25) and contains those settings affecting the student, but in which the student is not directly involved. This group could include the student’s parents’ employers, local school board, student’s healthcare providers, or central school administrators. Such people make decisions directly affecting the student.

The fourth layer is the macrosystem and includes important conditions determined by the culture that dominates the student’s life. For example, a student can go to the post office and it will generally look like and function as a post office. However, a post office in another country may not look or function as the student expects. Other examples include churches, classrooms, and parks.

Bronfenbrenner’s (1979) ecological systems theory fits with this study because it provides an opportunity to view the achievement of students in the afterschool program compared to those who are not in the program. When one considers movement through the ecological layers as areas of potential developmental change, decisions may be made more deliberately and thoughtfully. Bronfenbrenner’s Layers of Relationships for a Student in an After School Setting: Draw a circle with student in the Center. Each microsystem will be in circles radiating out from the student – surrounded by a triangle. Microsystems: School, Afterschool, Home/Family, Friends, Church. Some of the Microsystems are connected and those are called Mesosystems. Draw a set of circles
outside the Microsystems and they are the Exosystems. Exosystems include State Government, Federal Government, Local Government, Medical System, Extended Family, Media, Parents’ employers. Exosystems are contained within a square. The Macrosystem surrounds all of this and includes: Culture. It is within a circle. Citation after Figure: Inspired by (Leonard, 2011, p. 991).

Another way Systems Theory applies to the Afterschool Intervention research project is because for the intervention to be successful, the teachers need to have systems in place. It starts with the first system of trying to figure out who qualifies for the afterschool program using the STAR and first benchmark results. Secondly, teachers invite students who qualify for the program by sending letters home to the parents. Third, teachers are trained on how to diagnose the problem and how to help students in their training by the Literacy Coach. Teachers are given the goals of the afterschool program, what they need to teach in the intervention, and what paperwork they need to fill out for student learning improvement to be seen. Teachers need to make sure they are prepared with their lessons to ensure students are getting the lesson for the day that they need to learn the concepts.

The Systems Theory applies to the afterschool intervention program because for the interventions to be successful, everything needs to happen in an organized manner. The staff at Gold Elementary has to know what and where students are lacking in their education. Also, how will those gaps be filled by staff? Is the staff using the intervention curriculum provided by the program currently used in school is it using the teacher-made
curriculum to fill in the gaps in the curriculum? Who will provide the training for teachers interested in teaching the intervention? Teacher training needs to happen before the students are invited to attend the afterschool intervention. If the teachers are not prepared to teach what they need to teach to get the students moving in the right direction, then it is no use doing an afterschool intervention. Once the students are ready to attend, what does the intervention program look like in terms of the one hour students are there?

If all the above things do not happen in an organized way, the system does not work. It is not possible to act on one part of the organization without affecting all of its other parts. Systems theory also suggests the external environment partly determines the types of internal structures that organization develops, in turn, shaping individual and group behaviors (Blau, 1973; Parsons & Shils, 1951).

**Conclusion**

This study focused on the afterschool intervention program. This chapter reviewed seminal works on afterschool intervention. The literature maintained that afterschool intervention works for students when provided in a systematic way. The history of different programs that have been put in place from the beginning of time to offer assistance to low socioeconomic and diverse students does help. When examined through the lens of UDL, Appreciative Inquiry, and Systems theory, it is clear the United States is behind in our education system in such that not every student has the same access to education.
Chapter 3

METHODOLOGY

Introduction

The study used a mixed-methods approach to broaden the study’s scope utilizing both quantitative and qualitative data. Quantitative data were collected using a comparative design of the CST and Benchmark Assessment scores. Qualitative data were collected from the afterschool intervention program by observation of teachers teaching small groups. The following topics are discussed in this chapter: Research Design, Research Questions, Setting and Sample, Instrumentation and Materials, Data Collection and Analysis, and Protection of Participants.

Research Design

Quantitative comparative analysis is appropriate for this study as benchmark data and CST data were used to determine whether there was a significant difference in English language arts and math scores between students who attended an afterschool program and those who did not. There was no random selection process as is typical of most comparative design studies. CST data were also used to determine whether there was a significant difference in a student’s overall English language arts and math scores when he or she attended an afterschool intervention program over a two-year period. This study used intervention curricula in ELA and math that went with the adopted curriculum for the district. Effects of maturation were not a major concern in this research, as data were compared over a one-year period.
Research Questions

Four questions guided this study:

*Research Question 1:* To what extent does the after-school intervention program in this study reflect the principles of Universal Design for Learning Theory, Systems Theory, and Appreciative Inquiry Theory?

*Research Question 2:* Is there a significant difference in language arts and math performance among academically underperforming third-, fourth- and fifth-grade students who participate in an after-school intervention program compared to those who do not? Using benchmark test results in English language arts and math, an Independent Samples t-Test will compare two groups: those in the after-school program and those who are not in it.

*Research Question 3:* Is there a change in the level of absenteeism among elementary students after participating in after-school intervention programs?

*Research Question 4:* Are previously underperforming students scoring grade-level proficient in reading and mathematics on standardized tests after participating in after-school intervention programs? An Independent-samples t-Test compared two groups: those who were in the after-school program for two years and those who were not (using CST test results in English language arts and math).

Setting and Sample

The setting for this project was Gold Elementary School (Pseudonym), located in a small school district in Northern California. Nearly 500 students attended this
elementary school, and the population breakdown was approximately 26.40% Hispanics, 3.50% Asians, 3.50% African Americans, 0.70% American Indians, 1.80% Filipinos, 1.10% Pacific Islanders, 45.4% Caucasians, and 8.40% two or more races. The English Learner population was approximately 9.5%.

The researcher had been the principal at Gold Elementary for the last five years. There were 27 teachers at this school, all of whom were Caucasian except one. The school had a Learning Center for students who had Individual Education Plans and one classroom housed an autism class with six students. When the researcher was hired six years ago, the California Standards Test API for the school was 767; during the 2011-12 school year, the API was 888.

Two years ago, Golden Elementary School and the school District started to follow the Pinnell and Fountas (2008) philosophy whereby all the elementary teachers were trained on how to teach reading in the classroom and to offer help to students via afterschool intervention. At the elementary school sites, English language arts is leveled with the students’ beginning-of-the-year assessment and STAR testing. Students are reevaluated every six to eight weeks on their reading. In the lower grades, students are given fluency and comprehension checks every six weeks. In Kindergarten and first grade, teachers work with small groups for one hour every day; teachers work with groups of two to three students on whatever skills the students lack.

Teachers who teach afterschool interventions in English language arts are trained to deal with students who find literacy learning difficult. The curriculum used during the
day is the state-adopted curriculum, and all students work on it during the days. However, students in the afterschool program are front loaded with the next day’s lesson with differentiated instruction in the afterschool program so they are ready to do the work with their peers in class. The afterschool teachers follow the same schedule everyday so the students walk in knowing what they have to do first and the last thing before they walk out of the classroom.

Small groups are conducted in the afterschool intervention program when students have been introduced to a concept and are having difficulties with that concept. No more than 10 students are allowed in the afterschool intervention at Golden Elementary school so they can be put into small groups during the one hour of intervention. Lessons are fast-paced and at the interest level of the student.

The afterschool intervention teachers do assessments frequently and systematically. Students having difficulty with concepts are put into smaller groups to help them learn the concepts. The difficult concepts for the students are also discussed and communicated to all the teachers at the grade-level meeting so they can be addressed in the classroom for all students. If a student is doing well on assessments in the afterschool intervention, he or she is allowed to leave the afterschool intervention and then be monitored in their regular class for the next six to eight weeks.

The article by Pinnell and Fountas (2008) recommended students in the intervention be provided with highly structured and systematic lessons. The state reading program adopted by Golden Elementary school does that already with the lessons in
which teachers start with phonics, phonemic awareness, comprehension, and vocabulary. When this reading program was adopted, the district provided a three-day training for all teachers to show them how to teach reading and build reading skills using the program. Another strategy used with this reading program is that the writing is part of the program. The staff noticed the writing piece in the adopted program was weak, so during the 2012-13 school year, second- and fifth-grade teachers were trained on the Six Traits of Writing so reading and writing can work together. The trainer trained the teachers for one whole day. The following week, the trainer came to observe the teachers teaching the lesson and the lesson was team taught in which the teacher and trainer taught the lesson together. The trainer also helped teachers put a six-week writing plan together for each grade level so all the students were learning the same thing at the same time. If a teacher was having a problem teaching a lesson, he or she could watch a peer teacher teach the lesson then go back to class to teach the same lesson.

Students in the afterschool intervention program took home books to share and read with their families. Any worksheets or other work they completed in school are shared with the families. In the lower grades, students have book bags in which students take books they already know how to read home and share them with their families.

In the three afterschool math classes, two of the teachers are trained extensively in math and just have a passion for the subject. The third teacher is a special education teacher at Golden Elementary school and brings many new skills from special education to regular education. Math adoption was three years ago and, at that time, the teachers
were all trained on how to use their materials for five days in the summer with three follow-up days during the year. Three teachers teaching the math intervention have had all the training plus some through the University of Davis. Math is taught in small and large groups in the afterschool intervention class. All the above systems are in place to help all the students at Golden Elementary students be successful in school in today’s world. If they are prepared well in elementary school by their education, these students should do well in middle and high school.

Students who participated in this study were third, fourth, and fifth graders, ages 8-11. Ten students each were chosen from third, fourth, and fifth grades to participate in the English language arts intervention program and 10 were chosen from each grade for math. Group 1 consisted of students performing below grade level in mathematics and/or language arts according to STAR testing and beginning-of-the-year assessments. The second comparison group will consisted of students also performing below grade level in mathematics and/or language arts who were invited to attend the afterschool intervention program but did not attend (N= total number of participants).

Students that attended the afterschool intervention selected themselves to be in the program. This could bias the study because students who selected themselves have parents who want their students to do well so they signed up for the program quickly as compared to parents who are busy and did not really understand the afterschool system. Another reason some minorities students did not participate in the program is parents
were not able to pick up their students after school due to their work schedules or they needed the older children home to take care of the younger siblings after school.

**Instrumentation and Materials**

All students were given beginning-of-the-year assessments in math and English language arts. Their progress was monitored through benchmark assessments in math and English language arts. These assessments were given every six to eight weeks for the remainder of the year. The beginning-of-the-year assessment was given to every student at the start of the school year to determine where the student was academically. The student scores were tracked throughout the year in the district data system. During the year, the data from the benchmark assessments were collected to see if the interventions helped enrolled students. The benchmark assessment was given to every student by the classroom teacher every six to eight weeks to drive future instruction. During the academic conferences at the school (data conversations), all the students’ scores were discussed. Additionally, CST test data results were used to track repeat students and trends in growth, if applicable; this data may encourage families with underperforming students to agree to participate in the afterschool intervention if previous invitations to participate have been declined.

**Data Collection and Analysis**

Methodology for data analysis included two Independent Samples t-Tests. These tests were used to evaluate differences for between-group comparisons (Question 2). An Independent Samples t-Test was used to evaluate group difference (Question 4). With
regard to Question 2, two Independent Samples t-Tests were performed. The factor (participation in an afterschool intervention program) divided the case into two levels, while the dependent variable described the case quantitatively on English language arts and math achievement. With regard to Question 4, an Independent Samples t-Test was used to evaluate within-group significance of the afterschool program over two years.

The data were presented according to grade level and afterschool intervention program status (participates or does not participate), in the form of SPSS output, including charts and narratives. The use of CST data increased the validity of the results, as CST data are a reliable source. The test variable is normally distributed in each of the two populations. With a moderate or larger sample size, the independent samples t- test may yield a reasonably accurate p value. The second part of the data analysis was afterschool classroom observations. The researcher conducted 12 observations in the classroom. Question 1: “To what extent does the afterschool intervention program in this study reflect the principles of Universal Design for Learning Theory, Systems Theory, and Appreciative Inquiry Theory” was answered using the classroom observation data.

An Observation Checklist was created using behaviors of Elements of Universal Design Theory and Appreciative Inquiry Theory Pertaining to Teaching, Student Engagement, and Assessment (see Table 1). This checklist was used during classroom observation in the afterschool program.
Table 1

Observation Checklist

<table>
<thead>
<tr>
<th>Element Number</th>
<th>Element</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Represent: Are students provided with a variety of different ways to represent essential core concepts?</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Engagement: Are students invited and encouraged to participate in class?</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Expression: Are students able to demonstrate what they have learned in a variety of ways?</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Discovery stage: Does the staff work to develop an understanding of the &quot;what is and what has been&quot; that forms an appreciation and value for the topic of study?</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Is the student group encouraged to generate information about the topic and converse about their understanding?</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Is the student group encouraged to discuss what is working well in the learning process?</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Is learning started with a positive interaction?</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>The Dream stage: Are learners encouraged to focus on areas for potential improvement and new learning outcomes? (Think and discuss)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>The Design stage: Are students encouraged to create possibilities or to suggest positive changes to be implemented? (Do/create)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>The Destiny stage: Are students provided a voice in &quot;what will be&quot; in their ongoing learning? Can they help to guide the path their learning is taking? (Current and future)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Do staff members seek out and focus on student strengths and accomplishments?</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Is an environment of mutual trust and safety between regular day teachers, after school instructional staff, and students apparent?</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Are team building skills taught and encouraged?</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Are higher order thinking skills taught and encouraged?</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Are students taught to be responsible for their own learning?</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Are non-competitive games and physical activities encouraged?</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Is it apparent that staff members are caring and supportive of students?</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Do staff members convey positive expectations for students?</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Are ongoing opportunities for participation provided?</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Is it apparent that staff members feel schoolwork is important, and that they expect students to do their work?</td>
<td></td>
</tr>
</tbody>
</table>
Role of the Researcher

The researcher conducting this study is the current principal at Gold Elementary school. The researcher had been in this position for five years. The researcher is an East Indian female who has worked in education for the last 22 years. She holds a bachelor’s degree in education and a master’s degree in education leadership. To alleviate a potential conflict of interest, the researcher has established a degree of separation between the student scores by having the literacy coach pull the data from Illuminate (the data program). Since the researcher worked with archival data, there were no biases.

Protection of Participants

All data collection took place with the permission of the district superintendent. The school name is used; instead a pseudonym, Gold Elementary School, is used. The researcher retrieved the archival records using only ID numbers, not student names. ID numbers must be used to complete the Paired Samples t-tests, which matched individual student CST scores (in ELA and math). Also, as the principal at this site, the researcher had the district literacy coach acquire the data off the website for the benchmark assessment going on throughout the year. No names or ID numbers were used in reporting the information, and the numbers were not shared. The data were kept in a secure place and the only person having access to this data was the researcher. Once this project is completed, the data will be destroyed in an appropriate manner.
Chapter 4

ANALYSIS OF THE DATA

This study used a mixed-methods design with both quantitative and qualitative research techniques. Quantitative analyses methods were used for the first phase of the study, and a qualitative research approach was used during the second phase of the study.

The quantitative data address Research Question 2: “Is there a significant difference in language arts and math performance as measured by the Benchmark Assessments for academically underperforming third-, fourth-, and fifth-grade students who participate in an afterschool intervention program compared to those who do not? Research Question 3: “Is there a change in the level of absenteeism among elementary students after participating in afterschool intervention programs?” Research Question 4: “Are previously underperforming students scoring grade level proficient in ELA and mathematics on standardized tests after participating in afterschool intervention programs?” The researcher used three Independent t-Tests to answer questions 2 and 4 and question 3 was answered using district attendance data.

The second section presents the qualitative data using classroom observations and question 1 was answered using the collected information. Research Question 1 is “To what extent does the afterschool intervention program in this study reflect the principles of Universal Design for Learning Theory, Systems Theory, and Appreciative Inquiry Theory?” Qualitative data were collected through 12 classroom observations of the
afterschool program and highlight strategies used in the program correlating with the frameworks.

**Descriptive Demographics**

Students who participated in this study were third-, fourth-, and fifth-graders, ages 9-12. For the first two weeks of school in August 2012 at Golden Elementary, all students from first to fifth grades were assessed in English language arts and math. Additionally, the students’ STAR scores from the previous year are analyzed for trends to figure out where students were successful and where they were not successful on the STAR and the benchmark assessments.

Every Monday was an early release day for students so teachers could plan together for the following week. At the start of the school year, considerable time was vested in dissecting the results of beginning-of-the-year benchmark assessments and the STAR results. This was also the time when teachers made a list of students who were invited to attend an afterschool intervention program. A letter was sent home to the parents letting them know in which skills their child was deficient and that by attending an afterschool intervention three days a week, they can get extra help to fill in those learning gaps.

Teachers selected to teach in the afterschool program were chosen because they had the following characteristics: a) always prepared with lesson plans to help fill in student gaps in the afterschool intervention, b) connection – all six teachers were connected to their students – they knew their interests and how to motivate them. The
students knew when it was time for fun and when it was time for work, c) these teachers gave immediate feedback to students at the end of the hour, d) afterschool teachers communicated with students’ regular teachers to see what the student were able to accomplish in the classroom, and e) classroom environment is inviting where students want to go in and learn. Teachers have high expectations of all their students but students know when it is time to get to work and when they can have fun.

Students invited to the afterschool program were students not proficient on the STAR testing; they had a score of less than 350 on the test. The second measure was the beginning-of-the-year assessment in English language arts and math. If students scored less than 60% out of 100% on either test, they were invited to attend the afterschool intervention for that subject. If a student needed extra help in both English language arts and math, the decision was made to have the student participate in English language arts. Staff at Golden Elementary believe if a student can learn to read first, they would have more confidence in math.

The researcher used convenience sampling to invite 20 low-performing students to attend the afterschool intervention program in ELA or math from each grade level. The students selected themselves into groups by either bringing the permission slip to attend the intervention back or not. Ten students who brought their permission slips back first were chosen to participate from third grade, 10 from fourth grade, and 10 from fifth-grade classes to participate in the English language arts intervention program. Thirty students participated in Group 1, which consisted of students performing below grade
level in language arts according to STAR testing and beginning-of-the-year assessments. The 30 students participated in the afterschool intervention program for English language arts were matched for grade level and ability level. The non-intervention group consisted of 30 students (10 from each grade level) who were also performing below grade level in language arts and who were invited to attend the afterschool intervention program but chose not to attend.

In math, out of the four third-grade classes, 20 students were invited to attend the afterschool intervention program; however, only 10 students chose to attend. In fourth and fifth grades, again 20 students were invited from each grade level and the first 10 who returned their permission slips were accepted into the afterschool math program. The non-intervention group included 30 students who either brought in their slips too late or the parents chose for their son or daughter to not participate in the afterschool intervention. Students either participated in the English language arts afterschool intervention three days a week or in the math group. Students attending the English language arts are different students compared to the math group students.

Data were collected from the database of Gold Elementary School. The data collected for English language arts provided the beginning-of-the-year assessment, and the two benchmark assessments students had taken up to the collection point. The database also provided scores for beginning-of-the-year assessment for math and one benchmark assessment given to the students to cover the materials they had learned up to December 2012.
Results of the Research

Question Two

Is there a significant difference in language arts and math performance among academically underperforming third-, fourth-, and fifth-grade students who participate in an afterschool intervention program compared to those who do not? Using the district benchmark test results in English language arts and math, an Independent Samples t-Test was performed for both.

An Independent Samples t-Test was conducted to compare students who received an English language arts intervention after school compared to students who did not. There was a significant difference in scores for students who attended the intervention (M=68.16; SD=8.97) and students who did not (M=56.16; SD=15.86; t (df)= -3.60; p=.001 [two tailed], = -12.00%; CI: -18.69 to -5.33). Based on this value, the effect for students who attended the intervention is moderate to large (Eta squared =.182). The mean difference for students who attended the afterschool intervention (M= 68.16) compared to those who did not (M=56.16) was obtained by subtracting Group 2 (56.16) from Group 1 (68.16). The positive t value indicates the average scores for students in the intervention group are significantly higher (12.0) compared to students who did not attend the intervention. Eta squared represents the amount of effect the afterschool intervention had on the students’ scores. Effect size (Cohen) describes the strength of the correlation: .01 = low; .06 = medium; and .14 = high. Sig of p<.05 states there is a 95% Confidence Interval (CI) that we are sure the significance is not due to chance.
Table 2

*Means Table*

<table>
<thead>
<tr>
<th>Intervention Status</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA End (.00)</td>
<td>30</td>
<td>56.167</td>
<td>15.86600</td>
<td>2.89672</td>
</tr>
<tr>
<td>ELA Beginning (.01)</td>
<td>30</td>
<td>68.167</td>
<td>8.97538</td>
<td>1.63867</td>
</tr>
</tbody>
</table>

Students who attended the afterschool intervention for ELA (M= 68.16) compared to those who did not (M=56.16) was obtained by subtracting Group 2 (56.16) from group 1 (68.16). The results of the independent-samples t-test showed a moderate to large effect for students who received afterschool intervention in English language arts.

*Figure 3. ELA data for afterschool intervention.*
Students who attended the afterschool intervention for three days in ELA scored better on the benchmark assessments compared to students who did not attend the afterschool intervention program. The researcher used convenience sampling to allow participants who returned their forms and wanted to participate in the intervention be able to participate compared to those who did no turn in their forms.

A second Independent Samples t-test was conducted to compare students who received math intervention after school compared to students who did not. Again, there was a significant difference for students who received intervention in math (M=69.53; SD=13.06) compared to students who did not (M=59.80; SD=13.44; t(df) -2.84 p=.006 [two tailed]) (mean differences = -9.733%; CI: = -16.58 to --2.88 large effect Eta squared = .122). The results of the independent-samples t-test shows a large effect for students who received afterschool intervention in math compared to students who were not part of the afterschool intervention Programs.

Table 3

<table>
<thead>
<tr>
<th>Intervention status</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math Scores (no Intervention)</td>
<td>30</td>
<td>59.800</td>
<td>13.44311</td>
<td>2.45437</td>
</tr>
<tr>
<td>Math Scores Intervention</td>
<td>30</td>
<td>69.533</td>
<td>13.06412</td>
<td>2.38517</td>
</tr>
</tbody>
</table>
Students who attended the afterschool intervention for three days did significantly better on the benchmark assessments compared to students who did not attend the intervention.

**Question Three**

“Is there a change in the level of absenteeism among elementary students after participating in afterschool intervention programs?” Attendance records were examined using the AERIES system from September 2012 to December 2012 for students attending the afterschool intervention program. Sixty students were attending either the ELA or math intervention afterschool program. On the average, approximately four students
were absent from school on any given day. If these students were absent from school, they did not attend the afterschool intervention program.

After analyzing the attendance data at Golden Elementary School for students who attended the intervention program compared to before the intervention started for these students, there was no correlation with the afterschool program. If students were absent during the day, the students attending the afterschool intervention did not come back to attend the intervention class. On any given day, four students out of the 60 who had signed up to attend the afterschool program in all three grade levels were absent. Absent students had excused absences, which meant the student was sick or had a medical appointment on the day of absence.

**Question Four**

“Are previously underperforming students scoring grade-level proficient in ELA and mathematics on standardized tests after participating in afterschool intervention programs?” Thirty students who had previously attended an afterschool intervention in ELA or math had a significant difference on their STAR test after attending an afterschool intervention program for one school year. Each student moved up one level on the STAR testing. For example, if a student was in the basic range on the STAR test with scores between 275 to 349 after the intervention, these students scored 5-15 points higher on the next year’s STAR testing putting these students in the proficient range overall.
Table 4

*STAR Math Test Scores Before and After Intervention*

<table>
<thead>
<tr>
<th>Sum</th>
<th>Math Sum Before Intervention</th>
<th>Math Sum After Intervention</th>
<th>Point Difference in Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sum</td>
<td>9829</td>
<td>10,134</td>
<td>305</td>
</tr>
</tbody>
</table>

The sum of the average difference mean of the math score before they attended the afterschool intervention. The second sum is after students attended the intervention for a full year and then took the test.

*Figure 5.* Math star scores before and after the intervention.

The above graph represents math scores before the intervention in green and blue represents after the intervention. The blue represent that students were matched ability wise and shows less variance between the bell curve. What is equally interesting is that
the intervention group was more homogenous in the afterschool intervention. An Independent Samples t-Test was conducted on students who had participated in the math afterschool intervention during the 2010-2011 school year. The researcher studied students’ STAR test scores for 2011-2012 after students participated in the math intervention for a year. There was a significant difference between scores for students who attended the intervention (M=352.6; SD=31.44) and students who did not (M=322.3; SD=22.2; t(df) = -4.31 p=.000 [two tailed]). The magnitude of the difference in the mean scores for students who attended intervention was higher compared to students who did not (mean difference = -30.33; CI:-44.44 to -16.25). Based on this value, the effect is large (Eta squared=.242). Students who attended the afterschool intervention for the whole year were more successful at STAR testing during the 2012-2013 school year.

*Figure 6. STAR math scores.*
Test results after one academic year of afterschool intervention showed that many students significantly improved their STAR math test scores into the proficient range compared with students of similar abilities who chose not to be in the afterschool program. On average, the students improved at least one level in math, according to the results from the state of California. Students who were basic on the test moved up to the proficient range, and students who were below basic moved to the basic range.

Figure 7 shows the ELA scores using a Bell Curve illustrating that students in the intervention group were better matched ability-wise so the diagram shows less variance between the points. These students did self-select to be in the program and they were grade level and unintentionally ability matched in ELA.

*Figure 7. STAR ELA scores before and after the intervention.*
The researcher examined STAR test scores for 2011-12 after the students had participated in the intervention program one year before. An Independent Samples t-Test was conducted on students who had participated in the ELA afterschool intervention program during the 2010-11 school year. There was a significant difference between scores for students who attended the intervention in English language arts (M=344.5; SD=41.30) and those of students who did not (M=319.4; SD=32.89; t(df)= 2.68 p= .009 [two tailed]). The magnitude of the difference in the mean scores was higher when these students attended the afterschool intervention class (mean difference = 25.06 CI: 6.40 to -43.72). Based on this value, the effect is large for students who attended a full year of afterschool intervention in the ELA program during the 2010-11 school year (Eta squared =.103).

![Figure 8. STAR ELA scores.](image-url)
Qualitative Data Collection

The researcher used a qualitative research approach to address the classroom observations in the afterschool program. The classroom observations were done to augment the quantitative research on the CST and the benchmark data and also to answer Research Question 1: “To what extent does the afterschool intervention program in this study reflect the principles of Universal Design for Learning Theory, Systems Theory, and Appreciative Inquiry Theory?” The researcher was likewise trying to gain rich description of the day-to-day goings-on in the afterschool program.

The afterschool program for third-, fourth-, and fifth-grade students went from 2:45 to 3:45 three days a week. Students were either in the English language arts intervention or in the math. Six certificated teachers taught these classes and three out of the six were extensively trained in English language arts. No more than 10 students were in each of the classes. Students were expected to stay for the full hour in either one of the interventions. The researcher observed six different classrooms and watched 12 different lessons in English language arts and math in all afterschool classrooms. During the classroom observations, an observation sheet was used to observe. A checklist was used to record behaviors to help determine which elements of UDL and AI were used by the Golden Elementary School staff. The observation checklist demonstrates multiple occurrences of behavior.
Qualitative Data Analysis

Creswell (2009) and Merriam (2009) wrote the purpose of qualitative data analysis is to make meaning of the data and both authors described similar steps to analyzing qualitative data. Merriam, in *Qualitative Research: A Guide to Design and Implementation* (2009), permitted the use of categories, concepts, and hypotheses or themes to form links between and among the categories and properties of the data (p. 199). The researcher read through all data and made notes in the margins looking for segments of data until categories emerged and formed. The researcher then looked at properties of the categories that emerged and formed. The researcher then looked for properties of the categories, the “concepts that define a category” (p. 200). “Comparisons are constantly made within and between levels of conceptualization until a theory can be formulated” (p. 200). The theory formed is referred to as “substantive theory” because the theory applies “to a specific aspect of practice” (p. 200). The first phase of this process is to analyze the frequency of observed incidents to find categories.

**Frequency data.** The observational data was analyzed and counted for frequency of observed incidents. Table 1 shows the number of observed incidents related to the observation checklists used in this study.

**Categories of data.** After counting the frequency of observed instances on the Observation Checklists, the researcher’s next step was to pick out categories of data, based on the frequency of occurrence during the observations. The following five categories emerged:
1. Teachers have high expectations of their students academically and of themselves.
2. Teachers convey positive expectations and relationships for students.
3. Students are responsible and empowered for their own learning.
4. Curriculum is modified to meet the students’ individual needs.
5. Learning environment set up for students to succeed and learn new materials.

**Properties of categories.** The researcher looked for the properties of the categories and compared the properties until a theory could be formed. The categories are listed below, along with properties from the data describing the categories.

1. **Teachers have high expectations of their students and of themselves.**

Teachers in the English language arts and math interventions expected the students to walk in ready to work. Students were expected to be engaged in the lesson that was being presented to the students. Students were given problems in math to show the teacher they understood the concept being presented to them.

In the fourth-grade intervention class, students were working on division problems and were struggling with the paper and pencil task. Teacher showed the students how to make a multiplication grid where students were able to fill in numbers from 1 to 13 in different directions, ending up with a times table chart from 2-13 to learn math facts quick. The students used this tool to help them with division.

Teachers had high expectations of themselves because the lesson plans they had for the afterschool intervention targeted the areas in which the students needed help that week. The lessons also tied back to what the students were learning in their regular
classes. The teachers in the afterschool program pre taught next day’s regular day lesson so the students in the afterschool program would get certain parts of the lesson twice. Teachers also communicated weekly with each child’s classroom teacher regarding the student’s performance in the afterschool program.

2. *Teachers convey positive expectations and relationships for students.* The researcher observed the teachers in the afterschool program having a positive relationship with the students. The students were greeted at the door and asked about their day. The students were told what the lesson plan for the day was and asked what they wanted to do first in two of their classes. In one of the math classes, students were solving equations. Instead of working the equations out using a paper and pencil, the students had a competition in which the room was divided into half and they solved word problems on the Smart board to see which team would finish first. The researcher noticed it became such a competition that many students did not realize they were solving equations. It became about which team would win. The noise level in the room went up with 10 excited student right along with the teacher.

During intervention math for fourth grade, student worked on finishing a math assignment and the researcher asked a student if she was done. The student replied back to the researcher “My teacher believes that I am a 100% so I have to recheck my work so I am not done yet.” She told me her teacher expects her to get good grades because she knew she was very smart when she applied herself. Her teacher has this student believing in herself that she is a high achieving student. The researcher was so surprised because
this student had been at Golden Elementary since kindergarten and not one of the other teachers had been able to light a fire for learning or self-confidence in this student. She finally had a teacher who had her believing she was capable of getting 100% on her math tests. The researcher believes this type of insight comes from teachers knowing their students’ strengths and weaknesses, knowing about their student learning profiles, and having personal relationships with their students.

3. **Students are responsible and confident about their learning.** Students in the afterschool program have an “I can do” attitude about learning, and if they did not understand a concept, then they raised their hands to get help. Teachers have communicated to the students that if they need help it is the student’s job to let the teacher know. If they are not letting the teacher know that information, then teachers cannot do their jobs all by themselves; they need the students to verbalize the area in which they need the help.

Students were more engaged in the afterschool lessons because what was being taught to them was at the level they could understand. Also, since it was a group of only 10 students, they were able to get the attention they needed when they had a problem with the concepts being taught. Students had more discussions and were being part of the learning process rather than sitting back and just listening to the teachers provide information.

Curriculum is modified to meet the child’s needs in the afterschool intervention program. The curriculum used in the intervention program is an intervention curriculum,
part of the state-adopted English language arts curriculum used at Golden Elementary School. Teachers pick and choose the materials they need to fill the students’ gaps. During the observation in two classes, the students were working on writing strategies and the lesson was fast-paced, giving students the pertinent information and then having them practice what they learned. One component of the intervention curriculum is that it is used to introduce the material the students are going to learn the next day in class so students in the program are already familiar with the lesson. This gives the students in the afterschool intervention a chance to be part of the regular classroom and do grade-level activities. For some students, teachers were scaffolding even the intervention curriculum. Students were provided information in chunks to make sure they understood the information. After the teacher modeled a concept to the small group, the students worked on some problems to make sure they understood what was being taught to them.

The learning environment is set up for students to succeed. All six classrooms are set up to where students have power in their learning, feel safe, and get individual help. In three of the classrooms, the agenda for the hour was up on the board and the students were asked what they wanted to work on first. The teacher went with the majority of what the students wanted to do to start the lesson. Two students were having a hard time with the division so she started the other eight students working and took the two students to the back table to give them some extra practice on the division problems.

The researcher observed that the student needing the extra help told the teacher point to which he or she understood the problem and where he or she was having
difficulty. She modeled four more problems for the students and talked through each step. Once the students seemed to be getting the math, she assigned a problem to the students. She had the students talk through their steps with her to make sure they were correct. When she was sure they understood, she let the boys go back to the group to finish what they needed to do.

Using Merriam’s *Qualitative Research: A Guide to Design and Implementation* (2009), the researcher made comparisons within and between the levels of properties and categories until a theory could be formulated. “Hypotheses are the suggested links between categories and properties” (p. 200). The comparisons led the researcher to a hypothesis or theory, referred to as substantive theory.

Looking at the five categories, and each of the properties in the categories, four themes or “aspects of practice” (p. 200) emerge:

1. Teachers
2. Students
3. Curriculum
4. Learning Environment

**Themes.** When comparing categories, four categories emerged as one theme because they shared properties. The categories were:

1. Teachers convey positive expectations and relationships for students
2. Teachers have high expectations of themselves
3. Teachers have high expectation of all the students in the afterschool program.
The following sections provide examples and data that show what factors impacted the afterschool intervention program experience of students by identified themes. Factors include teachers, students, classroom environment, and curriculum.

**Theme 1: Teachers.** The qualitative data from the observations show teachers have a positive impact on students. The theme of teachers emerged because it was noticeable that teachers had high expectations and relationship with their students in the afterschool program. Students were engaged in the lessons and learning what was being taught to them in the afterschool setting. Teachers were being supportive to the students when they were having difficulty with understanding the concepts being taught. Teachers did not stop the lesson for the whole group because one student was having difficulty. Teachers moved the group of nine forward and then took one student to the back table to go over the concept for the student having a difficulty. The researcher observed teachers as someone who supported their student’s educational experience.

*Example Teacher Responses*

Teacher: “Let’s go the board so I can show you the steps”

Teacher: “I know everyone understands the material so you will do well on the test tomorrow”

Teacher: Breaking the division problem into smaller chunks, stopping and explaining each step in the problem

Teachers: welcoming of their students into the classroom, some at the door and others in front of their classes.

Both math teachers making learning into fun games
All teachers having can “succeed attitude with the student”

Positive/encouraging interactions with students

Teachers: knew their students likes/ dislikes

The researcher noticed some students were more motivated in the afterschool program compared to their regular classroom. With just having 10 students in the classroom, the teachers were able to help individual students more with whatever the student was having an issue. Teachers knew the students’ learning styles and what types of reading books were of interest to their students.

Theme 2: Students. The second theme, students were responsible for their own learning, emerged from the following three categories:

1. Students are empowered to ask questions about their learning.
2. Students are responsible for their own learning
3. Students come in with a positive attitude

Students were completely engaged in the lesson being taught. Students were consulted in two of the classes regarding what they wanted to do first in the classroom. In the math classes, two out of the three classes were playing learning games on the smart board. Students were so involved in the competition part of the game that most of them did not realize they were learning to solve equations for math. Students were responsible for their own learning and teachers were not constantly reminding the students of what they had to do.

Example Student References
Students have a “can succeed” attitude in the classroom

Feeling safe to give their opinion in class

Getting individual help on a difficult concept and moving on

“What would you like to do first?”

Students able to relate what they are learning in the afterschool intervention back to their own classrooms

Students engaged in the lesson

Students having a comfortable relationship to ask for help when they needed it

Relationships at school are seen as being a very supportive factor of the students’ educational experiences.

The qualitative data from the researcher’s observation report positive supports from teachers to students. Students were observed wanting to do well in school and were doing their part to succeed. Students were supported by their teachers when they were having a difficulty with the material being taught. Students were engaged in the learning process and teachers were letting some groups of students be part of the decision-making process in terms of what they wanted to learn first. Students knew what they were learning in the afterschool intervention and how it applied to the learning they were going to do the next day in their classroom.
**Theme 3: Curriculum.** The third theme, *curriculum*, emerged from the following categories:

1. Teachers use intervention curriculum to teach students in the afterschool program.
2. Teachers scaffold the curriculum to meet individual student needs and tie it back to classroom learning.

The qualitative data from the observation show curriculum has a positive impact on the educational experience of the students if it is able to meet their needs. The curriculum in the afterschool program was part of the state and district adopted material; however, the intervention piece that came with the program helped these students. Also, teachers were able to present the material in a sequence so the students were getting the most out of the program. The lessons were fast-paced and information was provided in chunks. Another factor playing an important role is that the intervention material ties back to adopted curriculum for the classroom so students in the afterschool program already got some pre-teaching on the stories they would work on the next day in class. Teachers were able to modify the curriculum, which helped the students in the afterschool program. Sample observation responses are shown below.

*Example of Curriculum observed in the classroom*

- Lessons are fast-paced
- Curriculum is broken down into small pieces so students understand
- Curriculum relates to the next day’s lesson in the classroom
Teachers familiar with the curriculum due to training

Teachers able to isolate students’ problems in ELA using the curriculum

Does the adopted curriculum meet every child’s need?

Teachers have to scaffold curriculum for students

The qualitative data from the observation on curriculum report that not all adopted curriculum meets the students’ needs. Teachers have to scaffold the material to meet the needs of all students in the classroom. Curricula are broken down into small lessons in the afterschool intervention so students’ learning gaps can be filled. Teachers keep lessons at a fast pace so students are not bored. During the observation, the researcher observed one classroom out of the six using reteach materials and the other five classes use the on-level practice books and reading books for their students. Students tend to get bored if a teacher uses re-teach materials every day in the program.

**Theme 4: School environment.** The final theme, *School Environment*, emerged from the following categories:

1. Classroom Environment is structured to be inviting to students and set up for students’ strength
2. Students feel safe to ask questions because the student-to-teacher ratio is small.

The qualitative data for environment show it is important for schools to set up a structured environment where all students are safe. In the afterschool classrooms, students are able to ask for help or give their opinion without being afraid. Likewise, teachers have a supportive relationship with students. Teachers are focusing on students’
strengths rather than the weakness during the school day. Keeping the student-to-teacher ratio numbers low allows the students to get the attention they need in the classroom, especially in the afterschool intervention program.

*Sample Observations for Classroom Environment*

**Student-to-teacher ratio**

Supportive of student learning

Focusing on students’ strengths

Students can get individual help

Feeling safe

**School environment**

Having students be part of the decision making regarding their learning

**Summary of Qualitative Data Addressing the Classroom Observations**

The following themes emerged as having an educational impact on the students in the afterschool intervention program: teachers, students, curriculum, and school environment. Teachers were seen as having a positive impact on student learning and student-teacher relationships. The students themselves were open to learning and came to the program with a good attitude. The last theme, environment, had a positive impact if the adults or leaders set the environment up so students were successful, but if it was not set up correctly, students suffer.
Conclusion

This study used quantitative data to address the research questions. Quantitative data were analyzed using three Independent Sample t-tests to answer Research Question 2 and 4. Qualitative data from classroom observations were used to derive themes noted in the afterschool program and to answer research question 1.

An Independent Samples t-test was used to find significance in scores on the district’s benchmark assessments in English language arts and math. The point difference on the benchmark assessment in ELA from beginning to end was significant. Another t-test looked at scores of students who had attended the afterschool intervention one year before and then taken the STAR test. Students who attended the afterschool intervention program did well compared to students of similar abilities who chose not to be in the afterschool program.

Chapter 5 follows and includes a review of the findings, conclusions and discussion, findings in the context of the study’s theoretical frameworks, recommendations, policy and leadership implications, and suggestions for further research.
Chapter 5
DISCUSSION OF FINDINGS AND RECOMMENDATIONS

Overview of the Study

For the last five years, Golden elementary has offered afterschool interventions to the low-achieving students. The researcher, an administrator of a K-5 school, wanted to know if the afterschool intervention programs in English language arts and math is helping students’ academics. Golden Elementary has a STAR API of 888, which is in the high range in the state. But what about individual students who are low-achieving students; are they given the same opportunity as the other students? This chapter begins with a review of the study’s purpose and research questions, followed by a summary of the findings, conclusions and discussion, findings in the context of the study’s theoretical frameworks, recommendations, leadership and policy implications, and suggestions for future research. The purpose of this study was to examine the afterschool intervention program in English language arts and math for students in third-, fourth-, and fifth grades. Subsequently, recommendations are made to examine and improve the practices of afterschool interventions at the elementary school level.

Research Questions

1. To what extent does the afterschool intervention program in this study reflect the principles of Universal Design for Learning Theory, Systems Theory, and Appreciative Inquiry Theory?
2. Is there a significant difference in language arts and math performance among academically underperforming third-, fourth-, and fifth-grade students who participate in an afterschool intervention program compared to those who do not?

3. Is there a change in the level of absenteeism among elementary students after participating in afterschool intervention programs?

4. Are previously underperforming students scoring grade level proficient in reading and mathematics on standardized tests after participating in afterschool intervention programs?

**Summary of the Findings**

**Research Question Two**

Research Question 2 was addressed by the quantitative data collected on the Independent Samples t-Test. The results of the independent-samples t-tests showed a large effect for students who received an afterschool intervention in English language arts compared to students who did not attend the afterschool intervention. Students who were in the ELA intervention program scored 12 points higher on the benchmark assessments compared to students who chose not to come to the intervention class. The dependent variables of the beginning-of-the-year assessments, STAR assessments, and benchmark assessments were the same for all the students. Independent variables for students who received the afterschool intervention show a 9- to 12-point difference in their scores compared to students who did not attend the intervention.
The second part of the question was to look at math test scores on the benchmark assessments after the intervention. Again an Independent Samples t-test was done and it showed that students who attended the afterschool intervention had scored higher by 10 points compared to their peers who did not attend the afterschool intervention class. These findings are supported by El Baum (2000) who found interventions done by certificated teachers yielded larger effects in scores than those done by volunteer tutors. Since teachers know where the learning gaps are for students and are able to fill in these gaps quicker than volunteer tutors. Another study supporting the finding was done by Gordon et al. (2007) illustrating that when tutoring is highly structured, a tutoring program catered to the specific needs of the students in the school, students are more successful.

**Research Question Three**

Is there a change in the level of absenteeism among elementary students after participating in afterschool intervention programs? After analyzing the attendance data at Golden Elementary School for students who attended the intervention program, there was no correlation with the afterschool program. If students were absent during the day, the students attending the afterschool intervention did not attend the intervention. On any given day, four students out the 60 who had signed up to attend the afterschool intervention in all three grade levels were absent. The students who were absent had excused absences, meaning the student was sick or had a medical appointment on the day of the absence.
No correlation was found between a student having a relationship with an adult in the afterschool program and their attendance. If students were present at school during the day, these students stayed for the afterschool intervention; however, if students were absent from school, they did not come back just to attend the intervention. Data to research question 3 did not have a significant impact on the discussion or recommendation of this study.

**Research Question Four**

Research Question 4 was “Are previously underperforming students scoring grade level proficient in ELA and Mathematics on standardized tests after participating in afterschool intervention programs?”

Students who attended the English language arts afterschool intervention in 2010-2011 did much better on their STAR testing in 2012-2013. There was a significant difference in scores for students who attended the intervention, with a mean score of 344.5 compared to students who did not attend the intervention with a mean score of 319.42. The results of the independent-samples t-tests show a large effect for students who received the afterschool intervention in English language arts compared to students who did not attend the afterschool intervention program during the 2010-11 school year.

In STAR math, if the students attended the afterschool intervention in 2010-11, they scored higher compared to students who did not. There was a significant difference in scores for students who attended the intervention, a mean score of (M=352.6), and
students who did not attend, a mean score of (M=322.3). Based on the above values, the effect is large.

The researcher expected students who attended the afterschool intervention to do better than students who did not attend. What was not expected was that in English language arts and math, the scores were much higher compared to students who did not attend the afterschool intervention. Various studies have shown increases in student achievement through a variety of instructional strategies. These include small class sizes (Konstantopoulos & Chung, 2009) and use of standards-based practices in English language arts and math (Johnson, 2009; Thompson, 2009).

The qualitative data collected from the classroom observations answered question 1 and is described in themes. Figure 9 describes the themes that emerged from the qualitative data.
**Figure 9.** Themes from qualitative data.

**Qualitative Themes and Factors in the Afterschool Intervention Program**

To have an afterschool intervention program that works for the students at Golden Elementary, teachers, students, the curriculum, and the environment need to all work together. All three theories need to be present in the afterschool interventions for the intervention program to be successful. The Universal Design theory helps focus on the curriculum taught in the afterschool program. The teachers, during their afterschool training, are taught to scaffold the lessons so they work for the students in the afterschool intervention. During Monday’s articulation, the classroom teacher and afterschool teacher align the curriculum to be taught in the classroom and how the teacher in the afterschool program needs to scaffold that for students in the intervention.
Appreciative Inquiry also plays a role in the afterschool intervention whereby teachers appreciate what the students are able to do and move them forward in their learning. The relationships the teachers have intentionally built with their students in the afterschool intervention also help students be more comfortable and willing to learn more during that one hour of time.

Systems Theory in the afterschool intervention starts from the beginning of the program and has to work throughout the program in order for the program to work. When steps are skipped, the students suffer the consequences. The STAR assessment does not fit into any of the above theories; however, STAR assessment is the way all public schools and students are ranked. The school system needs to change to include more theories like UDL and appreciative theory because systems theory is already in place in most of the schools that conduct any business with students.

At Golden Elementary, the researcher asked teachers to teach an afterschool intervention and everyone was interested. However, with experience, the researcher has realized the following things need to be in place: the hour in the afterschool intervention needs to be structured, teachers need to be trained, and the curriculum has to meet the needs of the students in the program. Lastly, the environment has to be intentionally set up for student success.

**Discussion**

As a leader, the characteristics the researcher looks for in an afterschool teacher are someone who is positive, able to motivate students, and has good relationship with
their students. During the training, the teachers are taught how to diagnose the student’s strengths and weaknesses and then having a plan to help move the student along.

According to Gordon et al. (2004), teachers need to know students’ areas of difficulty first before they can provide assistance to them.

Teachers are taught during the training to come up with a structured schedule for that one hour so no time is wasted. Studies by Mathes and Fuchs (1994) and Shanahan and Barr (1995) support the notion that teachers need to have a structured schedule for the intervention; otherwise it becomes an hour of homework help. At Golden Elementary, it helps the students to be focused for the one hour they are in the afterschool intervention. The Literacy Coach trains teachers to modify the curriculum if it does not meet the needs of the students as well as how to scaffold the curriculum to best meet the needs of their students.

Having a classroom environment set up so students are happy to be there, feel safe, and are connected to their classroom teacher is important. Students understand teachers are on their team when they come to get the extra help in class. Students are part of the decision-making process when it comes to their learning by having choices in the classroom. Vieno et al.’s (2007) research supports the concept that when students are more involved in their educational experience, including participating in school events such as making classroom rules and organizing school events, the students feel more connected to their school. Much of the research on student teacher relationships suggests the more opportunities the students have to make sure their voices are heard, the greater
the likelihood for positive relationships, which in turn may lead to greater academic success. It is another instance when Systems Theory works at Golden Elementary school; the teachers and students have to know what we want out of the after-school program. Those goals are communicated to the teachers and teachers meet with students and parents to go over the goals with students. If these systems are not in place then someone on the team is not on board and the after-school intervention does not work.

Figure 10 represents the interconnected dimensions of factors influencing the educational outcomes of Elementary Students at Golden Elementary School. The factors are categorized around the students to show that all these factors need to be in place for the student to be successful. It all begins with the students at Golden Elementary and all the other factors work around our students to meet whatever needs they have.

Figure 10. Conditions affecting student success.
Figure 10 represents what needs to be place for the student to succeed in the learning environment. If leaders cannot provide this for all students, leaders are failing at their jobs.

**Significant Findings of This Study**

The following factors positively impact the education of students in the afterschool Intervention.

- Positive relationships with teachers in the afterschool intervention program
- Positive classroom environment
- Structured one hour
- Students empowered in some decision making in their learning
- Curriculum meeting the students’ needs
- Student engagement in the program

Another finding coming out of this study was that standardized tests are in conflict with the afterschool learning environment at Golden Elementary School. However, public schools are judged by the STAR test results and when parents are shopping for a school for their children, they look at the schools’ API scores. As a society, we are failing our children by narrowing down the curriculum and assessing in only one way. Students are taught to fill in the bubble for answers rather than thinking through the process for solving the problem. In some school districts, teachers are required to test students using only the multiple-choice test rather than using critical thinking. Additionally, we test our students only once at the end of the year to figure out
if they mastered their grade-level standards. Rather than testing several times during the year to get a better picture of how students are doing, the state only does with in one test.

As a school leader and researcher, I believe students need to have access to curriculum in all areas, such as English language arts, math, science, and social studies and not a narrow curriculum. Students need to be tested several times during the year using different types of assessments so all students are able to shine in their learning styles. Also, the state government should not put too much into the state testing such that districts get so caught up in testing they stop teaching the other curriculum. When all the above factors are in place, students are able to succeed in the learning process.

**Finding in the Context of the Theoretical Frameworks**

This study was grounded on three theoretical frameworks: Systems Theory, Universal Design for Learning (UDL), and Appreciative Inquiry Theory. This study points to having all students be successful in their learning if certain mechanisms are in place. The researcher discovered, through classroom observations, that the after-school intervention program reflected many of the practices of all three theories in the classroom.

Systems Theory applies to the after-school program because all systems need to be in place for student success. It begins with the list of students who are being recommended for the after-school intervention, a letter being sent home to parents, having the teachers trained on how to find the skills students are lacking, and filling in those
skills so students can move forward. If one of the systems is not in place, the overall effect is not the same.

The System Theory applies to the teachers who teach the afterschool intervention because they need to have systems in place in their classroom. Having a structured one hour of intervention requires the teacher to have timely lesson plans, keep records of the daily monitoring of students skills, and understand how students come into the classroom to start their learning. If teachers do not have lesson plans prior to the intervention, then time is wasted because the teacher is trying to do that while also trying to run the class. The system would not be working and would affect what other learning goes on in class. If students do not come prepared to learn or have an attitude of being ready to learn, what happens during the one hour is effected. Instead of guessing what everyone needs to do, it is better to have a system in place and make sure people involved know that system. Every one of the steps above needs to happen in a systematic way for the students to be successful.

Universal Design for Learning is a relatively new theory to education; however, in the researcher’s opinion, all education entities should be using this theory. Instead of having the student fit into the mold of the school, the school should have to fit the mold of the student. It means having the environment of the school be open and accessible to all students.

The teachers in the afterschool intervention use the UDL framework when it comes to using alternative ways for students to learn materials. A fifth-grade teacher was
using alternative ways to teach students about fractions in which she had students
drawing the fractions on paper and coloring certain part of the fraction. This way, all the
students had a good understanding of the concept of fractions instead of just and abstract
paper and pencil task. Different learning styles were accommodated in the fifth-grade
classroom.

Teachers who teach the interventions know what their students are capable of and
have high expectations of all their students. If the curriculum is not working for the
student then it is modified or scaffolded so the teachers help students get the main
concepts. Some students in the intervention do not like to write when it comes to writing
projects. Teachers in the afterschool program have taken those students to the computer
lab so they can research and use keyboarding instead of writing.

In another classroom, the teacher just taught students small chunks of information
and then stopped to make sure the students were getting the concept rather than just
teaching the full lesson. She was able to remove some barriers for the students so they
were still able to get the lesson but in a different way. A fifth-grade classroom had the
students listen to an English language arts story on the listening station so when it came
to comprehension questions, the students were able to do them even though they were not
reading at grade level. The teachers know their students’ capabilities and what they
themselves need to do for them to succeed.

The teachers use the Appreciative Inquiry in the afterschool intervention.
Teachers are excited about the skills students have already and help them build on those
skills. Teachers provide positive and supportive feedback to the students when they answer questions. Sometimes, when the students give a wrong answer, instead of saying your answer is the wrong, the teachers often walked through the process to show them the correct answer giving the power back to the students. Two teachers in the afterschool intervention program sit down with their students every two weeks to work on their learning goals for the next two weeks. When students see what progress they have made and what they need to do for the next step, they are empowered around their own learning. The students become their own advocates and responsible for their own learning. The learning process becomes about data and the students instead of about the staff.

**Limitations of the Study**

The limitations of this study are that the researcher should have interviewed students, teachers, and the parents to get their perspective on afterschool interventions. Interviewing students would have given more insight into why some students worked harder in the afterschool intervention rather in their own classroom. From the teachers perspective the researcher wanted to learn more about the relationships they have with students in the afterschool intervention and about modifying the curriculum to meet the students need.

A limitation is the researcher did not include interviews with parents that collected their reasons for sending their students to the afterschool intervention. The influence they have on their children’s during the intervention and with homework when
they do attend the intervention? The researcher should interview the parents of students who did not attend the intervention for their reasons as to why they did not choose to send their students.

A different limitation in this study was the STAR testing data used in questions 2 and 4. The researcher admits it is not the ideal measure; however, it is a pragmatic tool the researcher used in this study. Another limitation of this study is that the participant numbers are small. A Different study could include more students and a different elementary school around the state so one could study the implications of gender, grade level, race, non-matched samples, and students who are English learners.

**Recommendations**

Based on the findings of this study, the researcher recommends the following institutional practices for Golden Elementary School:

1. Facilitate and support positive relationships between students and all adults on campus.
2. Facilitate and support teacher training for staff who work with low-achieving students.
3. Encourage a classroom environment that is inviting to all students so they are not afraid to ask questions and be part of their learning program.
4. Make any curriculum that is district adopted fit the needs of the students.
5. Implement and support activities that encourage self-efficacy.
1. Facilitate and support positive relationships with all staff on campus.

This recommendation is based on the strong correlation between relationships with the adults in the afterschool program. Positive relationships between adults led to a positive school experience. Students in the afterschool program are more engaged to learn because the relationship in the classroom is like a partnership instead of the teacher being in charge of the classroom learning. Students need to know teachers believe in them and care about their success. Valenzuela (2009) examined the relationships between teachers and students in a study. Valenzuela suggested teachers greet students at the door, monitor their attendance and school academic progress, and be engaged with the students.

2. Facilitate and support teacher training for staff who work with low-achieving students.

Train teachers before they start working with low-achieving students. During the training, make sure the following factors are covered: a) What are the goals of the program?, b) What tests do teachers need to be familiar with to figure out the gaps in student learning?, c) Teachers will need to know to scaffold or modify the curriculum to meet the students’ needs., d) Teachers will have to create a classroom environment in which the time is structured but students know the teacher cares about them., and e) Teachers need to bring their best/positive attitude when they are going to be working with these students.
3. Make a classroom environment that is inviting to all students.

Teachers have to be taught how to set up the classroom environment so students feel comfortable asking questions. Students should be part of their goal setting in the classroom, which empowers students. Once they are part of the goal setting, students know what they need to do to achieve those goals. Environment also includes having the students work with the teacher to come up with rules and routines for the classroom. Currently, student-teacher collaboration on student goals is not taught in schools for the new teachers coming into the teaching field. It needs to start from the top where teachers are making sure the environment works for the students at school instead of just the adults.

4. Making any curriculum that is district adopted to fit the needs of their students.

Curriculum publishers need to publish books that meet the needs of student populations currently in school. Since that is not the case at this time, teachers have to be taught how curriculum can be modified to meet the needs of their students in all subject areas. New curriculum needs to be designed so it has flexibility and customized options, which allows all learners to progress from where they are to where they need to be. The right curriculum can help school districts meet the needs of all students by removing barriers from the learning process.

5. Implement and support activities that encourage self-efficacy.

Self-efficacy is the belief in one’s personal ability to be successful. Belief is a powerful force that gives one hope in overcoming difficult circumstances and the ability
to persevere in trying times. If we taught self-efficacy to students in elementary schools, they would be successful in school and in life. Schools have to support educational experiences that encourage students to persevere and achieve a difficult task and have conversations about creating a positive vision for students’ futures.

**Leadership Implications**

Elements of Appreciative Inquiry Leadership styles are required to implement the recommendation of this study. The foundation of Appreciative Inquiry Leadership comes from the approach of organizing Appreciative Inquiry. The fundamental difference between AI and other leadership approaches is that with this theory, the leader focuses on the positive qualities working in an organization. It involves asking participants strategically crafted questions about the organization’s strengths and positive stories and building on the vision for the future. To move organizations in a positive direction, the focus needs to be on what the organization does best.

Appreciative Inquiry Leadership style has five core strategies that can be used in helping organizations change.

1. Inquiry – asking people their opinion instead of telling. A forum needs to be set up where people are invited to share their thoughts, feelings, stories of success, and ideas for the future.
2. Illuminate – to discover unique skills, abilities, strengths, and a positive potential of everyone and all situations. As a leader, seek to fulfill people’s need for recognition and celebration.
3. Inclusion – acknowledging and addressing people’s need for belonging. It accommodates conversational differences.

4. Inspiration – putting forth a vision of what is possible and providing resources for that vision.

5. Integrity – Demonstrating honest transparency, authenticity, and moral or ethical conduct. Encouraging everyone to give their best for the greater good of the organization.

Most public school systems are set up in the United States about the adults and teacher unions instead of the students. The Theory of Appreciative Inquiry in education posits that to change the education system, one must change the social context surrounding the education system. Using the Appreciate Inquiry Theory, teachers and staff need to be brought together to find out from them what is working in schools and what is not in conversations emphasizing collaborative learning communities and making the learner center of the issues. Also, keep in mind the needs of diverse learning styles so teachers can provide flexibility and choice to students. Create caring, supportive relationships. These types of initiatives require schools and teachers to work differently. The needed change implementation process is difficult for many practitioners used to the status quo. A transformational leader can appeal to the higher purpose and provide supports necessary to successfully implement change. The leader needs to bring skills that can work with teachers, the teacher’s union, and other employees to bring a positive change using Appreciate Inquiry Leadership.
In addition to high accountability demands, today’s educational leaders must motivate and inspire teachers to make meaningful connections with students. An accomplished leader can inspire teachers to work beyond the minimum contract requirement and invest in the lives of children, families, and the community. School leaders see the social injustice revealed in the achievement gap. Leaders purposefully need to step outside the dominant institutional culture of the educational system to make meaningful connections with all students.

**Policy Implications**

This study, combined with other research on this subject, has implications for policy change at the local, state, and national levels. At the local level when leaders set up a School Site Council, it should be reflective of the student ethnic population. If there is a large population of ESLs or those of a low socioeconomic status, all those parents need to be involved in the Site Council. Single Plans for School Achievement should include goals purposefully connected to ESL and low-income student populations and the community. For example, achievement goals should be specific to the English learners who attend our schools.

National and state leaders are needing to adapt to the realization of a global economy. The global economy is changing the configuration of the workforce expectations and, once again, schools are being asked to respond to the needs of the nation. To respond to this challenge, political, business, and educational leaders must make informed decisions based on research. Additionally, policies must be reviewed,
amended, and developed to influence local, state, and national efforts to prepare more students for the 21st century.

**Suggestions for Future Research**

More research needs to be done to provide strategies for elementary schools to move their low achieving students up quickly. This study should be replicated on a bigger scale, gathering information from teachers, students, and parents at multiple elementary sites. The researcher recommends a larger sample size to increase the reliability of the findings for this study. With a larger sample size, one could study implications of gender, grade level, race, and English as a second language.

Further research is needed in the area of teacher training for teachers working with low-achieving students. Can this training be done at a University level? Or can it be part of the teacher program or both? These trainings need to happen somewhere so when teachers come to teach, they are able to teach any student in their class.

Additional research needs to happen by way of afterschool interventions where teachers who are going to be teaching in the afterschool program are taught the specific skills the students are lacking in their education. Teachers need to be taught how to fill in those gaps for students so they are successful. In this training, teachers should be taught to work with students of different races, genders, and ages.

School districts need to bring Universal Design Learning Theory and Appreciative Inquiry Theory into the school system to connect with all the students. Using the Universal Design Learning theory, teachers learn about the curriculum and
how to have the curriculum fit the student rather than the student fitting to the curriculum. Teachers learn about student-teacher relationships and how to build those skills using the Appreciative Inquiry.

Further research on afterschool interventions can be conducted using the Common Core Assessments coming up during the 2014-15 school year. Students will be tested in math and ELA three times during the year. Some of the assessments for math will be done in the classroom as projects working with other students. Also, testing will not be multiple-choice testing but a variety of different ways of assessing students such as short answers, essays, and project-based. These types of evaluations will be a better fit for the afterschool program currently working at Golden Elementary School.

Further research can look at other countries where the education system is successful for all students. Finland has a program where students attend regular school but when they are having issues, they are pulled out for tutoring on their time to teach them whatever skill with which they are having trouble. Tutors go to school longer than teachers for their degrees; however, that is not the only skill making these tutors successful. In the program, the tutors are taught to figure out the issues a student is having and then work on the issues through different skills and learning styles. In other countries that are ahead of United States on National Exams, their students do not take standards exams but their focus is more on:

• The development of rigorous, research-based teacher education programs that prepare teachers in content, pedagogy, and educational theory, as well as the
capacity to do their own research and craft creative pedagogical solutions for teaching.

- Significant financial support for teacher education, professional development, reasonable and equitable salaries, and supportive working conditions.
- The creation of a respected profession in which teachers have considerable authority and autonomy, including responsibility for curriculum design and student assessment, which engages them in the ongoing analysis and refinement of practice.

Finland appears to get more for less in education. Finland differs from many other countries in its minimalistic approach to educational effectiveness. Finnish children start formal schooling later than most other children, at the age of seven. According to international surveys, they also are expected to do much less school-related homework than others. Comparisons of intended instructional hours during compulsory education reveal that pupils in Finland have less classroom-based learning time than pupils in other developed countries. Last but not least, Finnish children experience little or no external standardized testing of what they have learned. This minimalistic approach to education policy and practice might suggest the education system is mediocre. That does not seem to be the case. Some Finnish analysts suggest a golden balance has been struck in Finnish schools between formal instruction and informal learning that allows both students and teachers to use their creative potential and imagination to complement the
effect of education. These smart education policies optimize inputs and limit the use of expensive quality control and data mechanisms common in many other countries.

Further efforts are needed in the area of afterschool interventions so students are prepared with skills upon which they can build in middle and high school and be better prepared for 21st-century careers. If California and the nation are going to prosper, then more students need to have the foundation skills in elementary school so they can build on those skills for their future. When schools set up afterschool interventions, many things need to be in place so students can be successful.
REFERENCES


doi:10.1177/0013124502239392


Rodriguez, A. J. (1997). *Counting the runners who don’t have shoes: Trends in students achievement in science by socioeconomic status and gender within ethnic groups*. Retrieved from ERIC Database. (ED472760)


