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At-Risk Students: An Analysis of School Improvement Grants in the State of Missouri

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by

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it to any other college or university course or degree here or elsewhere.

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Abstract

The educational system in the United States continues to pose many challenges for law and policy makers. Many of these challenges can be traced back to two landmark cases, *Plessy vs. Ferguson* and *Brown vs. Board of Education of Topeka*. And, while the U.S. Department of Education developed programs to address many of these issues, the cost versus the benefits must be considered. This research study examined the impact of federally-funded School Improvement Grants (SIGs) for elementary, middle, and high schools across the state of Missouri from 2010 to 2015 on retention rates, graduation rates, and test scores. The state of Missouri identified 56 schools as low-performing, and therefore, eligible to receive the grants. Specifically, this study examined whether the amount of SIG funds allocated per student was associated with increases in achievement scores (mathematics and English), graduation rates, and dropout rates. Using bivariate regression, the findings showed a statistically significant relationship only between the amount of SIG funds allocated per student and English scores. Surprisingly, the relationship showed that as the amount of funds allocated per student increased, English scores decreased. However, after a multivariate regression, findings indicated mathematics scores significantly increased as the amount of SIG funds per student increased, while English scores remained significant in the same direction. This research study also analyzed the relationship between the amount of SIG funds allocated per student and median household income during the first year the funds were disseminated. Because special attention was given to the educational achievement gap and race/ethnicity, this research study also compared Black and White student populations. The results showed that as the population of Black students increased, mathematics and

English scores decreased. Furthermore, the findings showed that as the population of Black students increased, the amount of SIG funds allocated per student decreased. This suggested that there may be a need to examine how funds were allocated and what other issues may have confounded the relationships between SIG funds and the major variables presented in this research.

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Chapter One: Introduction

Education has always been an important factor in determining the likelihood of students finding success in achieving the American Dream. In the United States, the individual's propensity for achieving this dream was one of the main factors that determined economic success. Research showed that those with more education earn a significantly greater amount of income over a lifetime than those who have less education (Carnevale, Rose, & Cheah, 2011). According to a report produced by Georgetown University's Center on Education and the Workforce, "obtaining a high school diploma adds 33% more to lifetime earnings" (as cited in Carnevale et al., 2011, p. 5). However, in the United States there were disparities in the educational system that led to inequities, based on a variety of social identities. Among these, the most prevalent were class and race.

Institutional Oppression in the United States

Oppression was an unfortunate, but very real part of the history of the United States. Disparities in public education were only one piece of the institutional oppression that plagued the country. From the illegalization of education for slaves, to *Plessy v. Ferguson* in 1896 and *Brown v. the Board of Education* in 1954, legalized oppression weaved throughout the fabric of U.S. history. Race and class, especially, played a role in determining who received quality education or education at all (Bauerlein, Burroughs, Forbes, & Haskins, 2003). For example, in North Carolina in 1830 there were legal statutes that forbade the education of slaves (Zinn, 1980).

> Be it enacted by the General Assembly of the State of North Carolina, and it is hereby enacted by the authority of the same, that any free person, who shall

> hereafter teach, or attempt to teach, any slave within the State to read or write, the use of figures excepted, or shall give or sell to such slave or slaves any books or pamphlets, shall be liable to indictment in any court of record in this State having jurisdiction thereof, and upon conviction, shall, at the discretion of the court, if a White man or woman, be fined not less than one hundred dollars, nor more than two hundred dollars, or imprisoned; and if a free person of color, shall be fined, imprisoned, or whipped, at the discretion of the court, not exceeding thirty-nine lashes, nor less than twenty lashes.
>
> Be it further enacted, that if any slave shall hereafter teach, or attempt to teach, any other slave to read or write, the use of figures excepted, he or she may be carried before any justice of the peace, and on conviction thereof, shall be sentenced to receive thirty-nine lashes on his or her bare back.
>
> Be it further enacted, that the judges of the Superior Courts and the justices of the County Courts shall give this act in charge to the grand juries of their respective counties. (General Assembly of the State of North Carolina, 1830, p. 15)

In the *Plessy v. Ferguson* decision of 1896, the U.S. Supreme Court ruled that racial segregation in public places was constitutional and not a violation of the 13th and 14th Amendments. Specifically, the majority opinion of the court, as delivered by Justice Henry Brown of Michigan, read

> We consider the underlying fallacy of the plaintiff's argument to consist in the assumption that the enforced separation of the two races stamps the colored race with a badge of inferiority. If this be so, it is not by reason of anything found in

> the act, but solely because the colored race chooses to put that construction upon it . . . The argument also assumes that social prejudice may be overcome by legislation, and that equal rights cannot be secured except by an enforced commingling of the two races… If the civil and political rights of both races be equal, one cannot be inferior to the other civilly or politically. If one race be inferior to the other socially, the Constitution of the United States cannot put them upon the same plane. (U.S. National Archives & Records Administration, 2002, p. 58)

With the 1896 separate but equal ruling came the passing of Jim Crow laws throughout the South, which led to segregation in every aspect of life including restrooms, drinking fountains and schools (Wolff, 1997). The impact of *Plessy v Ferguson* was felt across the United States until another landmark Supreme Court decision in 1954, *Brown v the Board of Education of Topeka, KS*, found that the practice of segregation was indeed a violation of the 14th Amendment, which granted equal protection of the laws (Wolff, 1997).

Brown v the Board of Education was one of several school desegregation cases heard by the U.S. Supreme Court in 1952 (Bauerlein et al., 2003). The impact of school segregation on Black children had been studied and the negative effects were becoming quite evident. Specifically, it was the work of psychologist Kenneth Clark and his wife, Mamie Phipps Clark, who was also a psychologist, that was an integral part of establishing the case for school desegregation (Bauerlein et al., 2003). Clark and his wife developed the doll test where Black children were shown brown and pink dolls and asked to identify the doll that most resembled themselves, as well as the doll they believed was bad. The results of the study showed that while Black children correctly identified

themselves with the brown doll, they had also identified the brown doll as being bad and the pink doll as being good (Bauerlein et al., 2003). In May of 1954, the U.S. Supreme Court voted unanimously that "in the field of public education the doctrine of 'separate but equal' has no place. Separate educational facilities are inherently unequal" (Bauerlein et al., 2003, p. 121). In delivering the Court's opinion, Chief Justice Earl Warren cited the psychological impact of segregation and argued that inferiority was not just in the mind of Black people, which countered the opinion in the *Plessy v Ferguson* case (Bauerlein et al., 2003).

Although *Brown v the Board of Education* signaled a victory for proponents of school desegregation, the process of desegregating schools, especially those in the South, would take nearly another two decades. It was not until around 1973 that almost half of Black children in a majority of southern states were attending schools that had previously been predominantly White (Bauerlein et al., 2003). In his bestselling book *Savage Inequalities: Children in America's Schools*, Kozol (1991) explored public education in six of the nation's poorest school districts; East Saint Louis (Illinois), Chicago, New York City, Camden (New Jersey), Washington, DC, and San Antonio. From 1988 to 1990 Kozol visited schools and collected data from students, parents, teachers, and administrators to gain a better understanding of the impact of segregation on America's schools. Upon completing his research Kozol (1991) stated,

> What startled me most-although it puzzles me that I was not prepared for this-was the remarkable degree of racial segregation that persisted almost everywhere. Like most Americans, I knew that segregation was still common in public schools, but I did not know how much it had intensified. The Supreme Court

> decision in *Brown v the Board of Education* 37 years ago, in which the court had found that segregated education was unconstitutional because it was 'inherently unequal,' did not seem to have changed very much for children in the schools I saw. (Kozol, 1991, pp. 2-3)

And, although Kozol's (1991) study was conducted in the late 1980s and early 1990s, many of the issues discussed in his book still plagued public education in the U.S. at the time of this writing. Over the years, there have been several programs initiated by the government to restructure or reform public education, including school busing and, more recently, No Child Left Behind (NCLB). In 2001, the introduction of School Improvement Grants, or SIGs, by the Office of Elementary and Secondary Education at the U.S. Department of Education (USDOE) provided yet another opportunity for public education reform.

School Improvement Grants

School Improvement Grants (SIGs) were formula-based federal funds provided to states who then disseminated them, based on application requirements, to low-performing schools in that state. Initially authorized in 2001 under section 1003(g) of Title I of the Elementary and Secondary Education Act (ESEA) of 1965, SIGs were increased and modified under the American Recovery and Reinvestment Act (ARRA) of 2009 (Hurlburt, Therriault, & Le Floch, 2012). According to Hurlburt, Therriault, and Le Floch (2012), for the USDOE and the National Center for Education Evaluation (NCEE) the purpose of these grants was to "catalyze turnaround in the nation's persistently lowest-achieving schools" (p. 10). The modifications under ARRA made the grant more

competitive by changing the funding process, redefining the meaning of low-achieving schools, and requiring the implementation of an improvement model.

Funding for individual states was calculated using a federal formula and was based on allocations of Title I funds. A competitive application process was then used for districts that chose to apply on behalf of their SIG-eligible schools. The USDOE established guidelines that allowed states to award districts up to $6 million over three years for each of their eligible schools (Hurlburt et al., 2012). SIG funds were awarded by states to schools that met all criteria established by federal SIG guidelines and "in accordance with state determinations of district capacity and commitment to support school turnaround" (Hurlburt et al., 2012, p. 2).

Schools with persistently low academic achievement were the targets of SIG in each state. According to the USDOE (2012), for Cohorts I and II, persistently low achieving schools were defined as "schools that are among the lowest-performing 5% or five schools, whichever number is greater, in terms of overall academic performance for all students and schools that exhibit a lack of progress toward achievement goals" (p. 3). The USDOE required each state to categorize and prioritize schools in one of three SIG eligibility tiers. Schools that did not fall in either Tier I, Tier II, or Tier III, were ineligible for SIG.

Tier I schools were Title I schools in improvement, corrective action, or restructuring. These schools were among the lowest-achieving 5% of schools in the state, or were high schools with graduation rates below 60% for several years (U.S. Department of Education [USDOE], 2012). States also had the option of classifying Title I eligible elementary schools that were not achieving at a higher rate than any Title I school, and

had not made adequate yearly progress (AYP) for two consecutive years or, based on proficiency rates, were in the state's lowest quintile, in Tier I (Hurlburt et al., 2012).

Tier II schools included secondary schools that were eligible for, but did not receive Title I, Part A funds and were in the lowest-achieving 5% of secondary schools in the state, or had graduation rates below 60% for several years (USDOE, 2012). States had the option of classifying in Tier II schools, Title I eligible secondary schools that were not achieving at a higher rate than the highest-achieving school recognized as a persistently low achieving school in Tier II, or that had graduation rates of less than 60% for several years, and had not made AYP for two consecutive years or, based on proficiency rates, were in the state's lowest quintile (Hurlburt et al., 2012).

Lastly, Tier III schools included the remaining Title I schools in improvement, corrective action, or restructuring that did not fall in Tier I. States had the option of classifying as Tier III schools, Title I eligible schools that were not eligible to be included in Tier I or Tier II, and who had not made AYP for two consecutive years or, based on proficiency rates, were in the state's lowest quintile (Hurlburt et al., 2012).

The final rules issued by the USDOE for Cohorts I and II stated that one of four improvement models must be specified for implementation in each Tier I and Tier II school included in a district's SIG application to their state for funding (Hurlburt et al., 2012). These models were the restart model, school closure, transformation model, and turnaround model. Schools that were reopened under the management of an education management organization, a charter school operator, or a charter management organization were classified under the restart model. Schools that were closed and had reassigned their students to higher-achieving schools were classified under the school

closure model. Schools that adopted the transformation model replaced the principal, developed a teacher-and leader-evaluation system that took student progress into account, introduced significant instructional reforms, increased learning time, and provided flexibility and support. Finally, the turnaround model required schools to replace the principal and at least 50% of the staff, introduce substantial instructional reforms, increase learning time, and provide flexibility and support (Hurlburt et al., 2012).

Dropout Risk Factors

SIGs were instrumental in manifesting educational enhancements in schools in a variety of ways, including tutoring and mentoring programs, to motivate teens to stay in school. However, the dynamics of the family structure in America had changed over the previous few decades and educators saw a drastic increase in the need to provide additional types of support to students beyond tutoring and mentoring (Hughes & Adera, 2006). In 2007, Hammond, Linton, Smink, and Drew published, *Dropout Risk Factors and Exemplary Programs: A Technical Report*. In the report, the authors shared their findings from a review of ERIC literature from 1980 to 2005 on the risk factors and conditions that increased the likelihood of students dropping out of school. The review of literature led to the following findings and trends:

1) There are a variety of factors that contribute to students' dropping out of school. Those factors can be classified in four domains: individual, family, school, and community (as cited in Hammond et al., 2007).
2) Because there are a variety of risk factors associated with dropping out, there is no single factor that can directly predict who is at risk of dropping out (as cited in Hammond et al., 2007).

3) When multiple risk factors are considered, there is a greater chance of predicting dropout (as cited in Hammond et al., 2007).
4) Students who dropout are not part of a homogeneous group. There are several subgroups of students who can be identified based on "when risk factors emerge, the combinations of risk factors experienced, and how the factors influence them" ((as cited in Hammond et al., 2007, p. 5).
5) Students attribute a variety of factors across multiple domains and the complex interactions among risk factors as their reasons for dropping out.
6) Often, a long process of disengagement, which may have occurred prior to beginning school, is the reason for students' dropping out (as cited in Hammond et al., 2007).
7) Dropping out is not a single event, but a process with factors mounting and multiplying over time (as cited in Hammond et al., 2007).

Teachers, at the time of this writing and more than in the past, were having to provide emotional support to students. Educators must be aware of the signs of potential emotional or behavioral problems that could indicate a student may need additional support (Hughes & Adera, 2006). Research showed that impoverished or low-income children often showed signs of emotional or physical trauma that caused them to behave in a manner that contradicted the behavior of students in their age group, leading to disruptive behavior (Bemak, Chung, & Siroskey-Sabdo, 2005; Carlile, 2009).

Additionally, females and males may display signs of emotional or physical trauma in different ways. Because of this, a good representation of both sexes was important to give female and male students an opportunity to seek a teacher of their same

sex (Carlile, 2009). Mentoring programs also proved to be beneficial to low-income students. Research showed that poor, working class, and even middle class students tended to struggle with peer pressure, sexual promiscuity, and identity development issues at higher rates than other students (Carlile, 2009). These were all issues that not only fostered a sense of hopelessness and despair in students, but also placed additional pressure on the public school system to address these issues (Bemak et al., 2005). Once a student reached an emotional low, there was a greater possibility that they may make unfavorable decisions about continuing their education, especially if they were lacking a strong support system (Gunn, Chorney, & Poulsen, 2010). Another student population where a strong support system was extremely important in order to reduce the dropout rate was teenage parents. Some teenage parents had a sufficient family support structure; however, young parents that did not have that critical foundation needed potential support from their teachers and other school officials (Knesting, 2008). Consequently, school districts should provide mentoring to teenage parents to assist with retention, while at the same time providing programs to educate them on effective parenting skills (McCowan, Roberts, & Slaughter, 2009).

Public school systems across the United States were facing the crisis of the declining number of high school graduates (Bemak et al., 2005). In light of this, government officials and educators must examine the factors that influence students' decisions to remain in school or to drop out (Gunn et al., 2010). The obstacles youth in the United States faced on a daily basis within their home and in society, as well as their perceptions of the educational experience and its value, shaped their decision to continue their education (Bemak et al., 2005). Since research showed that more teenagers were

deciding to end their educational journey before receiving a high school diploma, educators must do a better job of engaging students and communicating the value of an education (Gunn et al., 2010).

Hammond et al. (2007) identified four domains of risk factors for dropout; individual, family, school, and community. The individual domain included factors related to individual students, such as race or ethnicity, gender, teen pregnancy, substance abuse, school performance, and engagement. The family domain included factors related to family background and home experiences, such as socioeconomic status, family dynamics, household stress, and parental educational expectations. The third domain, school, included factors specific to school structure, environment and policies. Examples include public versus private, educational resources, student body demographics (race and class), school environment, and academic policies and practices. Last, the community domain included factors related to communities and neighborhoods. These factors were geographic location (urban or suburban), demographic characteristics (impoverished communities, large minority population), and unstable communities (violence, drug-related crime) (Hammond et al., 2007).

Government officials and educators developed and funded programs designed to reduce dropout rates and increase retention for low-income students. When decisions about allocating federal funds for school improvement were being made, government officials and educators must consider the full scope of social and economic factors that could hinder middle and high school students from graduating. This should also inform decisions for funding to schools that will truly benefit the most from SIGs and that could

lead to sustainable efforts that would positively impact students for years to come (Rheinheimer, Grace-Odeleye, Francois, & Kusorgbor, 2010).

Statement of the Problem

Students who lived in poverty were at a greater risk of dropping out of school due to a variety of factors including family dynamics, the lack of understanding of the benefits of receiving an education, and the lack of confidence in their ability to achieve sufficient grades (Suh & Suh, 2007). When at-risk students drop out of school, the student achievement gap increases and high school graduation rates decrease (Lessard, Fortin, Marcotte, Potvin, & Royer, 2009). Over the several decades previous to this writing there has been an increase in the number of impoverished and low-income communities in the United States. Because of this, there was a need to review programs designated to improve educational opportunities for this population (Suh & Suh, 2007). In order to ensure that programs were meeting the needs of a changing demographic, outcomes assessment were needed to ensure that funds were being used to achieve the goals set by the grant program. Additionally, a lack of educational resources, structurally sound schools, and safe learning environments in poor neighborhoods put pressure on educational institutions to identify areas of improvement (Knesting, 2008).

Despite some evidence that SIGs may be effective in assisting low-income students' persistence, there were concerns that these grants may not be as far reaching as originally expected. Students living in impoverished communities may not be aware of the various school programs that were available to them through funding by improvement grants. Support services, such as counseling, tutoring, and mentoring, may be in place, but may not be sufficiently utilized to promote academic success. Low-income students

should be encouraged and empowered to seek assistance from educators and take ownership of their own educational success (Rheinheimer et al., 2010).

Purpose of the Study

The purpose of this study was to analyze the effectiveness of SIG funding on academic achievement scores, dropout rates, and graduation rates for students attending low performing schools in the state of Missouri. A secondary purpose of the study was to analyze high school and alternative school data concerning dropout rates for each year after the implementation of the SIG program. After analyzing the various types of programs and administrative changes implemented at schools receiving SIG funds, this study identified and analyzed overall funding allocations for each program. The data gathered from this study adds to already existing literature related to school improvement programs and grant funding by determining if there is a positive correlation between funding allocations for high schools and increases in academic achievement scores and graduation rates, and decreases in dropout rates in low performing schools in the state of Missouri.

Public school systems throughout the United States were facing social challenges as the economic dynamics in America shifted (Bemak et al., 2005). Low achievement scores and increasing dropout rates continued to plague the public school system (Bridgeland, Diulio, & Balfanz, 2009). There were several factors that positively and negatively impacted students' desire and ability to drop out or stay in school. The number of teenagers ending their educational journey prior to graduating from high school was on the rise. If not addressed, this trend could lead to increased crime rates, decreased economic status and buying power, and an increased need for government assistance

programs (Gifford, Wells, Bai, Troop, Miller, & Babinski, 2010). This researcher believed there was a need for students at low performing schools to receive more individualized support services to meet their personal and educational needs. Many students attending low performing schools lived in impoverished communities, became teen parents, participated in violent or criminal activity, and experienced drug use and abuse. And, while SIG funding helped to implement prevention and intervention programs in the form of tutoring, childcare assistance, sex education, drug prevention and abuse programs, and mentoring programs to assist with increasing retention and graduation rates, and academic achievement, there is still room for expansion of programs and services (Zimmer, Gill, Razquin, Booker, & Lockwood, 2007).

Definition of Terms

Academically at-risk. A student was identified as academically at-risk if progress toward earning course credit was not taking place in a manner timely enough to allow all requirements to be met for graduation by the end of the fourth year of enrollment (USDOE, 2010).

Adequate Yearly Progress. A standard defined to measure a school district's success in achievement (Missouri Department of Elementary and Secondary Education [MODESE], 2010).

Cumulative Grade Point Average. An achievement scale used to indicate the average of high school grades over the span of four or more years (MODESE, 2010).

Low income schools. *S*chools where more than 30% of the student population come from low-income families, and the school is in a school district that is eligible to receive federal funding (USDOE, 2010).

Low performing schools. Schools identified by school districts that are "persistently in the lowest achieving 5% of all public schools in the past three years based on state reading and math assessments or graduation rates" (MODESE, 2012, p. 10).

Missouri Assessment Program. The composite scores of all the students in a school; this is the way the Missouri Department of Elementary and Secondary Education (MODESE) measures whether a school has made adequate yearly progress (AYP) according to the requirements of *No Child Left Behind*. Schools can document the progress of their students and analyze it according to grade level and other demographic information to gauge how they need to adjust the delivery of instruction for the next year (MODESE, 2010, p. 4).

No Child Left Behind Act. Based on the belief that setting high standards and establishing measurable goals can improve individual outcomes in education. The Act required states to develop assessments in basic skills to be given to all students in certain grades, if those states were to receive federal funding for schools. The act does not assert a national achievement standard; standards are set by each individual state (USDOE, 2010).

School Improvement Grant. A program implemented by the U.S. Department of Education as a platform for helping states and school districts restructure the nation's lowest performing schools (USDOE, 2010).

Student Intervention Programs. Provides opportunities for academic development, and assisting students with basic academic requirements and serves to motivate students towards the successful completion of their education (MODESE, 2010).

Research Questions and Hypotheses

The present study was designed to answer the following research questions:

1) How have school improvement grants helped high school graduation rates in the state of Missouri?
2) How have school improvement grants helped decrease high school dropout rates in the state of Missouri?
3) How are Missouri schools using funds from school improvement grants to help improve academic achievement scores?

The overall purpose of SIGs was to increase school retention and graduation rates of middle and high school students (USDOE, 2010). There were various methods employed by schools to accomplish goals of increased retention and academic success (Fournier, Austin, Samples, Goodenow, Wylie, Corliss, 2009). However, it is important to note that these programs may not always be effective in changing the trends that occur in many poor schools across the United States (Fournier et al., 2009). Additional social and economic factors must be considered in order to fully meet the needs of low-income students. These facts led to the following hypotheses for the present study:

H1: There are relationships between the amount of SIG funding allocated per 100 students and drop-out rates in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

H2: There are relationships between the amount of SIG funding allocated per 100 students and graduation rates in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

H3: There are relationships between the amount of SIG funding allocated per 100 students and MAP proficiency scores for English and math in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

H4: As the amount of SIG funds allocated per 100 students increases, the drop-out rates for low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015 will decrease.

H5: As the amount of SIG funds allocated per 100 students increases, the graduation rates for low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015 will increase.

H6: As the amount SIG funds allocated per 100 students increases, MAP proficiency scores will increase for English and math in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

Rationale for the Study

This research project addressed the gap in the existing literature in regards to SIG funded schools and graduation rates and academic achievement at high schools receiving these funds. The purpose of these SIG-supported programs was to increase retention and graduation rates (Zimmer et al., 2007). During the time of SIG financing, programs existed at the middle and high school levels and had explicit goals of increasing student retention and academic success (Gifford et al., 2010). There was sufficient research to indicate that the number of low-income families was on the rise. Educators must be equipped with the knowledge and skills to recognize at-risk students in a timely manner (Suh & Suh, 2007). Assessment data measuring the outcomes of SIG programs can provide valuable information for program improvement and modification of instruction

and counseling processes (Bemak et al., 2005). The data can also be used to identify effective instructional and classroom management processes (Jackson & McDermott, 2009). As stakeholders demand more accountability from states and school districts, policy makers must consider the needs of all students in determining support services for students (Jackson & McDermott, 2009).

Limitations of the Study

The study of the impact of SIGs on retention and academic achievement of low-income students was limited to the number of schools receiving SIG funding identified by MODESE. Additionally, statistics for student MAP scores in the state of Missouri were limited to the student populations identified by MODESE. Lastly, students placed in alternative learning environments and alternative schools may not be identified in the data provided by MODESE.

Summary

Since the landmark *Brown v the Board of Education* decision in 1954, the United States and the public education system have made great strides in providing equal education for all. However, while de jure segregation has ended, in many parts of the country de facto segregation continues to exist. School Improvement Grants (SIGs) have been one of several educational programs the USDOE have implemented to reverse the effects of the systemic oppression caused by slavery, Jim Crow, and segregation. The current study examined the impact of SIGs in low-achieving schools in the state of Missouri.

The report of this study was divided into five chapters. Chapter One introduces the study. Chapter Two is a review of the literature as it relates to the significance of

student support programs for academically at-risk students living in poverty. It also addresses whether then-current funding was sufficient and effective for the low-income families utilizing the public-school systems in the United States. Chapter Three provides a discussion of the methods used to conduct this quantitative study. Chapter Four is a review of the results of this quantitative study. Chapter Five provides a reflective overview of the study and a discussion of the conclusion this study.

Chapter Two: Literature Review

Introduction

The U.S. Department of Education was established in 1980 to ensure equal access to and excellence in education (USDOE, 2016). The Elementary and Secondary Education Act (ESEA) was reauthorized as the Every Student Succeeds Act (ESSA) in 2015. This was an initiative of the USDOE with the responsibility of ensuring equal opportunity to all the nation's children (USDOE, 2016). In 1965, President Lyndon B. Johnson signed the ESEA into law. The goal of ESEA was to provide financial support in the form of grants to school districts serving low-income students. Textbooks, library books, scholarships, and special education centers were a few of the initiatives that the grants went toward supporting (USDOE, 2016). Another important aspect of the grant was that it provided federal grants to state and local educational agencies to improve the overall quality of elementary and secondary education in the United States (USDOE, 2016).

The ESEA governed all funding available to local education agencies (LEAs) and state educational agencies (SEAs). LEAs were defined in ESEA as a public board of education or other public authority legally constituted within a State for either administrative control or direction of, or to perform a service function for, public elementary schools or secondary schools in a city, county, township, school district, or other political subdivision of a State, or for a combination of school districts or counties that is recognized in a State as an administrative agency for its public elementary schools or secondary schools (USDOE, 2016, para. 12).

LEAs, therefore, were the governing bodies of schools within a district or a county. Each state had a department of education or department of instruction with the primary responsibility of supervising the public elementary and secondary schools within that state. These were also known as SEAs (USDOE, 2016). It was through the ESEA that these education agencies received funding for programs and educational initiatives to support low-income school districts.

This literature review provides an overview of several of the programs under the ESEA whose goal was specifically to decrease dropout and improve academic achievement in low-income schools. This provided foundational information about the types of programs funded by the government, with the same goals as SIGs. The NCLB Act was reviewed and its impact on the administration of SIGs was explored. Hammond et al. (2007), in their technical report, *Dropout Risk Factors and Exemplary Programs,* provided four domains for risk factors associated with dropout. Those domains included individual, family, school, and community factors. Through their extensive review of the literature from 1980 to 2005, the researchers were able to determine the trends in the research as it related to retention and academic achievement. This literature review further explores the research related to those four domains.

Education Legislation

Jackson and McDermott (2009) stated there had been and continued to be a legislative push to change the direction of failing schools in the United States; however, in order for the change to be effective and sustainable, comprehensive curriculums, appropriately trained educators, and committed administrators were needed. This change was most needed in schools where economic inequality was pervasively evident (Walker,

Cassia, & Miriam, 2004). Dropout rates for middle and high school students were alarming. It seemed essential that educators play a larger role in determining causes of and preventing high dropout rates among their student populations (Bridgeland et al., 2009). According to Bridgeland, Diulio, and Balfanz (2009), many teachers felt as though they had little impact on students dropping out of school. The relationships that students often times established with their teachers put educators in a prime position to identify problems early enough to begin, or recommend, some type of intervention to halt what was starting to become the inevitable (Gifford et al., 2009). This is not to imply that all responsibility should be placed on educators, but it did provoke discussion that pertained to the magnitude that school officials should be held responsible (Bridgeland et al., 2009).

To assist school districts, administrators, and teachers with developing and implementing programs and resources to decrease the dropout rate and increase academic achievement in low-performing schools, the federal government made numerous grant programs available to LEAs and SEAs. Education agencies were able to apply for a diverse number of grants to support their initiatives through the ESEA.

School Dropout Prevention Program

Also known as the High School Graduation Initiative, the School Dropout Prevention Program fell under ESEA. This program was established in 2002 for the purposes of increasing academic achievement levels of high school students (USDOE, 2016). The program focused specifically on dropout prevention and reentry programs. There was also a middle school component of the grant that supported activities of those middle schools that were feeders to high schools with high dropout rates. These grants

were funded for up to 60 months to assist schools with developing and implementing sustainable dropout and re-entry programs (USDOE, 2016). Approved activities for this grant included the following:

1) The early and continued identification of students at-risk for dropping out of school
2) Providing at-risk students with services designed to keep them in school
3) Identifying and encouraging youth who have left school without graduating to re-enter and graduate
4) Implementing other comprehensive approaches
5) Implementing transition programs that help students successfully transition from middle to high school (USDOE, 2016, para. 2).

Innovative Programs

Innovative Programs provided funding for 27 program areas that focused on technology, instructional and educational materials, school and education reform, school improvement, and meeting the educational needs of at-risk students (USDOE, 2016). Innovative programs were state-administered, formula grants specifically for schools with a goal of improving academic success and the quality of education for students. There were three criteria a school must meet in order to be eligible for these funds. Proposed programs needed to meet the following guidelines:

1) Tied to promoting challenging academic achievement standards
2) Used to improve student academic achievement
3) Part of an overall education reform strategy. (USDOE, 2016, para. 1)

Funding for this grant program was first made available in 2002 as part of the ESEA under Title V, Part A.

Advanced Placement Incentive Program Grants

In 2001, the first appropriations were made for the Advanced Placement (AP) Incentive Program. These grants were established to increase opportunities for low-income students to participate in pre-AP and AP courses and tests (USDOE, 2016). Advanced Placement was a program available through the College Board, a not-for-educational organization, that offered college-level curriculum in high school (The College Board, 2016). A variety of activities were funded through this grant, including teacher training, development of pre-AP courses, participation in online AP courses, purchasing books and supplies, and the coordination between grade levels to prepare students for academic success in AP courses. Advanced Placement Incentive Program grants were available to SEAs, LEAs, and national nonprofit educational organizations with proficiency in providing AP services (USDOE, 2016).

School Improvement Grants

SIGs were formula-based federal funds provided to SEAs for the purpose of awarding them to LEAs that supported low-performing schools. SIGs were first authorized in 2001. In 2007, $125 million was allocated to support the mission of the program. Administered through the Office of School Turnaround, SIGs were available to qualifying LEAs for a maximum of 27 months and were required to be used to implement one of four improvement models (USDOE, 2016). The improvement models were the (1) restart model, where schools were reopened under the management of an education management organization, a charter school operator, or a charter management

organization; (2) school closure, where closed schools reassigned their students to higher-achieving schools; (3) the transformation model, where schools replaced the principal, developed a teacher- and leader-evaluation system that took student progress into account, introduced significant instructional reforms, increased learning time, and provided flexibility and support; and (4) the turnaround model, where schools replaced the principal and at least 50% of the staff, introduced substantial instructional reforms, increased learning time, and provided flexibility and support (Hurlburt et al., 2012).

No Child Left Behind Act

In 2001, President George W. Bush signed into law the NCLB Act in hopes of improving the quality of elementary and secondary education so that no child was left in a school that was failing them academically (USDOE, 2002b). This government mandate to educate all students in the United States significantly impacted the way in which federal funds, including Title I, could be used. The NCLB initiative focused on the development of programs that required students and educators to be accountable for achieving at high levels, to the extent that dropout rates would subsequently decline (Zimmer et al., 2007). Specifically, NCLB included

> four key principles-stronger accountability for results; greater flexibility for states, school districts and schools in the use of federal funds; more choices for parents of children from disadvantaged backgrounds; and an emphasis on teaching methods that have been demonstrated to work. (USDOE, 2002a, p. 9)

Accountability

Assisting students in meeting high academic standards was one of the fundamental parts of NCLB. One way this was accomplished was by requiring states to

submit annual report cards. These report cards included the results of annual assessments, based on stringent state standards, that measured students' progress in reading and math from grades three through eight (USDOE, 2002a). The data collected from the states was disaggregated based on a number of social identities, including race, ethnicity, ability, and English language proficiency, and tracked to determine which students were being left behind. Parents, educators, administrators, and policy makers were then informed about students' academic achievement. States with failing report cards received assistance; but with failure to improve, corrective action and possibly restructuring could take place. States that did well received academic achievement awards (USDOE, 2002a).

Flexibility and Local Control

Although NCLB mandated that states provide stronger evidence of academic achievement than in past years, the initiative did provide states with more flexibility and control over how federal funds could be used (USDOE, 2002a). States were allowed to transfer up to 50% of federal formula grant funds to a number of other grant programs, including those covered in Title I, without approval from the federal government. A benefit to this type of flexibility was that states were allowed to address issues specific to the needs of particular school districts. Additionally, certain states and school districts were allowed to combine federal funds to increase the reach of their educational efforts (USDOE, 2002a).

Enhanced Parental Choice

Under NCLB, parents with children who attended low-performing schools had greater options to assist their children with academic success. Parents of children attending low-performing schools that failed to meet state standards two years in a row

were given the opportunity to transfer their children to a school within the district with a higher academic performance record (USDOE, 2002a). The school district used Title I funds to pay for expenses associated with the student's transportation to the new school. If a school failed to meet standards three years in a row, parents were entitled to supplemental education services for their children, in the form of tutoring, after-school programs, and summer school. Another benefit of the act was that parents had the option to remove their children from unsafe schools, especially if the student was a victim of a violent crime while at school (USDOE, 2002).

Focus on What Works

Programs and practices proven, based on scientific research, to improve student learning and achievement were of special interest under the NCLB initiative (USDOE, 2002a). Specifically, funds were allocated to provide professional development to help teachers to strengthen previously attained skills and acquire new skills that would enhance their instructional techniques. Programs that were scientifically proven to prevent drug use and eradicate violence among youth were also important under this initiative (USDOE, 2002a).

The SIG program was an essential part of the then-new NCLB initiative. Since failure to successfully implement these types of programs was no longer an option, educational leaders were responsible for ensuring that the children to whom they were charged with educating, received a quality education (Bridgeland et al., 2009). Education reform through legislative initiatives placed pressure on school districts to have successful school transformations (Jackson & McDermott, 2009). To lead within this type of setting required diligence, hard work, and a sincere commitment to the

implementation of change with a valuable impact for all stakeholders (Jackson & McDermott, 2009). NCLB goals could be achieved if all stakeholders were on board and relevant support services were available to students who were more at-risk of being left behind, due to their economic status and social disparities.

Dropout Risk Factors

There were many reasons why students dropped out of school. These reasons ranged from a lack of support at home to boredom in the classroom (Bridgeland et al., 2009). To combat increased dropout rates, there should be a strong support system in the school district, as well as in the classroom. The goal of the NCLB Act was to set high educational standards, increase accountability, and establish measurable goals to improve educational outcomes for students (Jackson & McDermott, 2009). Included in this endeavor was the goal of increasing student retention rates and academic achievement (Zimmer et al., 2007). According to Jackson and McDermott, (2009), educators, administrators, and those generally interested in the public education system must examine how the NCLB initiative can assist students in staying in school and achieving academic success. Educational leaders must also begin by examining the factors, direct and indirect, that contributed to low retention rates and poor academic progress.

Individual Domain

The individual domain included a number of risk factors specifically related to the individual student. Those factors included race and ethnicity, poor school performance, teen pregnancy and disruptive behavior. The two areas most prevalent in the literature were teen pregnancy and disruptive behavior.

Teenage pregnancy. One factor that hindered students in low-income middle and high schools from graduating was premature parenthood. A common factor among teenage parents was the fear of the unknown. It was important, in these situations, for educators to provide guidance and direction in an effort to instill a sense of hope in young parents (Wilson & Wiley, 2009). Some teenage parents had strong family support structures. However, there were some teen parents who did not have that critical foundation and looked for support from their teachers and school counselors (Jackson & McDermott, 2009). As early parenthood became more prevalent, school districts needed to develop and enhance programs that educated teenage mothers on how to be good parents while remaining in school (Gifford et al., 2010).

The relationship between poverty and teen pregnancy was significantly strong, especially considering that the poverty rate for children born to unmarried teenagers was very high compared to their counterparts (Seunghyun, Johnson, Rice, & Manuel, 2004). Children born to poor, unmarried parents had a greater chance of dropping out of school. Contrastingly, children born to married young adults over the age of 20 had a low dropout rate (Sommers & Surmann, 2005). The statistics were even more staggering for African-American youth. There were reportedly various reasons why African-American teenagers became pregnant at higher rates than White youth (Seunghyun et al., 2004). These reasons ranged from alienation from peers and rebellion against authority, to the belief that a successful pregnancy created a sense of accomplishment that would otherwise be non-existent (Sommers & Surmann, 2005). Teenage pregnancy often led to poverty for these young parents and their children, which ultimately created a spiraling social and economic breakdown (Gifford et al., 2010). The combination of sub-par

educational training, the lack of basic life skills, and premature parenthood made it less likely that these teenage parents would have a chance of attaining gainful employment (Roxas, 2008).

Some educational leaders made curriculum changes to include sex education, childcare simulations, and home economic classes to address issues that helped students make better decisions (Wilson & Wiley 2009). These proactive leaders were visionaries, mentors, and advocates for change in the educational system. Their contributions were invaluable in providing what was needed demographically and culturally to school systems (Jackson & McDermott, 2009).

Although pregnancy prevention programs were used as scare tactics for middle-class suburban teenagers, the effectiveness was limited for lower-class urban youth (Sommers, 2009). As stated earlier, having a child at a young age provided a sense of accomplishment for some teenagers who faced multiple limitations and obstacles in their lives (Gifford et al., 2010). Therefore, simulations that created a reality of parenting responsibilities did not deter premature sexual behavior for teenagers who felt the need to fill a void in their lives (Sommers, 2009). It seemed inevitable that premature parenthood and poverty could have a negative impact on the retention rate for low-income schools and the number of students who graduated.

Due to an effort to stabilize and reduce teen pregnancy rates, which was often associated with dropout rates, some school districts took the initiative to create teen pregnancy prevention programs. In a study conducted by McCowan et al. (2009), a sample of 309 high school students from seven states was used to explore the role infant simulators played in deterring sexual activity among teenagers. Infant simulators were

life-like computerized infants that randomly displayed behaviors that real infants demonstrated. A treatment group and a comparison group were used for the study and pre- and post-tests were conducted to assess the attitudes and knowledge of students (McCowan et al., 2009). The treatment group completed a skill-based curriculum developed by an outsourced organization, which involved the infant simulators. The comparison group completed a normal school-developed curriculum without an infant simulator. The results showed that the structured curriculum with the infant simulator was more effective in changing students' attitudes toward early parenthood (McCowan et al., 2009). This may be an indication that more schools needed to offer similar programs.

Another study about teen pregnancy prevention examined a prevention experiment, Baby Think It Over, which was later named Real Care Baby, that focused on the attitudes and behaviors surrounding sexuality and the pregnancy rates among young people (Sommers, 2009). Again, a computerized infant simulator was used to study the effects on teenage pregnancy. Similar to previous studies, the data indicated that the program had a positive effect on teenagers who used the simulator; however, quasi-experimental results did not indicate the same significance (Sommers, 2009).

Some schools used abstinence-only-until-marriage education to highlight sex education programs to prevent teen pregnancy (Wilson & Wiley, 2009). Health teachers also utilized relevant research and statistics in public school sex and health education programs as a pregnancy prevention tool (Gifford et al., 2010). Questionnaires and surveys were used to solicit feedback from educators concerning their thoughts about the programs. The results showed that once educators examined the curriculum for these

types of programs, schools were more likely to adopt such initiatives (Wilson & Wiley, 2009).

Disruptive behavior in school. Educators must be able to recognize behaviors that are characteristic of students exhibiting social and behavioral problems. Often times, students show signs that they need additional attention by acting in a manner contradictory to what is expected of the average student (Carlile, 2009). For instance, when students are rejected by their peers, they may become disruptive by bullying others, performing poorly academically, or by becoming antisocial (Seigel, 2005). Females and males sometimes displayed disruptive behaviors differently even though they were dealing with similar issues; thus, it was imperative that teachers and counselors were trained to recognize the differences (Carlile, 2009). Additionally, students may struggle with peer pressure, social and economic deficiencies, and sexuality identity issues which could result in depression, substance and physical abuse, and identity development issues, all of which may hinder the learning process and cause feelings of hopelessness (Carlile 2009).

There are times when the external and internal struggles of students cause their behaviors to decline and manifest at school in negative ways, forcing teachers to take action (Carlile 2009; Roxas 2008; Seigel 2005). Respect, inquiry, and open-mindedness were all behaviors considered to be normal by teachers and administrators. However, school officials needed to be aware of the variation of social norms and social standards that students may perceive to be ordinary, which might cause undue stress on students when they do not meet those expectations (Gifford et al., 2009). In fact, when students

want to be accepted and want to be viewed as normal, they may lash out when their behaviors are not considered as such (Carlile, 2009).

When these students reach an emotional low, it may be easier for them to make the decision to quit school, especially without a strong support system (Roxas, 2008). Disruptive behavior in the classroom and on school grounds could be a cry for attention or help. Educators and counselors should be prepared to handle those students in a professional and effective manner (Carlile, 2009).

Family Domain

Family background and characteristics were risk factors associated with the family domain. Low economic status, low education of parents, and family disruption were a few examples of the background and characteristics associated with the family domain. There was overlap in the literature, as economic status, parents' education, and family disruption were all interrelated in some way.

Parental time with children. The amount of time parents devoted to their children's education was directly related to students' academic achievement. Students whose parents were able to invest more time and resources in their education were more likely to have higher test scores in math and reading and were more likely to be retained in school. Todd and Wolpin (2006) conducted a study to determine the role of the home environment on students' cognitive development and achievement in math and reading. The researchers used longitudinal data on test scores, home environments, and schools to study test score gaps between White, Black, and Hispanic children. They found that the home environment played an immense role in student achievement outcomes. For example, Black, White, and Hispanic mothers were administered a questionnaire where

they were asked the number of times they read to their children, the number of books their children have, and how often they engaged in teaching activities with their children. The results showed that 94% of White mothers, 57% of Black mothers, and 63% of Hispanic mothers reported that their children, age 3-5, had 10 or more books. The results also showed that 70% of White mothers reported reading stories to their children while only 40% of Black mothers, and 44% of Hispanic mothers reported reading their children stories. The results were better, but still disparaging, regarding mothers who engaged in teaching activities with their children; 78% of White mothers, 66% of Black mothers, and 70% of Hispanic mothers reported engaging in teaching activities with their children. According to Todd and Wolpin (2006), the home environment was directly related to students' test scores and overall academic achievement. These results were connected to the educational attainment of the mother. When the number of years of schooling was compared, the results showed that White mothers, on average, had 13.1 years of schooling, while Black mothers had 12.4 and Hispanic mothers had 11.7 years of schooling. Furthermore, when mothers were tested on their abilities and knowledge, White mothers scored 52.4%, which was closer to the median, while Black mothers and Hispanic mothers scored 20.4% and 25.6%, respectively.

Parental income. Research showed that individuals with more education greater income over a lifetime than those with less education (Carnevale et al., 2011). According to a study conducted by Page, Stevens, and Lindo (2007) parental income, as it related to job displacement, had an impact on students educational and socioeconomic attainment. Specifically, the researchers used a control group of students whose parents had never experienced job displacement, and two treatment groups one with parents who

experienced job displacement due to closure of a firm and the other with parents who experienced job displacement due to a layoff. The researchers found that children who were already experiencing financial issues, or from low-income households, were most likely impacted when job displacement occurred. The researchers initially did a review of literature that supported that children raised in low income families, among other things, had lower levels of education. However, family background characteristics could not be removed as a variable, since it was well documented that low income children graduated at lower rates than those from wealthy homes with access to more resources. Moreover, the researchers found that when children's parents were less educated, unmarried, and Black, more negative consequences were suffered.

Dahl and Lochner (2011) conducted a study where they explored the Earned Income Tax Credit (EITC) and its relationship to family income changes and child academic achievement. The researchers stated

> Children growing up in poor families are likely to have adverse home environments or face other challenges which would continue to affect their development even if family income were to increase substantially. Furthermore, year-to-year changes in family circumstances like parental job loss or promotion, illness, or moving to a new neighborhood may affect both family income as well as family dynamics and parenting behavior. (p. 1)

Dahl and Lochner (2011) believed that family income played an important role, not only on family dynamics, but also on the investments families were able to make to their children's education. They found that income was directly related to students' test scores

in math and reading. Additionally, the researchers found that the extra income provided though EITC played a small, but significant role in the increase in students' test scores.

School Domain

Risk factors associated with the school domain were related to school structure, environment, and policies. Examples of these factors included educational resources, school environment, and academic policies and practices. Educational resources and school environment were predominant in the literature.

Positive teaching environments. Research showed that when teachers had positive beliefs about students' abilities to succeed, they conducted themselves in a manner that helped students to achieve academic success (Jackson & McDermott, 2009). When teachers believed their students had the potential for high academic achievement, they were more effective in their teaching methods (Gifford et al., 2010). And, while maintaining a positive attitude in the classroom was proven to be an essential component for academic success, the support of administrators and policy makers was also needed. It was required that educational leaders encourage teachers to think positive, stay motivated, and focus on their diverse talents in the classroom (Jackson & McDermott, 2009).

While it might be difficult for administrators to be directly involved in the lives of each student, they did have the power to create social environments conducive to learning for each student (Jackson & McDermott, 2009). To this end, administrators should focus on making a positive difference for the school and the students, regardless of any social limitations that may exist (Jackson & McDermott, 2009). Additionally, school officials should make it a priority that students have access to the necessary resources that will

help them educationally, economically, and socially (Jackson & McDermott, 2009). Educators recognizing the need for innovative measures and creative initiatives can bolster students' abilities to achieve and succeed academically.

Alternative schools and programs. Alternative schools and programs were designed to address the needs of students who, for whatever reason, were unable to learn in a traditional school setting. Students who attended alternative schools were usually at-risk students and faced educational struggles and obstacles (Carver, Lewis, & Tice, 2010). Generally, students who attended alternative schools had poor grades, truancy problems, behavioral issues, or were teenage parents. Alternative schools were usually located in an area away from the traditional public middle or high school campus. However, in some instances, traditional schools had alternative programs as part of the institution's curriculum (Carver et al., 2010). There were some alternative school programs that provided distance education as an instructional option for at-risk students who had dropped out of the traditional, public school system or those who had displayed disruptive behaviors and were no longer able to be educated with the general population (Carver et al., 2010).

School districts were required to report the number of alternative schools and programs they had in place on an annual basis. This information was then analyzed and published by the Center for Education Statistics. The reported data included the number of students enrolled and the circumstances surrounding their need to be enrolled in alternative schools or programs (Carver et al., 2010). This data allowed educators and researchers an opportunity to identify the needs of any given school district, and the dynamics that surrounded those needs. The information obtained from these data enabled

educators to explore new ways of teaching and facilitating learning with at-risk populations (Carver et al., 2010). Armed with this information, teachers were able to recognize warning signs sooner, rather than later, and develop intervention strategies that helped turn things around for the students (Carlile, 2009).

Alternative learning environments could be used along with enhanced literacy programs and other teaching methods to help decrease dropout rates. However, unless highly trained teachers were hired, standards based-curriculums were used, and college readiness programs were in place, these changes would not be sustainable (Bridgeland et al., 2009). As educational leaders analyzed the needs of at-risk students, nontraditional teaching methods should be explored (Roxas, 2008). Gifford, Wells, Bai, Troop, Miller, and Babinski (2010) recommended using child and family team meetings during the weekends to accommodate the schedules of the parents, giving all parents an opportunity to address their students' learning issues. Diverse instructional practices could be implemented and assessed to ensure the needs of at-risk students were being met.

School counselors. Counselors played a very important role in schools and were an excellent resource for at-risk students. Counselors were trained to recognize signs of abnormal behavior and develop and implement care plans for students before their behavior spiraled out of control (Carlile, 2009). Because of this, it was imperative that school counselors understand the different social structures, social pressures, household dynamics, and mental challenges students faced (Bridgeland et al., 2009). According to Carlile (2009), effective student intervention plans involved school counselors and teachers and offered options for student support structures and alternative communication arenas, so teachers and counselors could have a place to foster the needs of at-risk and

displaced students. Counselors could serve as mediators and confidants to at-risk students who showed signs of leaving school due to disruptive behavior, pregnancy, family problems, and identity development issues.

Mentors and role models. Another way low-income schools could face the challenge of increasing retention rates for at-risk students was by implementing mentor programs. As a first step in decreasing the dropout rates, educators and administrators should work with community leaders, social activists, and local government officials to identify mentors and role models (Jackson & McDermott, 2009). Administrators and educators should examine the dropout epidemic and develop mentoring programs that accommodate the specific needs of their at-risk student population (Bridgeland et al., 2009).

Peer and professional tutoring could also be a form of mentorship. As students feel more comfortable with the tutoring process, they may be more inclined to seek assistance for issues unrelated to academic achievement. Student intervention programs that embraced mentoring as a form of teaching have been shown to be an effective strategy if the program was monitored and assessed regularly (Rheinheimer et al., 2010).

Student intervention programs. Student intervention programs could be tailored to fit the needs of at-risk students in any given school. At-risk children usually have problems achieving in school due to poor physical health, poverty, mental or physical abuse, neglect, and behavior disorders (Carlile, 2009). Having access to health and human services in schools proved to be a key factor in exposing students to options and resources that may help them make better life decisions (Gifford et al., 2010). Collaboration with child advocacy groups and other agencies was also shown as an

effective method for providing students with better access to human and social services (Gifford et al., 2010). These inclusive efforts to create in-school social services programs indicated that some educational leaders were thinking outside the box (Gifford et al., 2010). Access to nutritional programs, mentoring, tutoring, counseling, and adequate housing was shown to alleviate worries that caused much of the stress that pushed youth toward negative options to survive. Moreover, enhanced access to doctors and nurse practitioners in schools may become more important to reducing teenage pregnancy rates (Gifford et al., 2010).

Community Domain

Dropout rates were higher in impoverished communities and communities with high crime rates. These are both risk factors associated with the community domain. The location and type of school also impacts dropout rates. Schools located in urban areas had higher dropout rates than those in suburban and rural areas.

Disadvantaged neighborhoods. Crowder and South (2011) examined the spatial and temporal dimensions of neighborhoods and the impact it had on high school dropout rates. Specifically, the researchers examined how the spatial, or areas surrounding a student's neighborhood, and temporal, or length of exposure to disadvantaged conditions in one's own neighborhood and surrounding neighborhoods, dimensions affected the likelihood of high school graduation. The researcher shared the fact that in disadvantaged neighborhoods students were surrounded by their peers, who were in similar socioeconomic situations and who devalued education. Additionally, adult role models who have experienced economic success in disadvantaged areas were scarce. There were more examples of a lack of education and its value in disadvantaged areas than in areas

with higher socioeconomic status. And, while their research showed some racial and ethnic differences associated with spatial and temporal dimensions, overall, the researchers found that a student's neighborhood as well as the surrounding neighborhoods socioeconomic status impacted graduation. Also, the longer students were exposed to disadvantaged neighborhoods, the less likely they were to complete high school.

Wodtke, Harding, and Elwert (2011) conducted a study similar to Crowder and South (2011), where they explored temporal dimensions and its impact on educational attainment. The researchers found "that sustained exposure to disadvantaged neighborhoods—characterized by high poverty, unemployment, and welfare receipt, many female-headed households, and few well-educated adults — throughout the entire childhood life course has a devastating impact on the chances of graduating from high school" (Wodtke et al., p. 17). Furthermore, the researchers concluded that

> family background and neighborhood context affect children through a complex time-dependent process of selection, exposure and feedback. We argue that family characteristics linked to children's educational attainment, such as parental marital status and family income, are not only important determinants of where a family lives but are also affected by neighborhood conditions in the past. (p. 18)

Ultimately, the research related to the community domain further exemplified the fact that each of the four domains were interconnected and directly and indirectly impacted one another. Individual, family, school, and community domains have, threaded throughout the factors, socioeconomic status. This was not surprising since class was

generally the common denominator when exploring social identities, such as race, gender, and ability in relation to oppression.

Summary

The preceding literature review explored factors associated with dropout rates for at-risk students in middle and high school. With an increased focus on accountability and assessment, this researcher believed that administrators may face more pressure from stakeholders to educate all children, despite any negative circumstances. Administrators and educators in low-income and impoverished schools faced an even bigger challenge to stabilize or decrease middle and high school dropout rates, because poverty presented additional obstacles (Jackson & McDermott, 2009).

When used effectively SIGs could have a significant and positive impact on student retention, student achievement, and academic success. In the study conducted by Rheinheimer, Grace-Odeleye, Francois, and Kusorgbor (2010) the researchers found that educators needed to implement and encourage the use of student intervention programs early in the learning process to enhance the educational experience and empower students to take charge of their educational journey. This researcher believed that all children deserved a quality education and that a quality education was a necessity for economic mobility. This researcher also believed that to make the educational experience engaging and enriching, parents, students, and educators must partner and become advocates for one another.

Educating and retaining students in impoverished schools seemed to be a growing dilemma that required immediate attention (Jackson & McDermott, 2009). Challenges for an educator in the 21st Century involved competing with disruptive households,

navigating social problems, and working through economic struggles that young people faced on a daily basis (Gifford et al, 2010). The research gave some insight into the practices that may help educational leaders enhance programs, develop innovative curricula, and ultimately change the lives of children.

Chapter Three: Methodology

The purpose of this study was to examine the SIG program and determine the effectiveness of SIG funding on academic achievement scores, dropout rates, and graduation rates for students attending low performing schools in the state of Missouri. Secondary purposes were to examine high school, middle school, and grade school comparisons for each year after the implementation of the SIG program.

Data Sources

The data for this study were obtained from MODESE. MODESE provided a report card for each school in the state of Missouri, which included MAP scores, dropout rates, graduation rates, demographics, budgets, and information pertaining to the accreditation standing of each school and district. Additionally, MODESE provided information regarding schools receiving federal funding under various programs. This information was made publicly available on the office website for MODESE.

In 2010, the USDOE provided final requirements for schools interested in participating in the SIG program (MODESE, 2010). Schools were required to use a three-tier system to identify and rank schools with the lowest academic achievement and the greatest need for funding to improve academic achievement. The tiers were defined as follows:

- Tier I: A Title I school making corrective action or restructuring that the school district or what is considered state education agency identified as persistently ranked as one of the lowest achieving schools in the district.
- Tier II: Secondary schools identified as persistent low achieving and eligible for Title I-Part A funds but don't receive those funds.

- Tier III: Title I schools currently undergoing improvement or corrective action or restructuring but are not identified as Tier I schools. (MODESE, 2010, p. 2)

The USDOE also issued final rules, in the form of four improvement models, for Tier I and Tier II schools applying for state funding. One of four improvement models was to be used for school districts receiving federal funding. The four models were as follows:

1) Restart model: Reopen the school under the management of a charter school operator, a charter management organization, or an education management organization.
2) School closure: Close the school and reassign students to higher-achieving schools.
3) Transformation model: Replace the principal, develop a teacher- and leader-evaluation system that takes student progress into account, introduce significant instructional reforms, increase learning time, and provide flexibility and support.
4) Turnaround model: Replace the principal and no less than 50% of the staff, introduce significant instructional reforms, increase learning time, and provide flexibility and support. (MODESE, 2010, p. 1)

Schools in the state of Missouri implemented the turnaround and transformation models. The turnaround model, as defined by Mass Insight Education, was an intervention used to produce significant gains in achievement within two years (as cited by Kutash, Nico, Gorin, Rahmatullah, & Talant, 2010). Additionally, it provided a foundation to prepare schools for the longer process of transformation (Kutash et al., 2010; MODESE, 2010). The transformation model was similar to the turnaround model;

however, the majority of the responsibility for failing to create an appropriate learning environment fell on leadership and instructional personnel.

School Improvement Grant Funded Schools

The state of Missouri identified a total of 56 schools to receive SIGs from 2010 to 2015 (MODESE, 2010). The qualified schools were located in three regions: St. Louis, Kansas City, and Southeast Missouri. Allocations were dispersed in increments, based on the classification of the school. For example, in 2010, 32 low performing schools received funding. These schools were classified as Cadre I, and funding ended in 2012. In 2012, MODESE classified 10 schools as Cadre II. These schools received funding until 2014. The final classification, Cadre III, included 14 schools that received funding until 2014 (MODESE, 2010).

Major Variables

Creswell (2005) defined the independent variable as an attribute or characteristic that influenced the dependent variable. In this study, there was one independent variable: the amount of SIGs allocated per student in low-performing schools. A further description is provided later in this writing. The dependent, or the criterion variables, were dependent on the independent variable (Creswell, 2005). The dependent variables in this study were the dropout rate, graduation rate, and MAP scores, particularly in the content areas of Math and English. Further information, by which each of the dependent variable values were calculated, will be explained in more detail in proceeding chapters.

Research Questions and Null Hypotheses

The following research questions and null hypotheses were addressed to examine the relationship between variables:

Research Questions

1) How have school improvement grants helped high school graduation rates in the state of Missouri?
2) How have school improvement grants helped decrease high school dropout rates in the state of Missouri?
3) How are Missouri schools using funds from school improvement grants to help improve academic achievement scores?

Null Hypotheses

$H_0$1: There are no relationships between the amount of SIG funding allocated per 100 students and drop-out rates in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

$H_0$2: There are no relationships between the amount of SIG funding allocated per 100 students and graduation rates in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

$H_0$3: There are no relationships between the amount of SIG funding allocated per 100 students and MAP proficiency scores for English and math in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

$H_0$4: As the amount of SIG funds allocated per 100 students increases, the drop-out rates for low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015 will not decrease.

$H_0$5: As the amount of SIG funds allocated per 100 students increases, the graduation rates for low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015 will not increase.

$H_0$6: As the amount SIG funds allocated per 100 students increases, MAP proficiency scores will not increase for English and math in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

Data Analysis

Mertler and Vannatta (2005) stated that the first step in most data analysis circumstances was to "describe or summarize the data collected on a set of subjects that constitute the sample size" (p. 7). Descriptive statistics involved determining measures of central tendency, variability, relative position, and relationship. The mean, median, and mode were all components of measures of central tendency (Mertler & Vannatta, 2005). Measures of variability included the range, quartile deviation, standard deviation, and variance. These measures provided the researcher with information related to the spread of scores around the measures of central tendency (Mertler & Vannatta, 2005). Percentile ranks and standard scores provided measures of relative position, and informed the researcher about the distribution of scores in a data set. The *Spearman rho* and the *Pearson r* were the most common types of measures of relationship. Measures of relationship specify "the degree to which two quantifiable variables are related to each other" (Mertler & Vannatta, 2005, p. 8;). Descriptive statistics were used in the present study to provide a description of the major variables and compare overall scores and funding during the funding period for each school and district.

Bivariate and multivariate regression analyses were used to determine the impact of SIG funding on dropout rates, graduation rates, and MAP scores. Additionally, correlations between SIG funding and each of the dependent variables, dropout rates, graduation rates, and MAP scores were analyzed. According to Diekhoff (1996),

bivariate regression analysis was "a statistical procedure that uses the correlation between two variables, X and Y, as the basis for predicting values on one variable from values on the second variable" (p. 344). In essence, the relationship between the dependent and independent variables are used to predict scores of the dependent variable from the independent variable (Diekhoff, 1996; Mertler & Vannatta, 2005). The amount of funding per student, proficiency scores, and dropout rates in schools that received SIGs were presented in each hypothesis. Elementary, middle, and high schools were isolated to determine the preceding associations, as well. Appropriate controls were accounted for in the analyses. The test for multi-collinearity was also used as part of the analysis to determine correlation between independent variables.

To determine the effects of SIG funding on graduation and dropout rates and English and math scores, a simple regression equation using ordinary least squares (OLS) was used. Regression equations were often used to make predictions about the relationship between variables (Utts & Heckard, 2004). A regression line was ideal, because it was a straight line, and ensured "the best equation for describing the relationship" between two variables (Utts & Heckard, 2004, p. 138).

The purpose of regression analysis was to "predict one variable from another based on the existence of a correlation between the variables" (Diekhoff, 1996, p. 7). Regression analysis was an inferential statistics procedure, because the prediction extended beyond the data being used for any given study (Diekhoff, 1996). Furthermore, this study used the Pearson Product Moment Correlation Coefficient (PPMCC) measure to analyze the relationships. Correlation was the appropriate method to use for analyzing the relationship between variables that were meaningfully quantifiable (Hamilton, 1998).

The PPMCC (*r*) was the numeric value that ranged between +1 and -1. Both described either a perfect positive or perfect negative relationship, respectively. A coefficient (*r*) less than 0 indicated a negative relationship and more than 0 indicated a positive relationship. The method showed strength of relationships as coefficients closest to +1 and -1 were stronger than those further away. A coefficient of 0 indicated no relationship (Hamilton, 1998). Typically, when the coefficient value is between -1.0 and -0.5 or 1.0 and 0.5, the relationship is considered strong. A coefficient value between -0.5 and -0.3 or 0.3 to 0.5 is considered moderate. A coefficient between -0.3 and -0.1 or 0.1 to 0.3 is weak, and between -0.1 and 0.1 is a very weak or no relationship (Hamilton, 1998).

A variety of statistical methods were used to describe and analyze the data to answer the research questions and null hypotheses for this study. Chapter Four provides a detailed overview of the results of the data analysis, as they relate to the null hypotheses. Chapter Five includes a discussion of the data and answered the established research questions.

Establishing Processes

The primary researcher was interested in determining whether SIGs had an impact on dropout rates, graduation rates, and achievement scores. This research used the linear sequence research model (Spradley, 1980) by beginning with the earlier stated hypotheses to analyze the effects of SIG funding on MAP scores, graduation rates, and dropout rates at schools that were eligible and received SIGs in the state of Missouri. As earlier stated, the data for this study were obtained from MODESE website that provided a school report card for each school in Missouri. The report card showed MAP scores, dropout rates, graduation rates, demographics, budgets, and all information regarding the

state of each school and district. Additionally, the MODESE site provided information that pertained to schools that received federal funding under various programs. In 2010, the USDOE provided final requirements for schools to participate in the SIG program, authorized under section 1003(g) of the ESEA (MODESE, 2010). Schools were required to use a three-tiered system to identify and rank schools that achieved the lowest and showed the greatest need for the grant aimed at improving student achievement.

The USDOE expected schools to use the SIG funds toward one of four models of intervention, (1) turnaround, (2) restart, (3) school closure, and (4) transformation (MODESE, 2010). Missouri schools only used the turnaround and transformation models (MODESE, 2010). The turnaround model provided a foundation to get schools ready for the longer process of transformation (Kutash et al., 2010; MODESE, 2010). The specific criteria for the turnaround model was to replace the principal, rehire no more than 50% of existing staff, and develop strategies to place, recruit, and retain staff, among other important tasks (MODESE, 2010). The transformation model was similar to the turnaround model, but held leadership and instructional personnel more responsible for not creating the appropriate learning environment. In addition to replacing the principal and not hiring existing staff, the transformation model included mechanisms to involve the community and parents and insure technical assistance, to name a few requirements (MODESE, 2010; Perlman, Chelemer, & Redding, 2011).

Each school that qualified for funding fell within three regions, St. Louis, Kansas City, and Southeast Missouri. The state of Missouri identified a total of 56 schools to receive SIGs from 2010 – 2015. Each school would receive funding for a maximum of three years. In 2010, which was the year when most low achieving schools were

identified, 32 schools received funding that ended in 2012, and MODESE classified them as Cadre I. In 2012, MODESE classified 10 schools as Cadre II that received funding until 2014. And finally, MODESE classified Cadre III schools that received funding form 2013-2015, which totaled 14 schools (MODESE, 2010). That said, this study examined the effects of SIG funding on MAP scores, dropout, and graduation rates for the identified schools.

School Improvement Grant Values

To determine a valid assessment of how funding for SIGs affected dropout rates, graduation rates, and MAP scores, it was important to address the variations of total amount allocated toward each school, along with the variation of the number of students enrolled in each school. This research assumed that the amount of money allocated perhaps would affect the success or failure of an intervention. To standardize the amount of money allocated to each school, this research identified an amount of funding per 100 students allocated to each school for a given year. The amount per 100 students was computed by dividing the total amount allocated to a given school by that school's number of students enrolled for that academic year. The result was then standardized by multiplying by 100, which provided the amount of money allocated for each 100 students in a given year. For instance, the mean total amount allocated for all schools involved from 2010 to 2015 was $668,459 and the mean number of students for all schools was 457. After standardizing these figures, the mean total amount of funds allocated for every 100 students was $146,271 (668,459/457 = 1462; 1462 x 100 = 146,271). The amount of funds per 100 students was the key independent unit of analysis in this study and was explored at varying degrees, such as relation to grade levels, type of

intervention, and year-to-year differences (cadres), for the three years' funds were received.

Dropout Rate Values

While some research used retention rates to measure school success, this study examined retention in relation to dropout rates. Much of the data that pertained to dropout rates were the result of the Missouri Revised Statute §167.275, which required secondary schools to consistently document and report dropout rates for youth 16-years-of-age or older (Missouri Revised Statutes, 2015). Only those who left school to attend another school, joined the armed forces, or attended a college or university were not included in the report (Missouri Revised Statutes, 2015, Chapter 167.275.1). Thus, MODESE used annual dropout rate reports to determine retention rates. Dropout rates in the state of Missouri were calculated for grades 9 through 12. The rate was the number of dropouts divided by the total of September enrollment, plus transfers, minus transfers out, minus dropouts. This number was then divided by two (MODESE, 2010). For purposes of drawing descriptions and statistical conclusions for this dissertation, a mean dropout rate was used for all Missouri schools that received SIG funding in years 2010 to 2015.

Graduation Rate Values

As this study analyzed the relationship of SIGs to graduation rates, it was important to point out how MODESE calculated those rates. MODESE looked at a four-year and five-year graduation rate. This study used the four-year rate, which was the number of students who graduated in four years divided by the number of students who formed the cohort for the graduating class, rounded to the nearest tenth. The cohort was

made up of students who started the 9th grade adjusted by adding any students who transferred into the cohort during the 9th grade and the next three years, and then subtracting all students who left for the following reasons: transferred out, emigrated to another country, or died during the same period. A mean graduation rate was also used for this dissertation to analyze the effects of SIG funds allocated per student during the years 2010 to 2015 on graduation rates.

Missouri Assessment Program Score Values

Math scores. MODESE collected data from each school district in the State of Missouri to determine types of programs needed, and how state and federal funds were allocated. Additionally, MODESE made data available to all school districts, so that educational leaders were equipped with sufficient information to develop stronger school districts (MODESE, 2010). Using data from MODESE's preliminary annual performance report (APR) and AYP, this study examined student achievement math scores, which MODESE measured through percentages of students within each school who were proficient or advanced, after taking the appropriate math achievement tests. These scores were available for students in elementary, middle, and high schools. It was important to note that MODESE recorded scores for each grade level within a given school, which prompted this researcher to examine the average of each grade level to provide one total school score.

English scores. The same method used for math scores was conducted for English scores. The mean English scores for all schools that participated in SIG funding between years 2010 and 2015 were analyzed, with results to follow, after a careful descriptive analysis of the data.

Descriptive Analysis

Before examining the stated hypotheses further, this study provides a description of the major variables and compares overall scores and funding, over the years each school was granted funds. As stated earlier, the mean amount of funds allocated per 100 students between 2010 and 2015 was $146,271. When broken down by the three years each Cadre received funding, Table 1 shows that only year one exceeded the mean amount allocated for the five-year period this study explored. In other words, the only year that schools received more than the mean amount per student was in the first year they received funding. When analyzing English and Math scores from the years 2010 to 2015, the mean scores were 21 and 16, respectively, for the three years, schools received funding. As earlier stated, the English and math score means were derived after averaging the percentage of students who scored proficient in each grade at a given school and calculating the mean of all schools that received SIG funding during the targeted years. The second and third years showed progress equal to or above the mean scores exhibited in the first year. With regard to dropout and graduation rates, the mean rate for dropouts from years 2010 to 2015 for the targeted schools was 15%, while the mean for graduation rate was 63%. Again, the dropout and graduation rate means were derived from the reported rates for each school targeted for SIG funding in this study. After analyzing the three years for each cadre, Table 1 shows that the mean dropout rate increased each year after funding was allocated, and the rate exceeded the mean rate in the third year. Likewise, the mean graduation rate increased in subsequent years and was higher than that of the mean graduation rate from 2010 to 2015 (Table 1).

Table 1

Mean Amount Allocated for Each 100 Students and Mean MAP Proficiency scores, Mean Dropout and Mean Graduation Rates for Students for Years 1, 2 and 3 of Fund Allocation

	Year 1	Year 2	Year 3
Funds allocated per student	$148,782	$136,542	$145,741
English Scores	20	21	23
Math Scores	14	17	17
Dropout rates	12	15	21
Graduation rates	50	62	66

N = 163 Observations

Source: MODESE (2010) Data

This study then examined this data by isolating each school level by high school, middle school, and elementary school.

Level of School

The mean amount of funds allocated for high schools for years 2010 through 2015 was $117,861. Table 2 shows that only year one had a higher mean. In fact, as the years increased, the mean amount allocated per 100 students in the high schools targeted decreased. The English scores for high school students for the three year's funds were received were approximately the same as the mean score for high schools across all tiers, cadres, and intervention types from 2010 through 2015. The mean dropout rate from 2010 to 2015 was 16%. Ironically, the mean dropout rate in year three exceeded the mean across categories, reaching 22%, as Table 2 indicates, while it was actually below the mean for the first and second years, 11% and 15% respectively. This implied that dropout rates worsened with each year high schools received SIG funding. The pattern

was the same for graduation rates, as Table 2 shows a mean rate of 66% for year three, compared to the mean rate of 63% for high schools within all tiers, cadres, and intervention types.

When analyzing middle schools within all tiers and cadres from years 2010 through 2015, the mean amount allocated per 100 students was $121,033. Similar to high school data, the mean amount allocated per 100 students also went down from the first year ($144,340) to the third year ($99,346), falling below the mean for all categories. The mean English score from 2010 through 2015 was 19, which started at 17 in year one, increased to 20 in year two, and fell to 19 in year three. After the first year of funding, the mean math score increased to 19 for years two and three, which was consistent with the mean score for all middle schools targeted in all tiers and cadres from 2010 through 2015 (see Table 2).

And finally, for elementary schools, the mean amount per 100 students within each tier and cadre from years 2010 through 2015 was $178,361. While only the second year saw a mean amount per 100 students below the mean from 2010 through 2015, students received most funding per 100 students in the third year for elementary schools at $192,605 (see Table 2). Unfortunately, the funds did not seem to be a factor for the MAP scores, as English scores decreased from 17 in year one, to 11 in year two, and then increased to 15 in year three (Table 2).

The mean for English scores from 2010 through 2015 was 12. On the one hand, Table 2 shows that the mean math scores increased from 11 in the first year to 13 in the third year, compared to the mean of 12 for years 2010 through 2015. It should be noted

that dropout and graduation rates were not recorded in MODESE website from which this study extracted information.

Table 2

Mean Amount Allocated for Each 100 Students and Mean MAP Proficiency scores, Mean Dropout and Mean Graduation Rates for Students for Years 1, 2 and 3 of Fund Allocation by Grade Level

Level	Mean Funds	English	Math	Dropout	Graduation
High					
Year 1	$121,643	37	17	11	60
Year 2	$116,695	37	21	15	62
Year 3	$115,479	38	21	22	66
Middle					
Year 1	$144,340	17	16		
Year 2	$112,069	20	19		
Year 3	$99,646	19	19		
Elementary					
Year 1	$173,971	17	11		
Year 2	$167,830	11	12		
Year 3	$192,605	15	13		

N = 163 Observations

Source: MODESE (2010) Data

Type of Intervention

After analyzing the data for schools that chose to undergo transformation, the mean amount allocated per 100 students from years 2010 through 2015 was $138,614. Only year two was below this mean (See Table 3). The mean scores for English and

Math for years 2010 through 2015 were 23 and 17, respectively. Table 3 indicates that the mean scores for year three exceeded the mean from 2010 through 2015. This seemed to indicate an improvement in scores by the final year the schools going through transformation would stop receiving SIG funding.

Table 3

Mean Amount Allocated for Each 100 Students and Mean MAP Proficiency scores, Mean Dropout and Mean Graduation Rates for Students for Years 1, 2 and 3 of Fund Allocation by Intervention Type

Intervention	Mean Funds	English	Math	Dropout	Graduation
Transformation					
Year 1	$145,368	22	15	8	64
Year 2	$130,098	22	17	14	61
Year 3	$140,484	24	18	20	68
Turnaround					
Year 1	$167,690	15	10	22	45
Year 2	$153,724	18	15	18	63
Year 3	$160,758	18	14	26	56

N = 163 Observations

Source: MODESE (2010) Data

It is not certain to what extent the amount of funds provided per student had any bearing on MAP scores, because the amount decreased from year one to year two and then increased from year two to year three. The mean dropout rate for years 2010 through 2015 was 14%, which was higher than the mean dropout rate for year one, which was 8% (see Table 3). The dropout rate worsened to 20% in year three. As Table 3

shows, the graduation rate initially ended below the mean of 65% from years 2010 through 2015, and then increased above that mean to 68% in the third year.

Schools that underwent the turnaround intervention appeared a bit different than those that used the transformation model. Although the mean amount allocated per 100 students for year one was $167,690, it decreased in year two to $153,724 (see Table 3), which was well below the mean amount allocated ($160,723) from years 2010 through 2015. However, it did manage to barely increase above that mean in year three. After analyzing English and math scores and dropout and graduation rates, each showed positive movement from year one to year two, but moved in a negative direction in year three (see Table 3). It should be noted that Missouri schools only used turnaround and transformation intervention models, and not the restart or school closure models.

Unfortunately, it was difficult to discern any valuable patterns from the above descriptions to determine if SIG funds had any effect on MAP scores, graduation rates, or dropout rates. Scores decreased and increased sporadically between the years that the targeted schools received funding. These results seemed to suggest that there were other factors beyond SIG funding that may directly or indirectly affect the outcomes, which might have to do with other confounding sociological issues. This study provides a brief examination of some of those concerns.

Confounding Issues and Effects of Social Structure

Obtaining a good education was something many espoused as a fundamental need for all. Nevertheless, there were many complexities that allowed some to receive it with more ease than others. Abundant research suggested that some sociological factors, such as concentration of poverty, unemployment, household income, economic inequality,

property values, and even racial makeup had at least some indirect effects on life's circumstances, including educational achievement (Sampson & Morenoff, 2006; Siegel, 2005; Smith & Holmes, 2003; Walker et al., 2004). Much of these factors were beyond the scope of this research. However, as earlier accounts within this writing alluded to with regard to historical circumstances of African Americans in the United States, this study did find interesting dynamics surrounding the percentage of African American students enrolled in the targeted schools. Having knowledge that African American students historically scored lower than many on MAP scores and had higher dropout rates and lower graduation rates (MODESE 2010), it seemed appropriate to note that the mean percentage of African American students who attended the targeted schools that received SIG funding during the reported years in Missouri was approximately 86%. White students comprised about 18%, while Hispanic students made up roughly 14%. Other race/ethnicity categories were too small to include (MODESE 2010). Although this research was not overly concerned with racial makeup of students, race data did provide a reference to other outcomes.

After breaking down racial makeup into three categories, schools with 80% or more African American students, 51% to 79% of African American students, and less than 51% of African American students enrolled, this research examined the amount of funds allocated per 100 students in each category. Figure 1 shows that schools with 80% or more African American students made up the bulk of schools receiving SIG funds during the period this study analyzed.

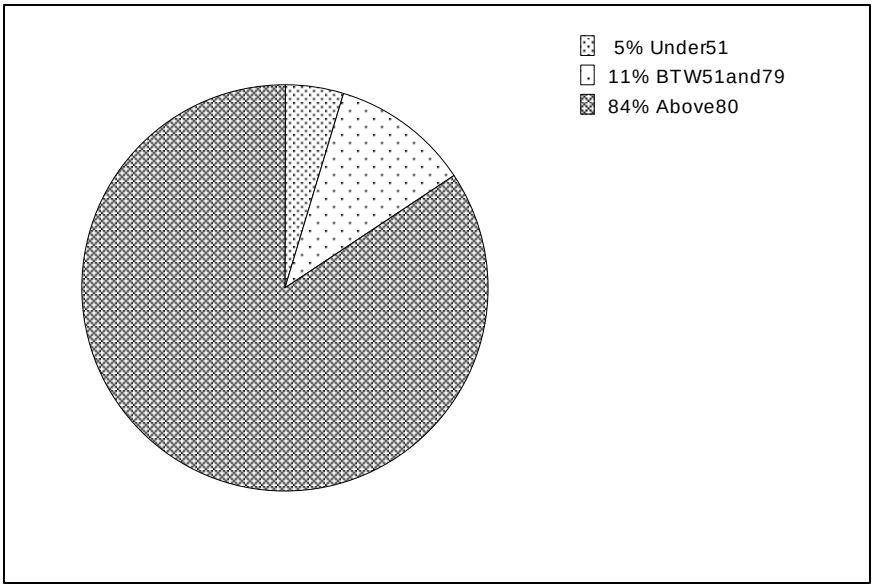

Figure 1. Mean funds allocated per 100 students and percentage of African American students in a given school (N = 163). Source: MODESE (2010) Data

Recall that the mean amount of funds allocated per 100 students from years 2010 through 2015 was $146,271. Figure 2 shows that the mean amount allocated per 100 students was lowest at $136,920 for schools that had 80% or more African American students enrolled. This seems ironic, because one would assume that, given what previous research indicated, the schools with the larger percentage of African Americans typically performed worse than other schools (MODESE 2010) and would, therefore, have the greater need for SIG funding. Figure 2 shows that the mean amount per 100 students was highest ($189,686) for schools where African American students made up between 51% and 79% of the population. Schools with less than 51% of African Americans received $156,295 per 100 students during the years of 2010 through 2015.

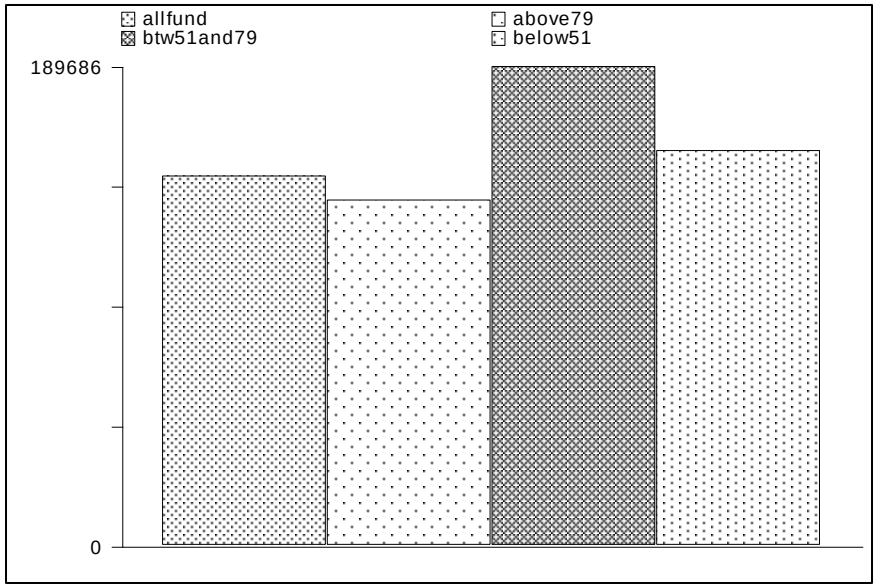

Figure 2. Mean funds allocated per 100 students and the mean percentage of African American students for all targeted schools receiving SIG funds (N= 163). Horizontal Axis = Mean Funds Allocated, Vertical Axis = Percent of Black Students. Source: MODESE Data (2010) and Neighborhood Link National Network (NLNN, 2014).

When analyzing MAP scores, this study found that schools with an African American population of 80% or more scored the lowest in English and math, according to Figure 3. The mean English and mean math scores from the 2010 through 2015 data were 21 and 17, respectively, by which schools with 80% or more African Americans had mean scores below these means at 19 and 14, respectively. The scores for this group remained below the mean, except for year three when the English score equaled the mean for all schools analyzed from 2010 through 1015.

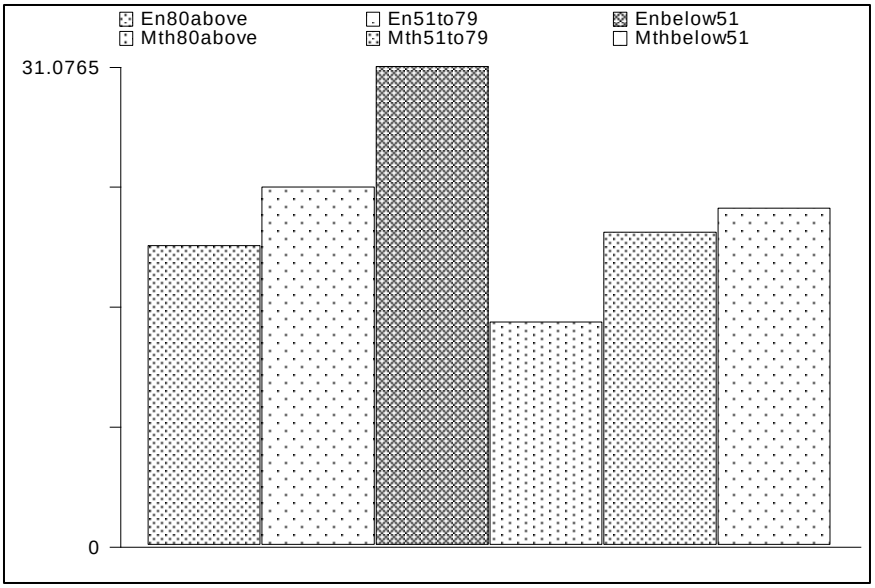

Figure 3. Mean math and mean English proficiency scores in schools based on the percentage of African American students in all targeted schools that received SIG funds (N = 163). Horizontal Axis = Mean English and Mean Math Score Scales, Vertical Axis = Mean English and Mean Math Scores Distinguished by Percentage of African American in Targeted Schools. Source: MODESE (2010) Data.

Unlike schools with 80% or more African American students, schools with 51% to 79% and those with lower than 51% of African American students compared better. For all three years that they received SIG funding, the mean scores exceeded the mean scores for all schools analyzed from 2010 through 2015. These results were consistent with the research regarding how African American students were more likely to score lower than other students on standardized tests.

The results were different for dropout rates. Schools with 51% to to79% of African American students had the highest mean dropout rates and lowest mean

graduation rates than schools with less than 51% and more than 80% of African American students, as Figure 4 shows.

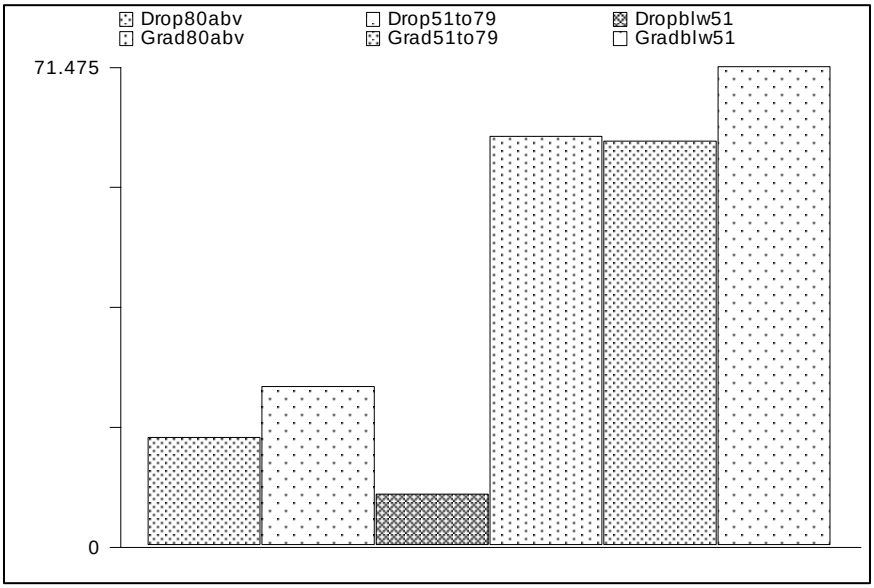

Figure 4. Mean dropout rates and mean graduation rates in schools based on the percentage of African American students in all targeted schools that received SIG funds (N = 163). Horizontal Axis = Mean Graduation Rates and Mean Dropout Rates, Vertical Axis = Mean English and Mean Math Scores Distinguished by Percentage of African American in Targeted Schools. Source: MODESE (2010) Data

Additionally, the mean dropout rate was lower in year two for schools with 51% to 79% of African American students; a higher mean graduation rate than the mean rates analyzed for all schools in this study. The mean rates for schools with less than 51% African American students were better than the rates for all schools analyzed in this study from years 2010 through 2015. In years one, two, and three, the mean dropout rates were lower for students in schools with 80% or more African Americans than the mean rate for all schools analyzed, and only had a lower graduation rate in year three. Based on these

descriptors, it appeared that the percentage of African Americans enrolled in a given school made little difference in graduation and dropout rates for those schools that received SIG funding for the years this study examined.

Income Issues

Continuing to analyze sociological factors that could mediate the effects of funding on MAP scores, graduation and dropout rates, this study examined income levels for the zip codes by which each targeted school was located. Existing research showed correlations between racial makeup income (Walker et al., 2004). Neighborhood income levels were also shown to influence the ability to mobilize political and economic resources (Blalock, 1967; Walker et al., 2004), which could perhaps include how much money a given school received as part of the SIG funding.

Recall that Figure 2 did not reveal a distinctive pattern for mean amount of funding per student based on race, although schools with the highest percentage of African Americans received less funding.

Figure 5 shows the mean household income for schools with 51% to 79% African Americans to be $42,761. Schools with 80% or more African American students had a mean income of $43,428, while the mean household income for schools with less than 51% African American students was $44,901. These figures were interesting, because the schools with 51% to 79% African American students also received the most funds per 100 students, which was below that for the United States, which was approximately $70,000. The mean for 80% and above was $43,428; for 51% to 79%, $42,761; and for under 51%, $44,901.

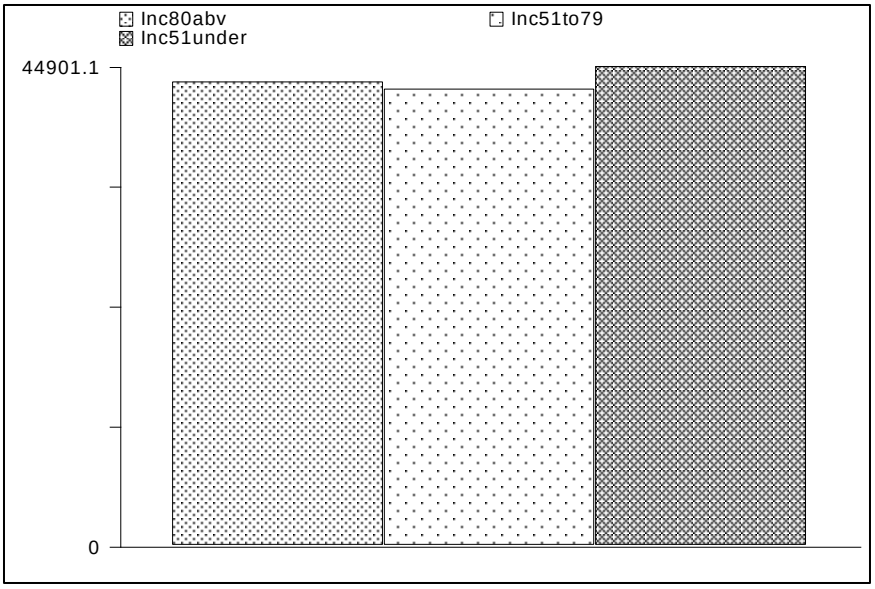

Figure 5. Mean Average Household Income in Neighborhoods where Schools that Received Sig Funding Based on the Percentage the African American Students in Each Targeted School (N = 163). Horizontal Axis = Mean Average Household Income, Vertical Axis = Mean English and Mean Math Scores Distinguished by Percentage of African American in Targeted Schools. Source: MODESE Data (2010) and NLNN (2014).

Descriptive Analysis Summary

The descriptive analysis showed that graduation rates increased each of the subsequent three years, following the year SIG funds were allocated; however, dropout rates actually increased as well, as shown in Table 1. The analysis also showed that MAP scores increased or stayed the same in the subsequent three years. It is important to note that the mean amount of SIG funds distributed the first year of implementation was higher than the second and third years of distribution, which made it difficult to draw meaningful conclusions from this part of the descriptive analyses (MODESE, 2010).

Similarly, when isolating grade levels, shown in Table 2, the three year results for graduation and dropout rates and MAP scores mirrored the results in Table 1, which was also the case in Table 3, which examined the type of intervention for the three-year period.

Although 84% of the schools that received SIG funds had an African American student body percentage of 80% or more, the most funds were spent on schools that had 51% to 79% of African American students (Figure 2) enrolled during the targeted years analyzed, as indicated in Figure 1. However, Figure 3 showed that English and Math scores were higher in schools with less than 51% of African American students. In fact, schools that had 51% to 79% of African Americans had the worst graduation and dropout rates during the periods examined as Figure 4 showed. It became important to make further analyses of the data, by attempting to find if there were statistical relationships to any of these descriptions.

Chapter Four: Results

The purpose of this study was to analyze the effectiveness of SIG funding on academic achievement scores, dropout rates, and graduation rates for students attending low performing schools in the state of Missouri. A secondary purpose of the study was to analyze high school and alternative school data concerning dropout rates for each year after the implementation of the SIG program. In this study, the independent variable was the amount of SIG money allocated per student in low-performing schools. The dependent variables were the dropout rate, graduation rate, and MAP scores, particularly in the content areas of Math and English.

The descriptive analyses informed that, as a whole, SIGs did not seem to affect MAP Scores, specifically math and English, or dropout and graduation rates in a meaningful manner in low performing Missouri schools that received SIG funding from 2010 to 2015. However, there were some results that needed further examination to determine statistical outcomes. Recall the purpose of this study was to analyze the effectiveness of SIG funding on academic achievement scores, dropout rates, and graduation rates for students attending low performing schools in the state of Missouri. The secondary purpose of the study was to provide policy makers with a foundational discussion on wasteful spending that concerned all tax payers.

Research Questions

To determine whether a positive relationship between funding allocations for high schools and increases in academic achievement scores and graduation rates, and decreases in dropout rates in low performing schools in the state of Missouri existed, the following research questions were developed:

1) How have school improvement grants helped high school graduation rates in the state of Missouri?
2) How have school improvement grants helped decrease high school dropout rates in the state of Missouri?
3) How are Missouri schools using funds from school improvement grants to help improve academic achievement scores?

Furthermore, null hypotheses were developed to further explore the social and academic factors that must be considered to determine the effectiveness of SIGs on low-income schools across the United States.

Null Hypotheses

$H_0$1: There are no relationships between the amount of SIG funding allocated per 100 students and drop-out rates in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

$H_0$2: There are no relationships between the amount of SIG funding allocated per 100 students and graduation rates in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

$H_0$3: There are no relationships between the amount of SIG funding allocated per 100 students and MAP proficiency scores for English and math in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

$H_0$4: As the amount of SIG funds allocated per 100 students increases, the drop-out rates for low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015 will not decrease.

$H_0$5: As the amount of SIG funds allocated per 100 students increases, the graduation rates for low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015 will not increase.

$H_0$6: As the amount SIG funds allocated per 100 students increases, MAP proficiency scores will not increase for English and math in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

The data for this study were obtained from the year 2010 MODESE website, which provided a school report card for each school in the state of Missouri. Included on each report card were MAP scores, dropout rates, graduation rates, demographic information, budget allocations, and any information regarding the status of each school and district. Additionally, the MODESE website provided information that pertained to schools that received SIG federal funding. There were a total of 56 schools and 20 school districts included in the study. The results for this study will be presented in the order of the null hypotheses. Research questions will be addressed in greater detail in Chapter Five.

Correlational Analyses

This study used various methods to examine the correlation between student achievement scores, dropout rates, and graduation rates in low performing schools in Missouri that received SIGs. These secondary data were obtained from the USDOE and MODESE. To examine the correlation between the previously stated variables, recall in Chapter Three of this study that Pearson's *r* was executed to examine the relationships.

Relationship Between Dropout Rates and SIG Schools

Null Hypothesis: There are no relationships between the amount of SIG funding allocated per 100 students and dropout rates.

The first null hypothesis proposed that there was no relationship between the amount of SIG funding allocated per 100 students and the drop-out rates. As earlier indicated, the correlation coefficient method was used to determine this relationship between meaningful numeric values. A double entry method was used to screen the data for accuracy, and there were no changes after entering the data twice in the statistical program. Table 4 shows that the r value for the correlation between the amount of funding allocated per 100 students and drop-out rates was -0.1603 (n=54; $\alpha = .05$; r-critical value = -0.261), which indicated a weak relationship, not significant.

Table 4

Correlations Coefficient for Funds Allocated Per 100 Students on Drop-out Rates, Map Scores, and Graduation Rates in the State of Missouri Between Years 2010 and 2015.

	Fundstud (*r*)	n
fundstud	1.0000	
dropout	-0.1603	54
Eng2	-0.2412	163
math	0.0799	163
gradu	0.1870	35

Note: Source: MODESE (2010) Data.

In fact, a regression analysis, illustrated in Figure 7, confirmed that there was no statistical relationship between the two variables, which prompted the researcher to not reject the null hypothesis that there was no relationship between the amount of SIG funding allocated per 100 students and the dropout rates in Missouri low performing

schools during the targeted dates. Because the *F*-test value fell below the *F*-critical value region (n= 54; *F*-test value = 1.37; *F*-critical value = 4.03), shown in Figure 6, the null hypothesis was supported as not rejected. At least for this study, SIG funding was not having the expected results for dropout rates.

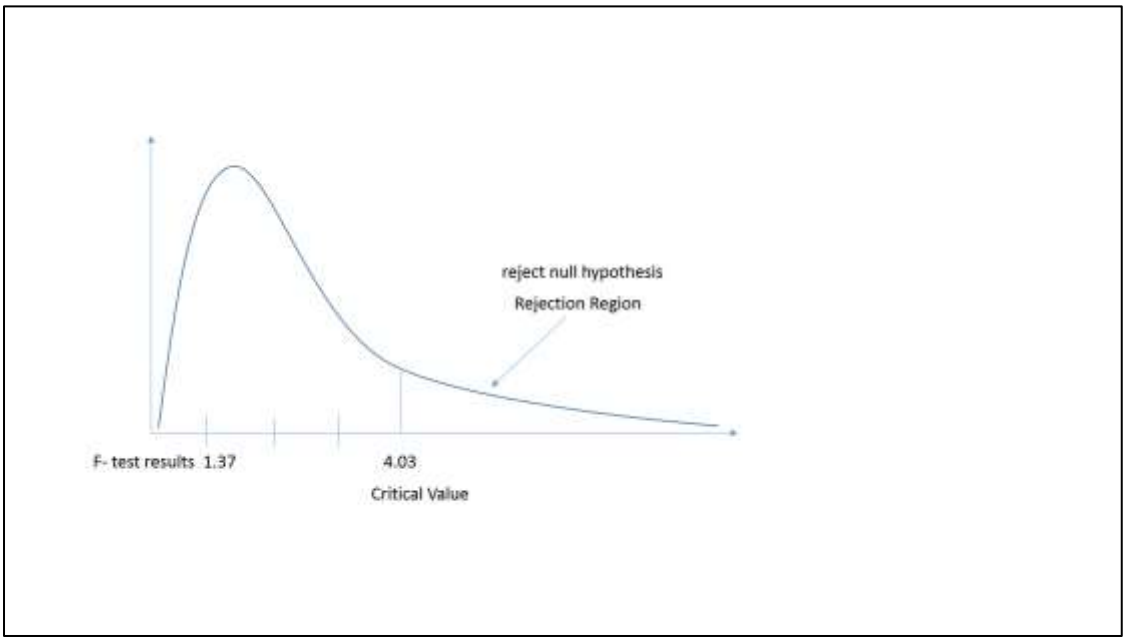

Figure 6. F-Distribution Graph Indicating Relationship Between Amount of SIG Funds Allocated per 100 Students and the Dropout Rates in Low Performing Schools in the State of Missouri Between Years 2010 and 2015. n=54; α .05; Excel F-Critical Formula =F.INV.RT.(0.05,1,52)=4.03. Source: MODESE (2010) Data

Relationship Between SIG Funding and Graduation Rates

Null Hypothesis: There are no relationships between amount of SIG funding allocated per 100 students and graduation rates.

The second null hypothesis proposed that there was no relationship between the amount of SIG funding allocated per 100 students and the graduation rates in Missouri low performing schools during the years stated. Similar to the previous comparison, the

correlation coefficient method was also used to determine the relationship between meaningful numeric values. This researcher also used the double entry method in this analysis to screen the data and found no issues. As Table 4 indicates, the *r* value for the correlation between the amount of funding allocated per 100 students and graduation rates was 0.1870, (n=35; α = .05; r-critical value = 0.325), which was also nonsignificant and weak, but positive, unlike the negative relationship found with dropout rates.

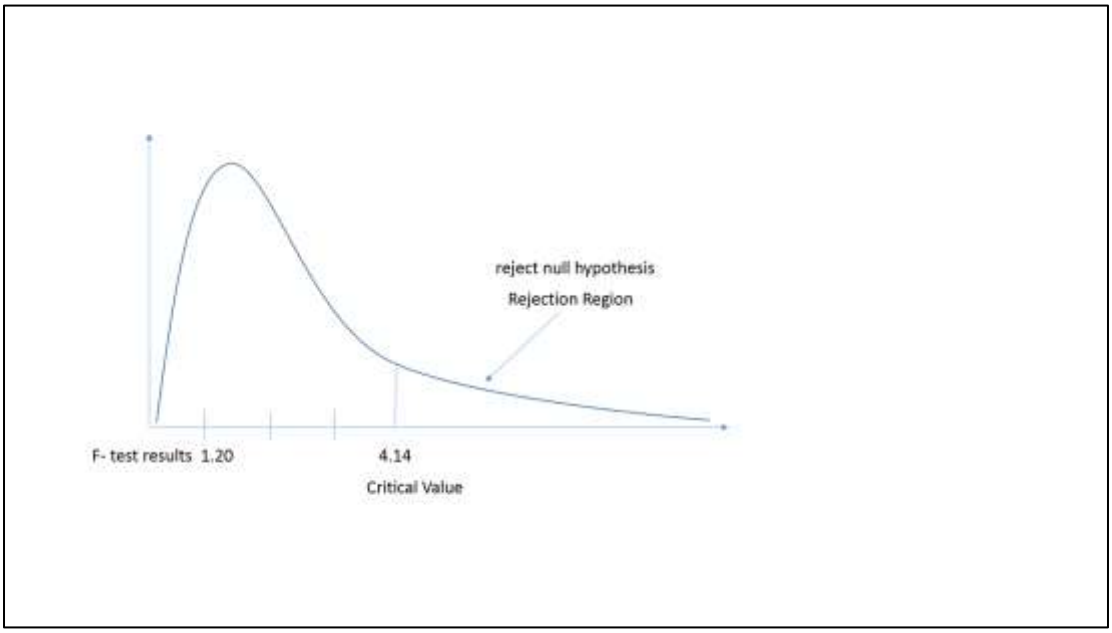

Figure 7. F-Distribution Graph Indicating Relationship Between Amount of SIG Funds Allocated per 100 Students and Graduation Rate in the State of Missouri Between Years 2010 and 2015 at Low Performing Schools. n=35; α .05; Excel F-Critical Formula =F.INV.RT.(0.05,1,33)=4.14. Source: MODESE (2010) Data

Table 6, which addressed null hypothesis five, also provides a regression analysis for this comparison and also found no significant relationship between the two variables (n= 35; *F*-test value = 1.20; *F*-critical value = 4.14). The researcher was again motivated to not reject the null hypothesis that there is no relationship between the amount of SIG

funding allocated per 100 students and the graduation rates in schools that received SIG funds in the State of Missouri, as shown in Figure 7. Similar to dropout rates, SIG funding did not seem to affect graduation rates.

When this study isolated the type of intervention (turnaround and transformation) that each school underwent, it found that the relationship between SIG funding and graduation rates became stronger, with an *r* value of 0.3665 (not shown), but remained statistically insignificant. While it became stronger, it was, at best, moderate.

Relationship Between SIG Funding and Math MAP Scores

Null Hypothesis: There are no relationships between amount of SIG funding allocated per 100 students and MAP scores.

The third null hypothesis proposed that there was no relationship between the amount of SIG funding allocated per 100 students and MAP scores. Again, this study analyzed math and English proficiency scores, specifically. After observing the correlation coefficient, for which a double entry method was again used to successfully screen the data for accuracy, Table 4 shows that the *r* value for the correlation between the amount of funding allocated per 100 students and English scores was -0.2412, (n=163; $\alpha = .05$; r-critical value = -0.195), which indicated a weak relationship. Although the correlation was weak, a regression analysis showed a statistically significant relationship (n= 163; *F*-test value = 9.95; *F*-critical value = 3.90), which caused this researcher to reject the null hypothesis that there was no relationship between the two variables, see Figure 8.

Because it was significant, the effects of SIG funding per 100 students on English scores cannot be ignored. However, that correlation was not in the direction one would expect, which will be discussed in further examination of null hypothesis six.

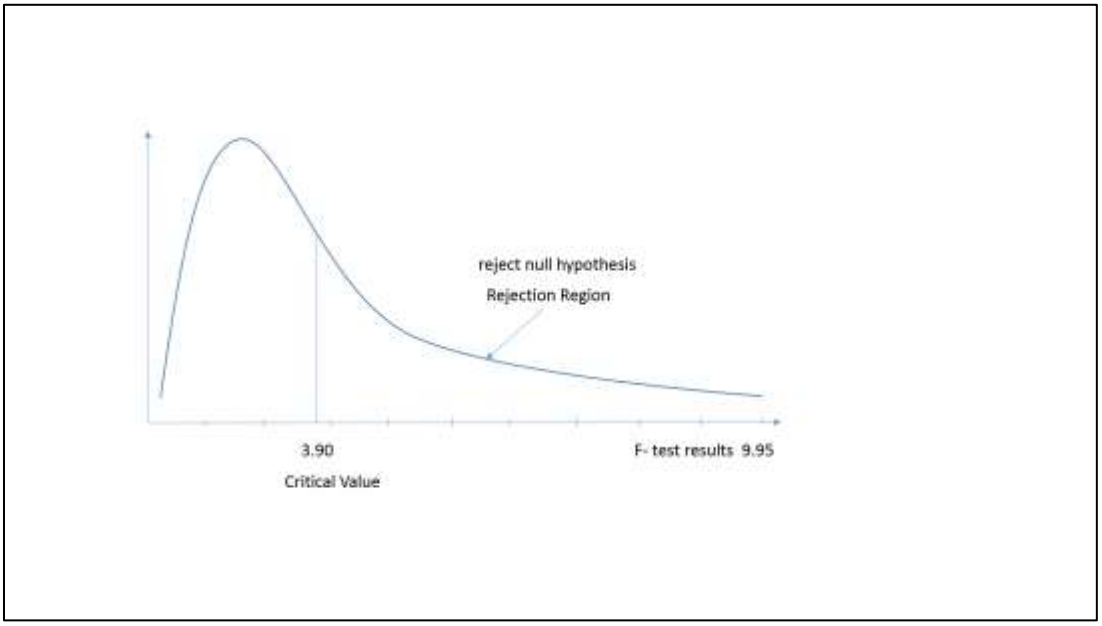

Figure 8. F-Distribution Graph Indicating Relationship Between Amount of SIG Funds Allocated per 100 Students and English Scores in The State of Missouri Between Years 2010 and 2015. n=163; α .05; Excel F-Critical Formula =F.INV.RT.(0.05,1,161)=3.90. Source: MODESE (2010) Data

Similar to English scores, Table 4 shows a weak correlation (0.0799) between math scores and the amount of SIG funds allocated per 100 students (n=163; α = .05; *r*-critical value = 0.195). Not statistically significant, Figure 9 represents a regression analysis that also confirmed the above lack of correlation, leading to the inability to reject the null hypothesis that math scores were not related to the amount of SIG funds per 100 students with the following results (n= 163; *F*-test value = 1.03; *F*-critical value = 3.90).

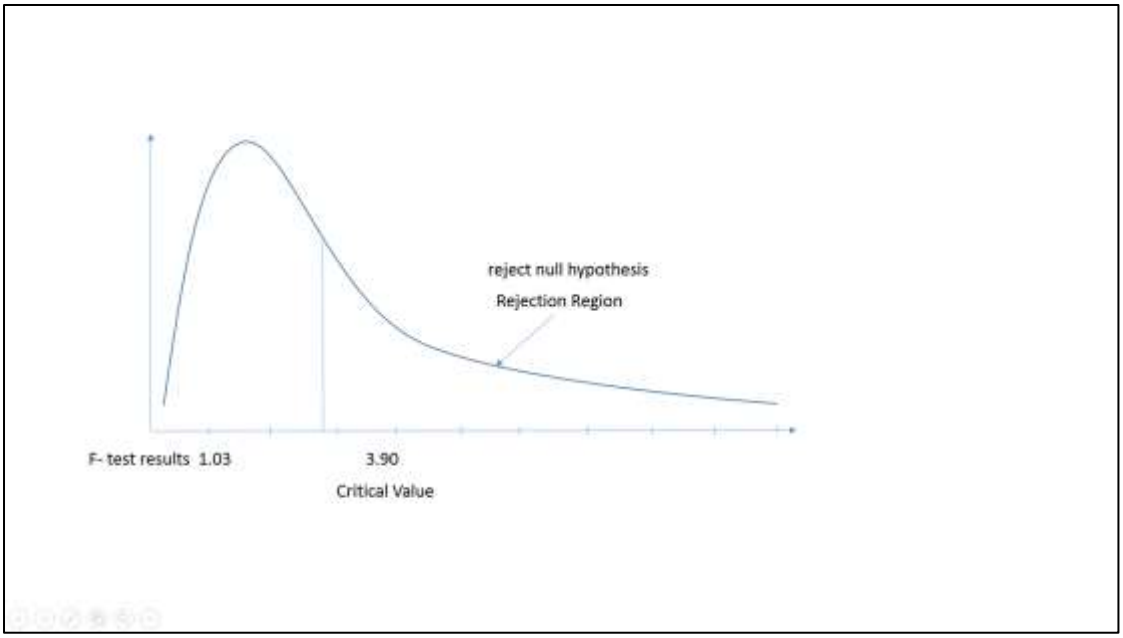

Figure 9. F-Distribution Graph Indicating Relationship Between Amount of SIG Funds Allocated per 100 Students and Math Scores in the State of Missouri from Years 2010 - 2015. n=163; α .05; Excel F-Critical Formula =F.INV.RT.(0.05,1,161)=3.90. Source: MODESE (2010) Data.

Bivariate Regression Analysis for SIG Funded Schools on Dropout Rates

A simple regression equation (y=a+bx+e) using ordinary least squares (OLS) (Hamilton, 1998) was used to assess SIG funding as a possible explanation, or at minimum a relationship, for increases or decreases in graduation and dropout rates and math and English scores. Bivariate regression was used to examine the associations between the effects of SIG funds and dropout rates, graduation rates, and MAP test scores. The regression analyses were standardized by looking at the amount of funding per 100 students between proficiency scores, dropout, and graduation rates in schools that received SIGs and dropout rates presented in each hypothesis. Elementary, middle, and high schools were isolated to determine the preceding associations, as well.

Null Hypothesis: As the amount of SIG funds allocated per 100 students increased, the dropout rates will not decrease.

Null hypothesis four proposed that as the amount of SIG funds allocated per 100 students increased, the drop-out rate for a given school receiving SIG funds would not decrease. Of course this argument suggests wasteful use of tax funds. A bivariate regression analysis was used after the data were initially screened during the same process used for the correlation coefficient data. The results, as shown in Table 5 indicate that, as the amount of SIG funds per 100 students increased, the dropout rates decreased .803 percentage points, in low performing schools that received SIGs during the targeted years.

Table 5

Bivariate Regression: The Effect of School Improvement Grant funding Per 100 Students on Dropout Rates in Low Performing Schools That Received SIG Funding in the State of Missouri from Years 2010 to 2015.

	Fund Per 100 Students	
	b	R^2
Dropout Rates	-.803	.03
	(.686)	

Note: Index (N = 54). [a] Standard error in parentheses. **p < .01. *p < .05. Source: MODESE (2010) Data

As this result was not significant with a p value of .247, which is higher than the .05 level of significance indicated with the corresponding asterisk in Table 5, the null hypothesis could not be rejected. Figure 10 provides a clearer picture with the statistical values (n = 52; T = -1.17; critical t = 2.01). The negative direction that the data takes was consistent with what the SIG funding hoped to produce and perhaps would be more favorable to graduation rates.

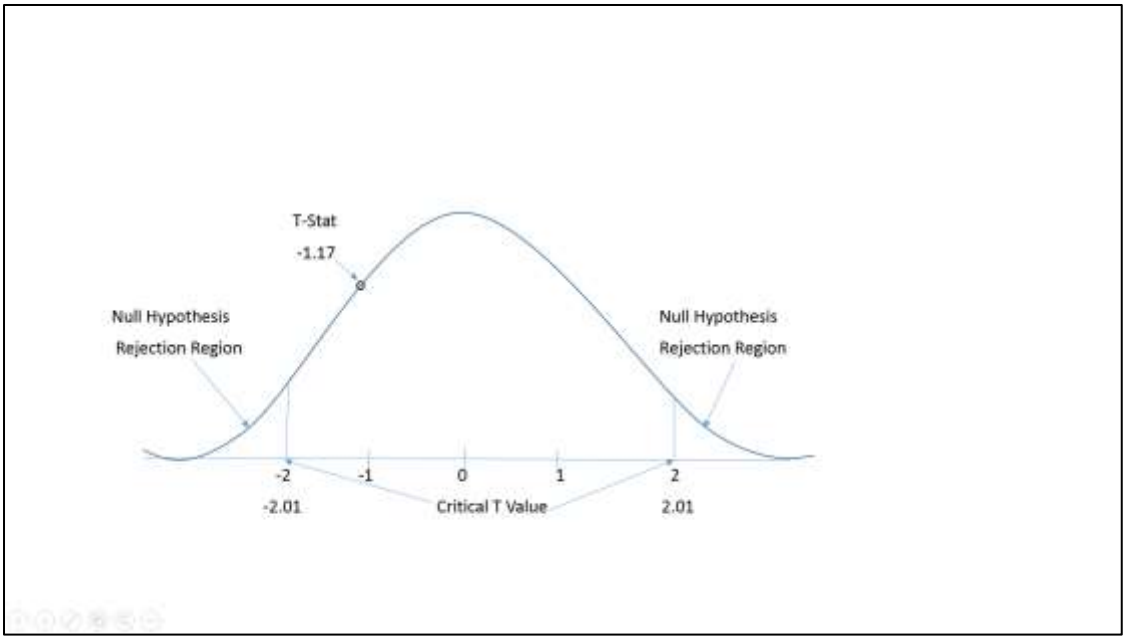

Figure 10. Normal T Distribution of Regressing SIG Funds Allocated Per 100 Students on Dropout Rates in Low Performing Schools in the State of Missouri Between 2010 and 2015. N = 54. Excel T Critical Formula =T.INV.2T(5%,52) = 2.01. Source: MODESE (2010) Data.

Regression Analysis for SIG Funded Schools on Graduation Rates

Null Hypothesis: As the amount of SIG funds allocated per 100 students increased, the graduation rates did not increase.

Null hypothesis five proposed that, as the amount of SIG funds allocated per 100 students increased, the graduation rate for a given school receiving SIG funds did not increase. After screening the data as before, bivariate regression analysis was again used. Table 6 shows that, as the amount of SIG funds 100 per students increased one unit, the graduation rates increased .937 percentage points, although not significantly. Again, this research could not support rejection of the null hypothesis.

Table 6

Bivariate Regression: The Effect of School Improvement Grant funding per 100 students on Graduation rates in Low Performing Schools that received SIG Funding in the State of Missouri from years 2010 to 2015.

	Fund Per 100 Students	
	b	R^2
Graduation Rates	.937	.04
	(.856)	

Note: Index (N = 35). [a] Standard error in parentheses. **p < .01. *p < .05. Source: MODESE (2010) Data

Similar to the p value for dropout rates, the p value for graduation rates was higher than .05 at .282. Figure 11 shows the following values (n = 35; t = 1.09; critical t = 2.03), which indicates that the t value did not fall within the rejection region.

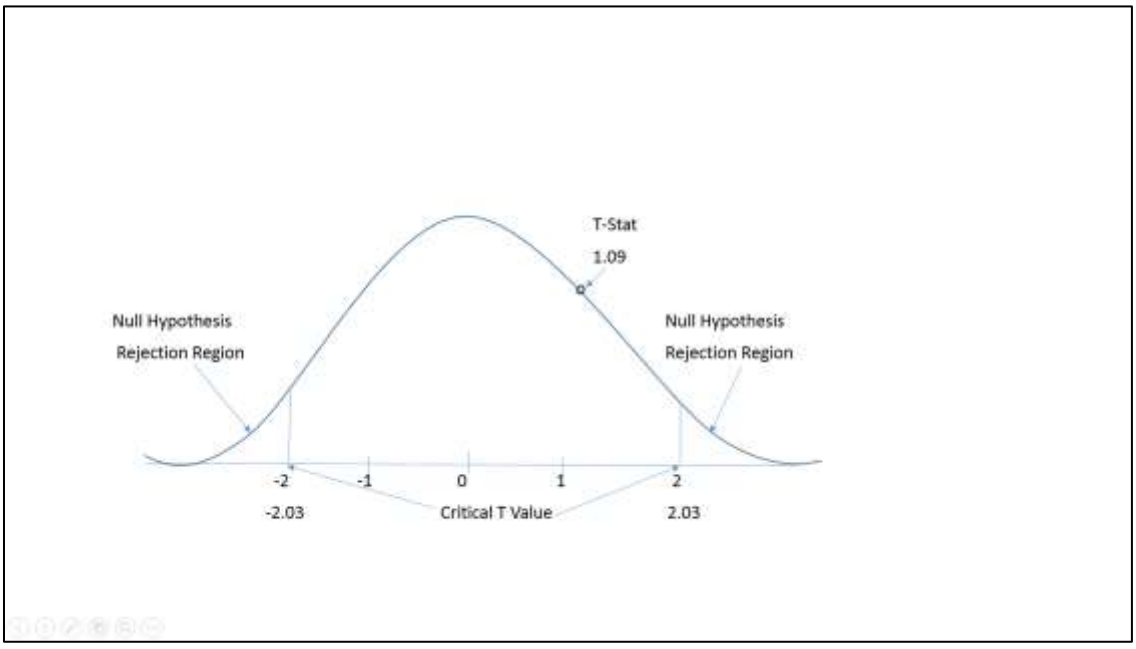

Figure 11. Normal T Distribution of Regressing SIG Funds Allocated Per 100 Students on Graduation Rates in Low Performing Schools in the State of Missouri Between Years 2010 and 2015. N = 35. Excel T Critical Formula =T.INV.2T(5%,33) = 2.03. Source: MODESE (2010) Data

Perhaps graduation and dropout rates were more a function of home environments and not affected so much as what might directly be seen in schools with initiatives toward improving MAP scores.

Regression Analysis for SIG Funded Schools on English Proficiency Scores

Turning to MAP scores that included English and math, the first discussion will regard English scores.

Null Hypothesis: As the amount of SIG funds allocated per 100 students increased, English the percent of students who scored proficient on English in the targeted low performing schools will not decrease.

Part one of null hypothesis six proposed that, as the amount of SIG funds per 100 students increased, the percentage of students who scores proficient in English at low performing schools in Missouri would not increase.

Table 7

Bivariate Regression: The Effect of School Improvement Grant funding Per 100 Students on English and Math Scores in Low Performing Schools That Received SIG Funding in the State of Missouri from years 2010 to 2015.

	Fund Per 100 Students	
	b	R^2
English Scores	-1435 **	.002
	(.455)	
Math Scores	.667	.006
	(.655)	

Note: Index (N = 165).[a] [a] Standard error in parentheses, **p < .01, *p < .05. Source: MODESE (2010) Data

Still operating from the double entry method for screening data, there were no changes to the data. Table 7 shows that there was a statistically significant decrease in English scores as the amount of SIG funding allocated per 100 students increased.

Interestingly, the results mean that for every unit of funds spent toward a student, the English score decreased .1435 percentage points. This was in a surprising direction as larger amounts of SIG funds, at minimum, should show some improvement in English scores.

The p value was .002, by which the double asterisks in Table 7 indicate that the regression analysis was significant at the .01 level of significance. Thus, the null hypothesis was rejected with the following values (n = 165; t = -3.15; critical t = 2.61), as the t statistic fell within the rejection region of the null hypothesis, see Figure 12.

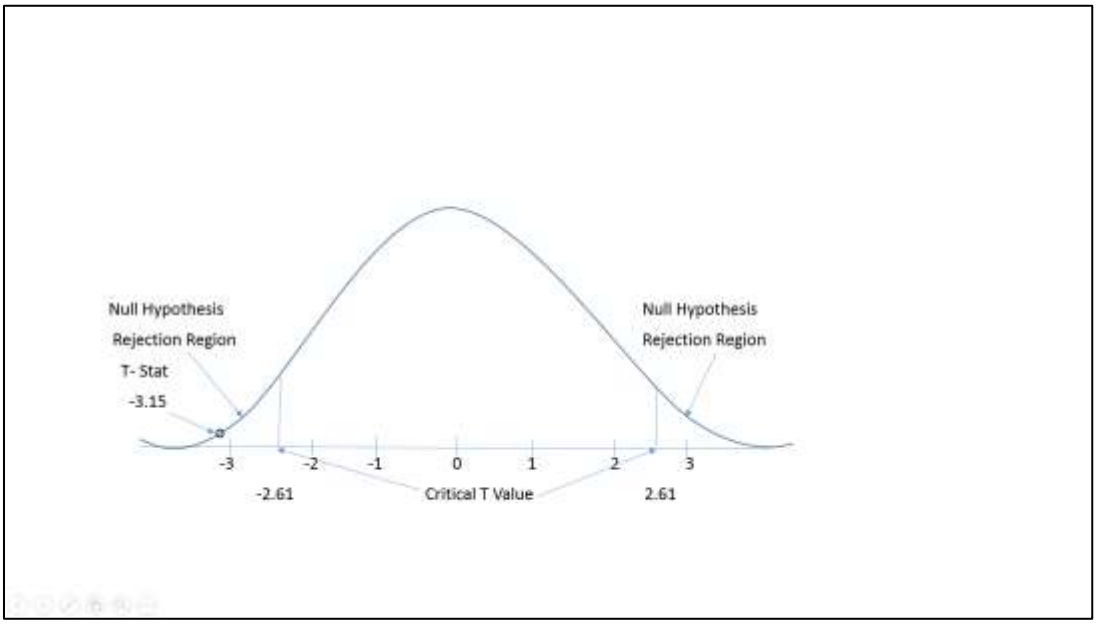

Figure 12. Normal T Distribution of Regressing SIG Funds Allocated Per 100 Students on English Scores in Low Performing Schools in the State of Missouri Between Years 2010 and 2015. N = 165. Excel T Critical Formula =T.INV.2T(1%,161) = 2.61. Source: MODESE (2010) Data

It was quite difficult to determine why this unexpected result occurred. Perhaps programs that developed from SIG funds emphasized other MAP subjects to the

detriment of English testing. This result will be analyzed further in Chapter Five of this writing.

Regression Analysis for SIG Funded Schools on Math Proficiency Scores

Null Hypothesis: Part two of null hypothesis six proposed that, as the amount of SIG funds per 100 students increased, the percentage of students who scored proficient in math at low performing schools in Missouri would not increase. As the data remained the same, after using the double entry method, the p value for math scores was .311. Still examining Table 7, the results showed that, as the amount of SIG funds allocated per 100 pupil increased one unit, math scores increased .667 percentage points.

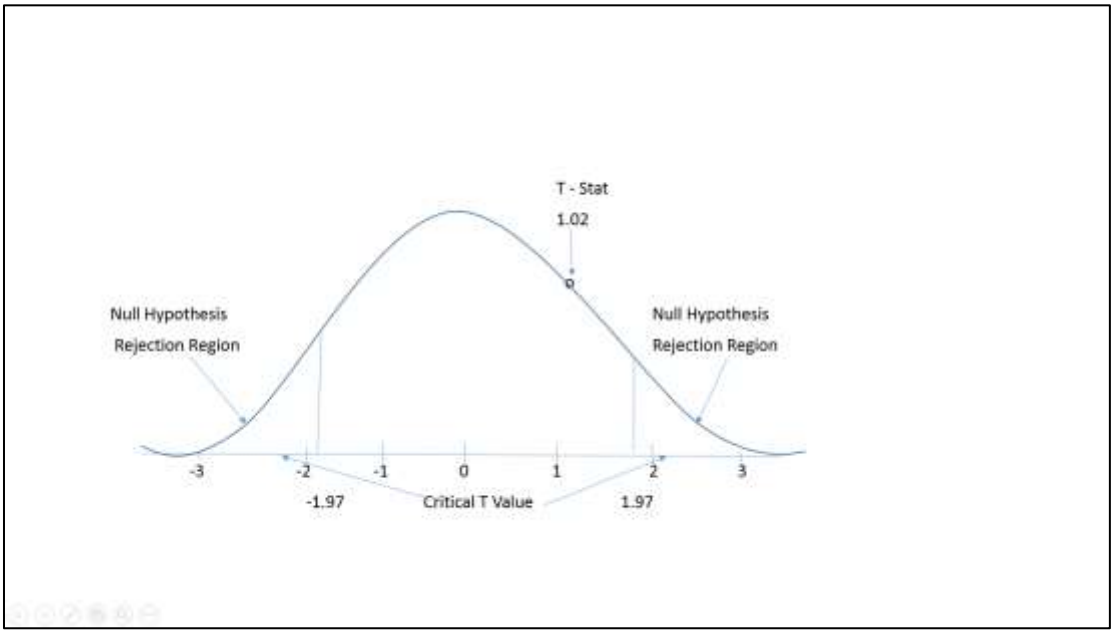

Figure 13. Normal T Distribution of Regressing SIG Funds Allocated Per 100 Students on math Scores in Low Performing Schools That Received SIG in the State of Missouri Between Years 2010 and 2015. N = 163. Excel T Critical Formula T.INV.2T(5%,161) = 1.97. Source: 2010 MO Department of Elementary and Secondary Education Data.

Figure 13 shows the following values that corresponded with the regression model (n = 163; t = 1.02; critical t = 1.97). However, this relationship was not statistically significant at the .01 or .05 levels of significance. Having found a surprisingly negative relationship between SIG funds allocated per 100 students and English scores, questions regarding how the main variables in this study perhaps were interacting with one another.

Multivariate Regression Analysis for SIG Funds on Dropout and Graduation Rates and English and Math Proficiency Scores

Using multivariate regression, the amount of SIG funding allocated per 100 students was regressed on dropout and graduation rates, along with English and math scores.

Table 8

Multivariate Regression: The Effect of School Improvement Grant funding per 100 Students on Dropout Rates, English Scores, Math Scores, and Graduation Rates in Low Performing Schools that Received SIG Funding in the State of Missouri from years 2010 to 2015.

	Fund Per Student b	R^2
Dropout Rates	-959	.33
	(828)	
English Scores	-3817 **	
	(1206)	
Math Scores	4234 **	
	(1448)	
Graduation Rates	727	
	(1063)	

Note: Index (N = 165)[a] Source: MO Department of Elementary and Secondary Education (2010) Data.

Table 8 shows that, when controlling for dropout rates, graduation rates, and math scores, the percentage of students who scored proficient in English remained statistically significant at the .01 level, with a p value of .004, which is indicated with the double asterisks in Table 8. Again, the relationship continued to show that, as the amount of SIG funding allocated per student increased, the English scores significantly decreased. Remaining curious about this result, this researcher also found a more predictable outcome with math scores, when controlling for the other major variables.

When dropout rates, graduation rates, and English scores remained constant, math scores were statistically significant at the .01 level. As Table 8 shows, when the amount of SIG funds increased per student, the percentage of students who scored proficient in math also increased, with a p value of .007.

At least this positive relationship provides a guide to compare with the other variables' program implementations. Although the math score results were encouraging for future initiatives, other factors not directly related to the variables studied in this research might have some interactive influences on the results.

Interactive Influences on SIG Funding and Dropout and Graduation Rates Along with a MAP Scores

Recall that an *r* correlation coefficient that fell between .5 and 1 was considered to indicate strong relationships. After isolating the earlier provided Cadres, there was a strong positive correlation between the percentage of math proficiency scores in Cadre I schools and the amount of SIG funds allocated per 100 students. The correlation coefficient was .7554, and the regression analysis was statistically significant. This result did not account for the possibility that the first year that school funds were issued created,

perhaps, an excitement that drove positive numbers for math proficiency scores. The math proficiency scores in Cadre II schools also had a strong correlation to SIG funds allocated per 100 students, but the strong relationship was not statistically significant. Perhaps intervention programs, personnel, or other circumstances unrelated to the function of the schools changed from year to year.

As earlier mentioned, other confounding variables were examined and it was discovered that, in low performing SIG funded schools located in neighborhoods where the median household income ranged from zero to $50,000, the percentage of students who scored proficient in math was strongly correlated and statistically significant to SIG funds allocated per 100 students. This result was not shown in tables, but is interesting to document in this writing (MODESE, 2010). Could there be more successful implementation toward math improvement in places where income levels are lower?

Bivariate regression models found that, as the percentage of Black students increased between schools, English and math scores significantly decreased. This was also true for schools going through transformation. However, this was not the case when isolating high schools and middle schools, but true for elementary school math scores. It was also discovered that, as the White population increased, the percentage of students who scored proficient or higher in math and English increased significantly. The question now became that, perhaps, there are more circumstances involved that had to do with the social status of Black students, since it appeared that the correlations were opposite when analyzing White and Black students. After controlling for funds per 100 students, it remained true that there was a negative relationship between percentage of Black students and funds per 100 students. The relationships between English scores

were significantly the same, while math scores became insignificant. The only item that remained significant when White student populations increased was the English proficiency scores. Does this imply that Black population increases were associated with worse school environments and were, therefore, more likely in need of SIGs? If so, one questions why the relationship between amounts of funds allocated per 100 students decreased, as the Black population increases. It could be argued that, before anything can be changed in the schools, social conditions in neighborhoods will need to be addressed.

Table 9

Multivariate Regression: The Effect of School Improvement Grant funding per 100 students on Percent of Black Students when Dropout Rates, Graduation Rates, English Scores, and Math Scores are Controlled in Low Performing Schools that Received SIG Funding in the State of Missouri from years 2010 to 2015.

	Fund Per 100 Student	
	b	R^2
Black Student Increase	-1033 *	.44
	(435)	
English Scores	-3466 **	
	(1129)	
Math Scores	3911 **	
	(1351)	
Dropout Rates	-805	
	(771)	
Graduation Rates	333	
	(1001)	

Note: **p < .01; *p < .05., [a] Standard error in parentheses., Index (N = 165)[a], Source: MODESE (2010) Data

Having discovered the preceding relationships through bivariate regression analyses, a separate bivariate regression analysis also showed that, as the SIG funds

increased, the Black population decreased, which seemed to suggest that SIG funds were not appropriately allocated in places where English and math scores suffered.

This study added percent of Black students to the multivariate equation to determine how the Black student population interacted with the amount of school funding on the main variables (dropout rates, graduation rates, English scores and Math scores). It was discovered that, when controlling for Black student population increases, English scores continued to statistically decrease and math scores continued to statistically increase, as the amount of SIG funds allocated per 100 students increased. Dropout and graduation rates remained insignificant (See Table 9).

Summary

While each of the main variables had weak correlations to the amount of SIG funds allocated per 100 students, math scores and English scores were statistically significant. The results for math scores resulted in a positive direction that would please the USDOE. However, the English scores surprisingly went in the wrong direction. Also statistically significant was the relationship between the percentage of Black student increases across schools and decreases in the amount of SIG funding allocated per 100 students. This would suggest a racial element to how SIG funds were allocated, and it is apparent that closer analyses of the data needs to be undertaken to pinpoint whether public funds were meeting their expectations.

Chapter Five: Conclusions

The purpose of this study was to analyze the effectiveness of SIG funding on academic achievement scores, dropout rates, and graduation rates for students attending low performing schools in the state of Missouri. A secondary purpose of the study was to analyze high school and alternative school data concerning dropout rates for each year after the implementation of the SIG program. After analyzing the various types of programs and administrative changes implemented at schools receiving SIG funds, this study identified and analyzed overall funding allocations for each program. The data gathered from this study adds to already existing literature, related to school improvement programs and grant funding by determining if there was a positive correlation between funding allocations for high schools and increases in academic achievement scores and graduation rates, as well as decreases in dropout rates in low performing schools the state of Missouri.

An additional purpose of this study was to expose the dynamics of the academic arena for the structure of low-income schools in the state of Missouri. It was important to expose different aspects of the family and economic infrastructure for low-income students and how they impacted the academic achievement. Educators should be given data and research that will help them understand the impact they have on students and how SIG funding can possibly help them enhance that influence.

The main significance of this study was that the project addressed a gap in the existing literature, at the time this writing, in regards to SIG funded schools and graduation rates and academic achievement at high schools receiving these funds. The purpose of these SIG supported programs was to increase retention and graduation rates

(Zimmer et al., 2007). During the time of the study, SIG financing programs existed at the middle and high school levels and had explicit goals of increasing student retention and academic success (Gifford et al., 2010). There was sufficient research to indicate that, at the time, the number of low-income families was on the rise. Educators must be equipped with the knowledge and skills to recognize at-risk students in a timely manner (Suh & Suh, 2007). Assessment data measuring the outcomes of SIG programs could provide valuable information for program improvement and modification of instruction and counseling processes (Bemak et al., 2005). The data could also be used to identify effective instructional and classroom management processes (Jackson & McDermott, 2009). As stakeholders demanded more accountability from states and school districts, policy makers had to consider the needs of all students in determining support services for students (Jackson & McDermott, 2009).

Research Questions

The present study was designed to answer the following research questions:

1) How have school improvement grants helped high school graduation rates in the state of Missouri?
2) How have school improvement grants helped decrease high school dropout rates in the state of Missouri?
3) How are Missouri schools using funds from school improvement grants to help improve academic achievement scores?

Hypotheses

H1: There are relationships between the amount of SIG funding allocated per 100 students and drop-out rates in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

H2: There are relationships between the amount of SIG funding allocated per 100 students and graduation rates in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

H3: There are relationships between the amount of SIG funding allocated per 100 students and MAP proficiency scores for English and math in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

H4: As the amount of SIG funds allocated per 100 students increases, the drop-out rates for low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015 will decrease.

H5: As the amount of SIG funds allocated per 100 students increases, the graduation rates for low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015 will increase.

H6: As the amount SIG funds allocated per 100 students increases, MAP proficiency scores will increase for English and math in low performing schools that received SIG in the State of Missouri Between Years 2010 and 2015.

School Improvement Grants and Graduation Rates

Research question 1: How have school improvement grants helped high school graduation rates in the state of Missouri?

As previously noted, hypothesis five proposed that as the amount of SIG funds allocated per student increases, the graduation rate for a given school receiving SIG funds will increase. After screening the data, bivariate regression analysis was used. Table 6 shows that as the amount of SIG funds per student increased, the graduation rates also increased, although not significantly, which also causes this research not to reject the null hypothesis, and hence to not support the hypothesis. Similar to the P value for dropout rates, the P value for graduation rates was higher than .05 at .282 (not shown). Perhaps graduation and dropout rates were more a function of home environments and not affected so much as what might directly be seen in schools with initiatives toward improving MAP scores.

Since hypothesis five was not supported for this research, the researcher concluded that SIGs have not helped high school graduation rates in the state of Missouri**.**

The literature review revealed some dynamics concerning at-risk students and their family, social, and economical arenas. The SIGs did not have a significant impact to improve graduation rates in the state of Missouri. That is not to say that the government should not continue to offer funding for structured programs that were aimed at improving academic success. But in some settings, it may be more imperative to tackle more deep issues and concerns surrounding the direct influences on at-risk students. As the research showed, low-income families may be dealing with situations that hinder the students from that environment from succeeding and excelling academically. It may be important for administrators to focus on in-school counseling and mentoring programs, so at-risk students could take advantage of when they are

dealing with issue or traumatic events at home. That may also allow the students to be more engaged when they are in the classroom.

School Improvement Grants and High School Dropout Rates

Research question 2: How have school improvement grants helped decrease high school dropout rates in the state of Missouri?

The third hypothesis proposed that there is a relationship between the amount of SIG funding allocated per student and MAP scores. Again, this study analyzed math and English scores specifically. After observing the correlation coefficient, for which a double entry method was used to successfully screen the data for accuracy, Table 4 shows that the *r* value for the correlation between the amount of funding allocated per student and English scores was -0.1041, which indicated a weak relationship. Although the correlation is weak, a regression analysis showed a statistically significant relationship, causing this researcher to support the hypotheses that there was a relationship between the two variables. Table 7 shows that at the .01 level of significance, the P value was .002 (not shown), which falls within the appropriate range of significance. Therefore, the effects of SIG funding per student on English scores cannot be ignored. However, that correlation was not in the direction one would expect.

The following comes from the MODESE website, which describes how the grants were supposed to be maintained. If any of these activities were not sufficiently administered, this could be a contribution to the results for English score.

The primary work includes:

1) Facilitate the LEA/schools teams in the design, development, implementation and evaluation of improvement efforts, specifically in the areas of turnaround and transformation. Source: 2010 MODESE Data and 2014
2) Provide coaching to LEA/school teams as they implement rapid and sustainable improvement in teaching and student learning.
3) Provide assistance to LEA/schools in meeting the timelines for deliverables, benchmark measures and project budgets.
4) Identify and assist in resolving conflicts and barriers that prevent LEAs/schools from effectively implementing the improvement plan.
5) Facilitate technical assistance and professional development sessions that support the improvement plan.
6) Assist LEAs/schools in analyzing school data from a variety of sources to measure progress and drive instructional decision-making.
7) Conduct regular visits (at a minimum monthly) to assigned LEA/schools to monitor the fidelity to and effectiveness of improvement plan implementation, measures and timelines. (MODESE, 2010, para. 2)

Similar to English scores, Table 4 shows a weak correlation (.2743) between math scores and the amount of SIG funds allocated per student. Nearly reaching a moderate correlation, the regression analysis (Table 7) revealed that the math scores were not statistically significant to the amount of SIG funds allocated per student with a P value of .311 (not shown), leading to not support the hypothesis that math scores are statistically related to the amount of SIG funds per student.

Hypothesis four proposed that as the amount of SIG funds allocated per student increases, the drop-out rate for a given school receiving SIG funds will decrease. Of course this argument suggests wasteful use of tax funds. A bivariate regression analysis was used. The results, as shown in Table 5 indicate that as the amount of SIG funds per student increased, the dropout rates decreased in low performing schools that received SIGs during the targeted years. As this result was not significant with a P value of .247, which is higher than the .05 level of significance indicated, the hypothesis could not be supported. The negative direction that the data takes was consistent with what the SIG funding hoped to produce and perhaps will be more favorable to graduation rates.

The research revealed that there were multiple elements that may be causing at-risk students to drop out of high school. The research showed that SIGs did not helped decrease high school dropout rates in the state of Missouri. The research also showed there may be outside forces that were causing students to drop out of school, like teen pregnancy, drug use, and criminal activity. In certain instances, the life style of students can play a huge factor on how they view their current life struggles with education and their futures.

The high school dropout rates could be contributed to social and economic factors, also. The research revealed that there are peer pressures that teenagers have to deal with during their academic journey. As previously noted in the literature review section of this research, there are four domains that play a contributing factor to the academic success of at-risk students. Since the research results have been outlined the domains should be revisited.

Individual Domain

The individual domain included a number of risk factors related to the individual student, which included race and ethnicity, poor school performance, teen pregnancy, and disruptive behavior. The two areas most prevalent in the literature were teen pregnancy and disruptive behavior.

Teenage pregnancy. One factor that hindered students in low-income middle and high schools from graduating was early parenthood. It was important, for educators to provide guidance and direction in an effort to instill a sense of hope in young parents (Wilson & Wiley, 2009). As early parenthood becomes more prevalent, leaders of school districts need to develop and enhance programs that educate teenagers on how to be good parents while they remain in school (Gifford et al., 2010).

The relationship between poverty and teen pregnancy was significantly strong (Seunghyun et al., 2004). Children born to poor unmarried parents had a greater chance of dropping out of school. On the other hand, children born to married young adults over the age of 20 had a low dropout rate (Sommers & Surmann, 2005). Teenage pregnancy often led to poverty for young parents and their children, which created a spiraling social and economic breakdown (Gifford et al., 2010).

Some academic administrators have made curriculum enhancements to include sex education, childcare simulations, and home economic classes to address issues and help students make better life decisions (Wilson & Wiley 2009). These contributions from proactive leaders, mentors, and advocates for change in the educational arena were invaluable in providing what was needed demographically and culturally to school systems (Jackson & McDermott, 2009).

As stated earlier, having a baby at a young age provided a sense of accomplishment for some teenagers who faced multiple limitations and obstacles in their lives (Gifford et al., 2010). Therefore, simulations that created a reality of parenting responsibilities did not deter premature sexual behavior for teenagers who felt the need to fill a void (Sommers, 2009).

Due to an effort to stabilize and reduce teen pregnancy rates that was often associated with drop-out rates, some school districts took the initiative to create teen pregnancy prevention programs. Some school districts used abstinence-only-until-marriage feedback to highlight sex education programs and prevent teen pregnancy (Wilson & Wiley, 2009). Also, some health educators used relevant sex and health programs as a pregnancy prevention tool (Gifford et al., 2010).

Disruptive behavior in school. Teachers must be able to recognize behaviors that are characteristic of students exhibiting social and behavioral problems. Often times, students show signs that they need additional help by acting out (Carlile, 2009). Females and males display disruptive behaviors differently, even though they were dealing with similar issues; thus, it was important that educators and counselors are trained to recognize the differences (Carlile, 2009).

School officials need to be aware of the variation of social norms and social standards that students may perceive to be ordinary that may cause undue stress on students when they do not meet those expectations (Gifford et al., 2009).

When these students reach an emotional low, it may be easier for them to make the decision to quit school, especially without a strong support system (Roxas, 2008). Disruptive behavior in the classroom and on school grounds could be a cry for attention

or help. Teachers and counselors should be prepared to handle those students in a professional manner (Carlile, 2009).

Family Domain

Family background and characteristics were risk factors associated with the family domain. Low economic status, low education of parents, and family disruption are a few examples of the background and characteristics associated with the family domain.

Parental time with children. The amount of time parents devoted to their children's education was directly related to students' academic success. Students whose parents were able to invest more time and resources in their education were more likely to have higher test scores in math and reading, and were more likely to be retained in school. Todd and Wolpin (2006) conducted a study to determine the role of the home environment on students' cognitive development and achievement in math and reading. The researchers used longitudinal data on test scores, home environments, and schools to study test score gaps between White, Black, and Hispanic children. According to Todd and Wolpin (2006), the home environment was directly related to students' test scores and overall academic achievement. These results were connected to the educational attainment of the mother.

Parental income. Research showed that individuals with more education earn a greater income over a lifetime than those with less education ((Carnevale et al., 2011). According to a study conducted by Page et al., (2007), parental income, as it related to job displacement, had an impact on students' educational and socioeconomic attainment. Specifically, the researchers used a control group of students whose parents had never experienced job displacement, and two treatment groups, one with parents who

experienced job displacement due to closure of a firm and the other with parents who experienced job displacement due to a layoff. The researchers found that children who were already experiencing financial issues, or from low-income households, were most likely impacted when job displacement occurred.

Dahl and Lochner (2011) conducted a study where they explored the Earned Income Tax Credit (EITC) and its relationship to family income changes and child academic achievement. Dahl and Lochner believed that family income played a significant role not only on family dynamics, but also on the investments families were able to make to their children's education. They found that income was directly related to students' test scores in math and reading.

School Domain

Risk factors associated with the school domain were related to school structure, environment and policies. Examples of these factors included educational resources, school environment, and academic policies and practices. Educational resources and school environment were overwhelmingly predominant in the literature.

Positive teaching environments. Research showed that when teachers had positive beliefs about students' abilities to succeed, they conducted themselves in such a manner that helped students to achieve academic success (Jackson & McDermott, 2009). When teachers believed their students had the potential for high academic achievement, they were more effective in their teaching methods (Gifford et al., 2010). And, while maintaining a positive attitude in the classroom was proven to be an essential component for academic success, the support of administrators and policy makers was also needed. It was required that educational leaders encourage teachers to think positive, stay

motivated, and focus on their diverse talents in the classroom (Jackson & McDermott, 2009).

Alternative schools and programs. Alternative schools and programs were designed to address the needs of students who, for whatever reason, were unable to learn in a traditional school setting. Students who attended alternative schools were usually at-risk students and faced educational struggles and obstacles (Carver et al., 2010). Generally, students who attended alternative schools had poor grades, truancy problems, behavioral issues, or were teenage parents. Alternative schools were usually located in an area away from the traditional public middle or high school campus. However, in some instances, traditional schools had alternative programs as part of the institution's curriculum (Carver et al., 2010). There were some alternative school programs that provided distance education as an instructional option for at-risk students who had dropped out of the traditional, public school system, or those who had displayed disruptive behaviors and were no longer able to be educated with the general population (Carver et al., 2010).

School counselors. Counselors play a very important role in schools and were an excellent resource for at-risk students. Counselors are trained to recognize signs of abnormal behavior and develop and implement care plans for students before their behavior spirals out of control (Carlile, 2009). Because of this, it is imperative that school counselors understand the different social structures, social pressures, household dynamics, and mental challenges students face (Bridgeland et al., 2009). According to Carlile (2009), effective student intervention plans involved school counselors and teachers and offered options for student support structures and alternative communication

arenas so teachers and counselors could have a place to foster the needs of at-risk and displaced students. Counselors could serve as mediators and confidants to at-risk students who show signs of leaving school due to disruptive behavior, pregnancy, family problems, and identity development issues.

Mentors and role models. Another way low-income schools could face the challenge of increasing retention rates for at-risk students is by implementing mentor programs. As a first step in decreasing the dropout rates, educators and administrators should work with community leaders, social activists, and local government officials to identify mentors and role models (Jackson & McDermott, 2009). Administrators and educators should examine the dropout epidemic and develop mentoring programs that accommodate the specific needs of their at-risk student population (Bridgeland et al., 2009).

Peer and professional tutoring could also be a form of mentorship. As students feel more comfortable with the tutoring process, they may be more inclined to seek assistance for issues unrelated to academic achievement. Student intervention programs that embraced mentoring as a form of teaching were shown to be an effective strategy if the program was monitored and assessed regularly (Rheinheimer et al., 2010).

Student intervention programs. Student intervention programs could be tailored to fit the needs of at-risk students in any given school. At-risk children usually had problems achieving in school due to poor physical health, poverty, mental or physical abuse, neglect, and behavior disorders (Carlile, 2009). Having access to health and human services in schools proved to be a key factor in exposing students to options and resources that may help them make better life decisions (Gifford et al., 2010).

Collaboration with child advocacy groups and other agencies were also shown as an effective method for providing students with better access to human and social services (Gifford et al., 2010). These inclusive efforts to create in-school social service programs indicated that some educational leaders had been thinking outside the box (Gifford et al., 2010). Access to nutritional programs, mentoring, tutoring, counseling, and adequate housing was shown to alleviate worries that caused much of the stress that pushed youth toward negative options to survive. Moreover, enhanced access to doctors and nurse practitioners in schools may become more important to reducing teenage pregnancy rates (Gifford et al., 2010).

Community Domain

Dropout rates were higher in impoverished communities and communities with high crime rates. These were both risk factors associated with the community domain. The location and type of school also impacts dropout rates. Schools located in urban areas had higher dropout rates than those in suburban and rural areas.

Disadvantaged neighborhoods. Crowder and South (2011) examined the spatial and temporal dimensions of neighborhoods and the impact it had on high school dropout rates. Specifically, the researchers examined how the spatial, or areas surrounding a student's neighborhood, and temporal, or length of exposure to disadvantaged conditions in one's own neighborhood and surrounding neighborhoods, affected the likelihood of high school graduation. The researcher shared the fact that in disadvantaged neighborhoods students were surrounded by their peers, who were in similar socioeconomic situations and who devalued education. Additionally, adult role models who experienced economic success in disadvantaged areas were scarce. There were more

examples of a lack of education and its value in disadvantaged areas than in areas with higher socioeconomic status. And, while the research showed some racial and ethnic differences associated with spatial and temporal dimensions, overall, the researchers found that a student's neighborhood, as well as the surrounding neighborhood's socioeconomic status impacted graduation. Also, the longer students were exposed to disadvantaged neighborhoods, the less likely they were to complete high school.

The results connect to the information in the literature review and are related to the four domains, because the SIG funding did not help increase student dropout rates in high schools within the state of Missouri. The researcher concluded that the four domains that were referenced in the review played a huge contributing factor to why students drop out of high school. If administrators could focus on using SIG funding on avenues that would combat domain factors that hinder academic progress instead of school reform, etc., they may see better results.

The four domains provide a holistic view of the forces that students face on a daily basis, which may be helpful for administrators and teachers to understand; so, they can approach their jobs in a different way. Realizing that the facilitating classroom instructions for academic gain was not the only challenge of a teacher's job duties would open a new diverse way of teaching and coaching students, so they can graduate.

The domains harbor an insight into how students deal with arenas that are outside of their academic journey that can influence their decisions about their lives. Those arenas can prove to be influential strings that pull on at-risk students to make them make decisions about their future.

Implications for Policy and Practice

The results of this study could help educators by exposing them to data that can help them identify at-risk students in their classroom who may need additional attention or care. This study can assist educators by giving them a tool to identify issues that hinder students from learning in the classroom and what life issues can stop them from being engaged. This study also can open the door for educators to walk through so they can think outside of the box and brainstorm on ideas that will help them to not only identify at-risk students, but to also create new ways of teaching; so, no child is left behind. The researcher wants the study to serve as a stepping stone for educators to use as a platform for doing their own research to better themselves and improve their classroom techniques. Teachers can serve as a second or third parent for students, because they play a major role in their lives. So, the results of this study can be a powerful mechanism for an educator to fuel the journey to save at-risk students.

This study can help administrators by giving them an insight to some of the day-to-day obstacles their at-risk students deal with that hinder them from being engaged in the classroom. Also, they can use this study as a starting point to open the door to new ideas about how to capture the attention of those students who may need extra assistance to keep them on the right track for graduation. The administrators who are working in low-income areas can use the data from this study as a starting point to begin their own research to uncover the dynamics of their at-risk students. They can conduct research and hand out surveys to their faculty and staff to solicit information about the makeup of their student body. It is important for academic leaders to know what type of challenges are in front of them, in order for them to be educated pioneers of change and effective

academic leaders. The arena of academics can bring about avenues of opportunities that can allow a teacher an opportunity to influence students to better themselves and make a difference in society.

This research can help policy makers as well. Policy makers can review the details of this study to help them recommend enhancements and changes to existing procedures and standards that will better assist at-risk students. Also, policy makers need to be exposed to research that explores the issues that students face on a daily basis to help them understand how their decisions impact at-risk students. Their power and influence gives them an advantage for correcting the structures that are in place. Policy makers may be able to influence law makers to implement programs that will improve the academic experience of at-risk students. The policy makers can use this study as a foundation for their transition to focusing on foundational structures that influence academic change. Academic enhancements should be the primary focus of policy makers, so substantial change can take place. The beauty of having power to make changes that carries a tremendous amount of weight is that it can have positive impact.

This study can help parents identify when their children are displaying behaviors or acts that may be an issue that will keep them from graduating from high school. Parents can use this research to open their minds to what may be happening with their children when they start failing in school. When adolescents start experiencing different external and internal situations and struggles that may cause them to display unfavorable behaviors in the classroom and parents need to understand that. Parents or caregivers who are responsible for school aged children have a large responsibility to help shape their minds so they can understand the importance of an education and graduating from

high school. Being a teenager can be an overwhelming experience without putting the pursuit of an education in the mix, and parents need to remember that. The results from this study can help a parent in many ways by allowing them to have a microscope look into different situations that can serve as a road block to a child's educational journey.

If influential figureheads in the state of Missouri have the opportunity to review this research, they will understand there is a potential crisis in their midst. The crisis is that the state of Missouri faces a dilemma, like other states, which is the fact that at-risk students exist. The results of this study will serve as ground breaking news and the results of this study can be used to improve SIG programs in the state of Missouri.

Limitations of the Study

Retention. As previously stated, the study of the impact of SIGs on retention and academic achievement of low-income students was limited to the number of schools receiving SIG funding identified by MODESE. Additionally, statistics for student MAP scores in the state of Missouri were limited to the student population identified by MODESE. Lastly, students placed in alternative learning environments and alternative schools may not be identified in the data provided by MODESE.

Detailed or specific data by school. The research was limited to public data and a quantitative research was conducted. The researcher was not able to interview or survey the faculty and staff at the schools that received SIG funding to get more internal details about how the SIG funds were received, perceived, and utilized.

Detailed or specific data by household. The research was limited to available public data so a quantitative research was conducted. The researcher was not able to interview or survey the parents and students from the low-income schools in Missouri

that received SIG funding. Feedback from the students and parents may be valuable to a researcher as they analyze the correlation between those individuals who are directly impacted by school that received SIG funds and academic achievement.

Behavioral problems and medical issues. While the conclusions of this research show correlations or lack of correlations between the given variables (amount of SIG funding allocated per 100 students, dropout rates, graduation rates, MAP proficiency scores for English, and MAP proficiency scores for math) other conflicting issues cannot be ignored. For instance, previous research showed correlations between lower scores on state mandated competency exams and school punishment before age 15, such as expulsion and suspension. This punishment disrupts the natural flow of the educational process. Perhaps schools that received funding were already predisposed to having students with behavioral problems; and thus, programs devised with SIG funding did not address those underlying issues.

Furthermore, there were disparities between White, Black, and Hispanic students who were diagnosed and in need of therapy or medicalization to address behavioral problems. Black and Hispanic youth were less likely to seek out medication for their behaviors, which subsequently affected their ability to score better than their White counterparts on aptitude tests, which also correlated to graduation rates. For those Blacks and Hispanics who did seek out therapy or medicalization, they typically received treatment from general practitioners, rather than specialized experts, which resulted in misdiagnosis or inappropriate medication (Ramey, 2016). This may impact the study due to disparity of how certain groups were treated when they had behavioral issues, which may impact their academic achievement, which could not be repaired with SIG grants.

Academic support and re-enforcement. All students need a good support system to help them navigate through the complexities of learning and achieving academic goals and milestones. Teachers may schedule homework assignments; but, once the students leave the four walls of the classroom they may need assistance. That is where parents come into the picture, because their ability, or lack thereof, to assist their children with their homework and extra assignments can positively or negatively impact academic achievement. The main influences on a student are the parents. The parents, or in some cases the siblings, can play an important role on how students tackle their school at home. If the support group does not value an education, or they are mentally unequipped to assist with homework assignments, that can hinder the academic success for the students in that household. Teachers can assign homework; but, their students may need help when they get back in their normal habitat, which can be concerning. There can be a gap in what the support system provides and what is needed for any given learning and academic level of the students.

The amount of allocated funds. It was observed by the researcher that as the average income per household increased the allocation of the SIG funds increased. As the number of Black students per school increased, the allocation of the SIG funds decreased. One could make the analysis that the SIG funds were not being allocated or appropriately distributed to low performing schools with low income students. The low performing, low income schools that needed the funding to save at-risk students may not have received enough funding to effectively carryout the intervention programs.

Recommendations for Future Research

If this study were to be replicated, what would you recommend the next researcher include in their study?

As previously mentioned, as the average income per household increased, the allocation of the SIG funds increased. Also, as the number of Black students per school increased, the allocation of the SIG funds decreased. With that being said, it is recommended that future research be conducted to explore the allocation of funds to low-income schools and how the funds are awarded. This may impact future studies, because the SIG grant allocations should be scrutinized and analyzed by a researcher that can access more defined and specific data per school.

Future research should focus on exploring the dynamics of the household and the possibility that some family infrastructures do not demonstrate a value towards education, which includes math and English studies. It can be explored if the family values contributed to the academic outcomes as failures or successes.

If the family dynamics do not value an education, then the children of that core will not exhibit the characteristics that are needed to succeed in society. Additional research can more deeply define whether the family structures had a stronger influence on young people than the restructure of an educational program with SIG funding.

Additional research can be done to explore the relationship between the influence of the family and social structure on the educational experience. The researcher would recommend that future studies be conducted as a qualitative research project. A different research design could include interviews and surveys. The data could include explicit

details concerning the dynamics of the administrative staff and how they handle and managing SIG funds.

One variable a future study can explore is the experience level of the teachers and administrators who are in charge of receiving and implementing the budget for the SIGs. That may help the reader to have better insight on how administrators handle the challenges of receiving funds for new governmental programs and the facilitation of the changes.

Additionally, another variable can be the average educational level of the parents for the low-income students who attended schools that received SIG funding. The research can explore the possibility of the parent's educational experience having a correlation to the graduation rate of the high schools their children attended. It can be researched whether the parents have the educational fortitude to help their children with homework and prepare for exams, etc.

Summary

The researcher learned that all students deserve an opportunity for better education and better quality of life. Over the years, it has become important for the public school system to embrace all students and their diverse backgrounds. A public education remains to be free to all citizens and walks of life, and it is just a matter of people taking advantage of that opportunity. A structured education seems to be a formal tunnel to good standard and quality lifestyle. Knowing the basics of mathematics, reading, and spelling are essential to academic achievement. Those basics will foster skills that will be needed for a higher education or the workforce. Saving at risk students has become a topic been visited more recently throughout the years. The future of our country falls in

the laps of the youth we are educating today. It is imperative that the academic administrators and teachers in high schools understand how important their roles are in nurturing and molding the minds of future leaders. The researcher learned that American cannot take a chance on cutting back on governmental funds for public schools. Saving at-risk students has to be the role and priority for administrators, teachers, parents, and students.

The researcher has also learned that, no matter what type of program we utilized as a society, there has to be checks and balances to the process to ensure funds are distributed and utilized at the best capacity. By best, the researcher means that there has to be positive results that can be measured and document, so the efforts can be eliminated or enhanced as necessary. If administrators and teachers are held accountable for their actions when it comes to utilizing funding for public education, then maybe the distribution allocation of the thoughts can be better utilized for future students. The researcher believes that it is important to document successes and failures, so other schools can learn from them.

The researcher discovered that low-income students may be facing social and economic challenges that may keep them from graduating from high school that other mainstream or middle class students are not burdened with. Some challenges can prove to be obstacles that at- risk, low-income students will not be able to overcome. With that being said, some low-income students may find themselves in that situation where they are unable to graduate because of the challenges in their homes and social settings take a toll on them. Administrators and teachers play an important role in guiding at-risk

students to the line for a high school diploma. They have the power to make a difference in their students' lives and the future of our country.

Additionally, the researcher learned that it is important for administrators and teachers to make sure the parents are engaged and included in the learning process for low-income students. That may make their jobs a little harder or more challenging, but they cannot do it alone, and improvement grants do not necessarily help them achieve the goal of academic success. The support groups for low income students, which may include the parents and their immediate surroundings and influences, will have to help teenagers achieve their academic goals and ultimately graduate from high school.

The SIGs seemed like a promising program, but the statistics in this study show they had very little impact on improving academic achievement, if any. So that leaves the researcher to wonder if other elements have more influence on academic achievement for low-income students than the SIGs. There are strong statistical implications that the SIG program did not directly have an impact on improvement of academic achievement rates.

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Vitae

A N I S S A W I T H E R S P O O N

EXPERIENCE

2000-PRESENT AUTOMOBILE CLUB – ACSC COSTA MESA, CA
Manager

- Communicates organizational objectives and goals through team meetings, mentoring, coaching and performance evaluations
- Responsible for a staff that takes inbound service calls for membership statements, changes, payments and membership transactions and correspondence
- Manages a staff of 35 associates or more which includes an administrative assistant, supervisors, analysts and membership specialists
- Responsible for reviewing and maintaining membership documents which includes billing statements, various letters or correspondence documents, and numerous reports
- Works closely with internal cashiering concerning misapplied funds and returned checks
- Responsible for monitoring and reviewing inbound service calls for quality assurance
- Responsible for overseeing various projects concerning memberships
- Assists internal and external customers with their membership concerns and issues
- Assists upper-level management with system enhancement projects and testing
- Previously worked in the Emergency Road Service and the Membership Service Center departments as a supervisor and was responsible for numerous duties such as budgets, performance evaluations, training, customer complaints and call monitoring

2000-2002 FONTBONNE UNIVERSITY ST. LOUIS, MO
Instructor

- Facilitator for Human Resource Management courses and Organizational Behavior courses

1999-2002 UNIVERSITY OF MISSOURI - ST. LOUIS ST. LOUIS, MO
Instructor

- Facilitator for Human Resource Management courses

1995-2000 BANK OF AMERICA ST. LOUIS, MO
Vendor Manager/Project Manager/Corporate Trainer

- Vendor Manager for a consumer mortgage lending division
- Worked with a mortgage lending quality assurance team
- Worked as a corporate trainer for the vendor management division
- Project manager responsible for the implementation of a vendor management company

EDUCATION

2009-PRESENT LINDENWOOD UNIVERSITY ST. CHARLES, MO

- DOCTOR OF EDUCATION, SCHOOL OF EDUCATION, EDUCATIONAL LEADERSHIP

1999 WEBSTER UNIVERSITY ST. LOUIS, MO

- MASTER OF ARTS, DUAL, HUMAN RESOURCE MANAGEMENT, AND HUMAN RESOURCE DEVELOPMENT

1994 UNIVERSITY OF MISSOURI ST. LOUIS ST. LOUIS, MO

- BACHELOR OF SCIENCE, BUSINESS ADMINISTRATION, MANAGEMENT AND ORGANIZATIONAL BEHAVIOR