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Smaller Learning Communities as Comprehensive School Reform: A Quantitative Analysis of Implementation

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SMALLER LEARNING COMMUNITIES AS COMPREHENSIVE SCHOOL
REFORM: A QUANTITATIVE ANALYSIS OF IMPLEMENTATION

by

Jerry B. Doss

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Doctor of Education

in

Ethical Leadership

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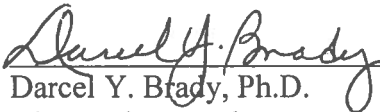
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Dissertation



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ABSTRACT

In recent years, smaller learning communities (SLCs) have emerged as a strategy to address the social problems and poor academic performance of students in large high schools. Smaller learning communities are structures such as schools-within-schools and academies that offer smaller settings and more personal environments and instructional opportunities for students in large high schools.

The purpose of the current study was to investigate the relationship between student achievement and SLCs in a medium sized suburban high school district in order to determine whether SLCs accomplished the goals of school reform. The school district under investigation received a Smaller Learning Communities grant from the United States Department of Education. The district was awarded a five-year grant in 2008 that ended in 2013. The current study evaluated data collected during the grant period to measure student achievement and graduation rate. A quantitative multivariate analysis was used to compare the GPA, ACT, and discipline data of students who were exposed to SLCs to those who were not exposed to SLCs in order to determine if there were any statistically significant differences between both groups.

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CHAPTER I

INTRODUCTION

Public education is a major factor that has influenced the development and growth of the United States of America. According to the National Commission on Excellence in Education (1983), access to public education over the last 250 years has fostered a civil population that has enabled the United States to become the only superpower and leader of the western world. Moreover, perpetuating an educated populace is crucial to the maintenance of a robust democratic society and sustaining the United States' position as a world superpower. However, public education is not an enumerated function of the federal government. The Tenth Amendment of the Constitution reserves education as an implied power to the individual states (U.S. Const. Amend. X). There is no constitutional mandate for the federal government to regulate or legislate public education policy. Nonetheless, according to Borman, Hewes, Overman, and Brown (2003), the federal government has exercised considerable influence on public education policy. The federal government's primary means of affecting public education policy has been through grants to states and local school districts. Specifically, school reform was one area in particular that the federal government has invested funding to improve low-performing schools. Establishing Smaller Learning Communities (SLCs) was one of the methods of school reform funded through grants by the federal government.

Milson, Bohan, Glanzer, and Null (2004) noted that as the 13 colonies matured into a unified nation, education became a basic part of everyday life. Most early schools were

religious-based and non-public. Thomas Jefferson was one of the first to lobby for public elementary and secondary schools as a public service of local and state government when he proposed the *Bill for the More General Diffusion of Knowledge* to the Virginia legislature in 1778 (Milson et al.). Accordingly, almost 100 years later Horace Mann continued to advocate the ideas of Thomas Jefferson in American society with the development of the common schools philosophy (Wiebe, 1969). The common schools movement was the idea that all Americans should have access to a comprehensive public education without regard to social class or ability to pay (Wiebe). According to Mann (as cited in Wiebe), a free and accessible public education system would unify the nation, energize the labor force, and unleash the productive capacity of the country.

Since the time of Horace Mann and Thomas Jefferson, public education has grown into a comprehensive phenomenon that is woven into the political fabric of greater society and all levels of government. Today, education is compulsory for students under the age of 17. In most states, issues of equity, fairness, efficiency, and accountability drive debate and policy decisions for creating safe and supportive learning environments for all students (National Commission on Excellence in Education, 1983).

Poterba (1996) suggested that as the management, operation, and oversight of schools expanded, the cost of public education increased. With increased cost came more formalized governing and financing structures. Today, billions of dollars are allocated to fund public education. Since the 1983 release of the Reagan administration's report, *A Nation at Risk*, policy makers at all levels of government have been concerned about the efficacy and results of public education (National Commission on Excellence in Education, 1983). According to the National Commission on Excellence in Education,

student achievement was not uniform across the country. In pockets of the country, schools were high performing and student achievement was at desired levels. However, in others, schools were low performing and student achievement indicators stagnated below state-mandated levels. Furthermore, this trend represented the first time in American history that low-performing schools were beginning to outnumber high-performing schools. The projected pure economic output and productivity of the current generation of students was not outpacing that of their parents. The contemporary decline of public education was detailed in the following excerpt from *A Nation at Risk*:

Each generation of Americans has outstripped its parents in education, in literacy, and in economic attainment. For the first time in the history of our country, the educational skills of one generation will not surpass, will not equal, will not even approach, those of their parents. (p. 12)

To address this trend, policy makers have instituted several comprehensive school reform initiatives. Recent reform efforts climaxed with the passage of the *No Child Left Behind Act of 2001*. *No Child Left Behind Act of 2001* amended the *Elementary and Secondary Education Act of 1965* (ESEA) as ESEA was reauthorized in 1994. According to Linn, Baker, and Betebenner (2002), the federal government mandated states and school districts that received federal education assistance increase standards and implement high stakes testing to measure adequate yearly progress (AYP) and hold schools accountable for the yearly academic growth of their students. Schools not making AYP for more than two consecutive years must participate in some form of school reform that addressed deficiencies in meeting state academic standards.

Borman, et al. (2003) commented that school reform was like a pendulum that swung from one research-based practice to another. Researchers and school leaders have attempted to find the magic bullet to transform low-performing schools for the greater part of the last 50 years. However, Borman et al. noted that with each reform effort that was implemented over the last 20 years, there has been little empirical research completed to ascertain whether or not the reform program was successful. SLCs were one of the many comprehensive school reform programs that were used nation-wide in schools not making AYP. The current study focused on SLCs as a means of comprehensive school reform in a public high school district.

Statement of the Problem

In the year 2000, the federal government and several private philanthropic educational organizations began to increase investment in SLCs as a reform model for low-performing schools (Cotton, 2001). In response to the evidence supporting both the academic and social benefits of small schools, government and private funding sources have made millions of dollars available to large schools, and especially large high schools, for these schools to create SLCs in buildings they already inhabit (Cotton).

However, more than a decade has passed since the implementation of SLCs nationwide. Low-performing schools are still struggling to close the achievement gap and make gains on high stakes standardized tests. Results are also mixed when explaining the effectiveness of SLCs in increasing student achievement and performance on standardized tests and reducing disciplinary referrals. Levine (2010) commented on the breadth and depth of understanding policy makers had about the effectiveness of SLCs and funds spent over the years to implement the initiative:

It is unclear as to what is limiting the success of SLCs. In spite of considerable effort and financial support for SLCs, research findings about their impact on students are just beginning to emerge. Such research, at present, does not provide sufficient evidence either to support or refute SLCs as a promising means to improve academic achievement. (p. 1)

The purpose of the current study was to investigate the relationship between student achievement and SLCs in a medium sized suburban high school district in order to determine whether SLCs accomplished the goals of school reform. Three schools were included in the study. Quantitative data were examined to establish a baseline and develop conclusions regarding the relationship of the SLCs as implemented in a suburban high school district compared to the structure the school district used during the five-year period immediately preceding the introduction of SLCs.

Background

Comprehensive school reform is primarily the umbrella reform initiative created and developed by the federal government over the past 50 years (Rowan, Correnti, Miller, & Camburn, 2009). The two most important milestones in this movement were the *Elementary and Secondary Education Act of 1965* and its 2001 re-authorization, the *No Child Left Behind Act*. Both pieces of legislation were attempts by the federal government to codify school reform and formally make reforming low-performing schools federal policy with substantial funding for implementation allocated (Lee, 2006).

Comprehensive school reform's origins can be traced back to the mid-1950s and the federal government's shift toward creating design-based school improvement (Rowan et al., 2009). According to Rowan et al., the first comprehensive school reform initiatives

were instituted because of the need to create scientifically-based approaches to reforming schools. The 1954 *Cooperative Research Act* authorized the U.S. Office of Education to conduct research with universities and state departments of education to develop programs and monitor implementation. The goal was to create reform efforts that could be duplicated across the country. Upon the creation of research teams and a network of education laboratories and research and development centers (R&D), several curriculum development and project-based initiatives were funded (Rowan et al.). The initiatives funded during the first round were the pre-cursors to modern day comprehensive school reform programs.

According to Rowan et al. (2009), starting with its inception in the mid-1950s, comprehensive school reform was one of the first public/private and non-governmental partnerships funded by the federal government to advance research in public education. The federal government partnered with universities, philanthropic organizations, and not-for-profits to create meaningful reform initiatives. Research and development occurred between the years 1954 and the mid-1980s. This period constituted the R&D phase. Schools and universities tested reform ideas, collected data, and evaluated results (Rowan et al.). After the publishing of *A Nation at Risk*, public attention turned to research-based means of transforming and improving low-performing schools (Rowan et al.).

During the 1980s and 1990s, the federal government began to implement comprehensive school reform strategies that were under research and development during the 1960s and 1970s. The mantra for school reform during the 1980s and early 1990s was scientifically-based reform in American education. The administrations of Presidents Reagan, G.H.W. Bush, and Clinton incrementally increased funding for school reform

while simultaneously increasing statutory mandates for low-performing schools to implement comprehensive school reform in order to maintain federal funding (Rowan, et al., 2009).

Modern comprehensive school reform was initiated in 1991 as part of President George H.W. Bush's America 2000 initiative (Rowan, et al., 2009). Based on Rowan et al.'s research, the reforms developed during the R&D phase were catapulted to national prominence. For example, by 1997, 685 schools across the country were implementing school reform measures developed under earlier reform research and development activities. According to Rowan et al., the number of schools implementing comprehensive school reform has increased since then. After the passage of the *No Child Left Behind Act*, as of 2009, nearly 10% of all public schools in the United States were implementing some form of school reform.

The year 2000 was pivotal for comprehensive school reform and school accountability because it was the year Congress and the president began drafting NCLB and changed the way the federal government provided monetary assistance to poor and low-performing schools. The *No Child Left Behind Act* fundamentally changed the way the United States Department of Education and states managed and evaluated local schools and school districts (Linn et al., 2002). Schools not making AYP or showing gains toward increasing yearly student achievement were required to adopt a scientifically-proven reform strategy to address deficiencies in student achievement. The strategies schools had to choose from were the ones tested during the 1960s and 1970s. Linn et al. illustrated the change in federal education policy articulated in NCLB in the following passage from their report on implementation:

The implications for teachers and school administrators derive from the requirements of the law that schools demonstrate steady gains in student achievement and close the gap in achievement between various subgroups of students. Schools that fail to meet improvement targets (AYP) must adopt alternate instructional approaches or programs that have been shown to be effective through *scientifically based research*, a phrase that appears 111 times in the NCLB law. (p. 4)

Furthermore, according to Linn et al. (2002), states were required to develop and implement rigorous literacy and numeracy standards, and annually test students to gauge progress toward meeting standards. Each year, AYP targets marginally increased for schools to show growth over time and provided accountability for student achievement. Schools that did not meet AYP were required to develop and institute research-based comprehensive school reform plans to address challenges that prevented the school from making AYP.

Now that NCLB has been implemented for more than a decade, many schools across the country have had to institute some form of school reform for failing to meet AYP (Lee, 2006). At the secondary level, smaller learning communities were a popular model for reform. According to Levine (2010), the federal government and several private funding organizations invested billions of dollars in research, development, and implementation of smaller learning communities. Funding from the federal government created more than 1535 SLCs across the country (Levine). Specifically, the Bill and Melinda Gates Foundation devoted more than \$1.5 billion to the effort and awarded grants that started 100 schools as of the year 2006 (Shear et al., 2008).

Over the last 50 years, many comprehensive school reform initiatives have been implemented. However, three initiatives have stood the test of time and are in use across the country. According to Rowan et al. (2009), Accelerated Schools Project (ASP), America's Choice (AC) and Success for All (SFA) were the three most prominent comprehensive school reform strategies in the country. Other reform measures have been implemented; however, the majority of schools used the three previously mentioned. As stated in this project, data and research on the success or failure of comprehensive school reform was limited. The early years of the movement were developmental and skewed toward moderate success in isolated case studies (Lee, 2006). Current results are still under investigation. Each of the three major comprehensive school reform models has unique visions for school reform. ASP focused on cultural, institutional and community based reform that differed greatly from the instructional and school-based reforms of AC and SFA (Rowan et al.). According to Lee (2006), national test results, National Assessment of Education Progress indicated that aggregate achievement did not increase with the implementation of comprehensive school reform and the mandates required by NCLB. However, according to Rowan et al. local data, individual school and state test results provided evidence of marginal improvement in student achievement in low-performing schools.

SLCs were a model of school organization that transformed traditional large high schools into smaller schools within a school. According to Matthews and Kitchen (2007), SLCs were formed around a gifted program, career, or a pre-college-themed curriculum and teachers were teamed to focus efforts on individualized instruction. The goal was to create environments where students and teachers could build better bonds and where

teachers could create more comprehensive lessons that were aligned across content areas (Matthews & Kitchen). SLCs were usually operated like schools within a school with autonomous administration.

Research Questions

The purpose of the current study was to investigate the relationship between student achievement and SLCs in a medium sized suburban high school district in order to determine whether SLCs accomplished the goals of school reform. The school district under investigation received a Smaller Learning Communities grant from the United States Department of Education. The district was awarded a five-year grant in 2008 that ended in 2013. The current study evaluated data collected during the grant period to measure student achievement and graduation rate. Student achievement was measured based on GPA and results on annual ACT Exams. Discipline was measured based on analyzing the number of discipline referrals during the same period. Archival student data were collected of students who were enrolled during implementation of the grant (2008-2013) and compared to archival data of students who attended school during the five years prior to implementation of SLCs in the district (2003-2007). The following research questions served as a framework for the current study.

1. To what extent is there a difference between students' GPA for students who were enrolled in the SLCs compared to students who did not participate in SLCs?
2. To what extent is there a difference between the number of discipline referrals for students enrolled in SLCs compared to students who did not participate in SLCs?

3. To what extent is there a difference between ACT scores for students enrolled in SLC compared to students who did not participate in SLCs?

Description of Terms

Adequate Yearly Progress (AYP). Adequate yearly progress is the metric that examines the performance of cohorts from year to year in terms of the proportion attaining proficiency on state standards based tests. If the proportion for the school as a whole and for each numerically significant subgroup is at or greater than that specified in state annual measurable objectives (AMO), then the school is designated as meeting AYP and presumably credited with making progress in closing the achievement gap. If a school does not meet AMO set objectives it is labeled as not meeting AYP (Choi, Seltzer, Herman & Yamashiro, 2007).

Annual Measurable Objectives (AMO). Annual measurable objectives are used to determine compliance with the federal NCLB. States must develop annual measurable objectives that determined if a school, district, or the state as a whole was making adequate yearly progress toward the goal of having all students proficient in English language arts and mathematics by 2013-14 (Choi et al. 2007).

Common Core State Standards. Common Core State Standards are new national standards in English language arts and mathematics for skills students should master to be college and career ready by the time they graduate from high school. States are currently working backwards until they have standards for all content areas from twelfth grade through kindergarten (Moustafa, 2012).

No Child Left Behind (NCLB). The *No Child Left Behind Act* amends the Elementary and Secondary Education Act of 1965. It has a number of testing and accountability

provisions that required changes in the practices of many states and holds schools responsible for meet strict achievement requirements and implementing plans to address deficiencies of students not at grade level (Linn et al., 2002).

Smaller Learning Communities (SLCs). Smaller learning communities are intended to create smaller schools-within-schools, or theme-based (career) academies within existing large high schools. Within SLCs there is an emphasis on providing a more personalized learning environment (Armstead, Bessell, Sembiente, & Plaza, 2010).

Significance of the Study

As the nation moved toward the next chapter of public policy and the strategic direction of public education, it was prudent to evaluate current initiatives to inform policy decisions. The high stakes accountability and independent state standards of NCLB are slowly transitioning to the more streamlined and rigorous standards of Race to the Top (RTTT) and the Common Core State Standards (Eun, 2011). The current study examined the implementation of SLCs in a moderate-sized high school district. With the transition to RTTT, comprehensive school reform will be an issue for federal and state policy makers (Eun). Struggling schools will still exist after NCLB and SLCs. However, with the lessons learned from NCLB, SLCs, and other school reform measures, planning the next chapter of national education policy may yield better results.

College and career readiness was becoming the focus of most secondary curricula. According to Armstead et al. (2010), SLCs as a reform model focused on preparing students for college and career by fostering small learning communities around general career themes and college preparation. According to Eun, (2011), the Obama administration's RTTT initiative was transitioning from the traditional high school

structure to curricula that were based on individual career pathways rather than small communities centered on college and career clusters. Consumers of this study can use its conclusions to shape the next generation of comprehensive school reform models that prepare students in low-performing schools for college and careers, rigorous learning standards and a global society.

Process to Accomplish

Participants

The participants of the current study were high school students who were enrolled in the second round of SLCs funding, from 2008-2013, along with other high school students who were enrolled during the 2003-2007 school year and who did not participate in the SLCs program. The experimental group was the 2008 cohort. The control group was students who did not participate in the SLCs structure and attended school between the years 2003 and 2007. The group of students that was exempted from the current study was special education students. The researcher used archival student data stored in the school district's data management system, Powerschool. Data were retrieved from the district without identifying information. Because all data that were collected were archival and historical in nature, no recruitment or selection process was needed. Data for all students who attended school in the district during the period being studied were included. No students were excluded except those who left the schools, and the exclusion occurred at the time of their departure from the district.

The current study used a nonrandom sampling process to select the participants. All students who matriculated between the years 2003 and 2013 were included. Specifically, convenience sampling was used. Convenience sampling is the process of including

whoever happened to be available in the sample (Gay, Mills, & Airasian, 2012). Convenience sampling was used in order to obtain a sample size that could be generalized to the greater population of the high school district under investigation. The convenience sample used in the current study was the 2003-2007 cohort and the 2008-2013 cohort. According to Gay et al., one major disadvantage of convenience sampling is the difficulty to describe the population from which the sample was drawn and to whom the results can be generalized. However, such was not the case in the current study. Because of advances in technology and data management software, the researcher was able to gather data for both cohort groups that represented the entire population. The school district's data management software had archival data for all students included in both cohorts. The only students not included were those who transferred out of the school district, or were removed from the school district for disciplinary reasons. Nonetheless, the data were still included for students who left the district until the date of their departure. Both groups were homogenous except for the independent variable, participation in the SLCs program.

The site chosen for this research was a high school district. The district served students in grades 9 through 12 in three comprehensive high schools. The experimental group was the students who entered high school during the 2008-2009 school year, ending with students who graduated in 2013. Over the course of the current study, there were some changes within both the control and experimental groups over time due to student movement into and out of the district. Those transient students were either added to or subtracted from the experimental and control groups as such movement occurred. The experimental group was compared to the control group, which was the non-SLCs

students within the district who attended during the years 2003 and 2007. The school district had approximately 5,000 students, all in 9th through 12th grades. Approximately 3750 students in the district were classified as low-income.

Since receiving the Smaller Learning Communities grant in 2008, the school district had not made any major changes to curriculum and instruction. Some college and career programmatic options had increased, but they were in response to mandates of the grant. The school district could not make any substantial changes to the curriculum and other SLC-based programs until the grant ended at the conclusion of the 2012-2013 school year. All students matriculating during the grant period had had the same educational experiences save for staffing changes and non-grant-related turnaround.

Measures

Quantitative data for the current study included ACT scores, discipline referrals, and grade point averages. There were two groups of students involved in the current study. These two groups were compared in the three different categories: ACT, discipline referrals, and GPAs. Descriptive statistics were used to show how often and to what degree a certain score occurred as well as the mean, median, and mode for comparison in both groups. Standard deviations were computed to determine the spread of data around the mean. Inferential statistics were used to determine how likely the results of this study could be applied to the greater population of schools in the school district that implemented smaller learning communities. The multivariate *t* test of significance was used to compare both groups with respect to ACT scores, discipline referrals and GPAs. In order to control for lack of randomization and manipulation, the researcher used homogeneous groups. Both groups were pre-existing and no discriminating factors were

used to create the groups. All students matriculating during the period under investigation were included in the study.

Procedures

An *ex post facto* research design was used for this study. *Ex post facto* research “is research that attempts to determine the cause or reason for existing differences in the behavior or status of groups or individuals.” (Gay et al., 2012, p. 235). The researcher used this type of design because both groups are fairly homogenous and data gathered from both groups were archived and pre-existing. The major challenge with this method of research was that an apparent cause-effect relationship could not be conclusively determined (Gay et al.). In the current study, the independent variable was not manipulated because the data for research in question had already been collected. Both the control group and experimental group already existed and randomly assigning participants to the groups were not possible before the research began. Furthermore, there was no way to rule out all other extenuating influences that could have affected both groups.

Data were collected for all students in both cohorts. Data from the experimental group and control group were compared using the multivariate *t* test of statistical significance. The multivariate *t* test was used to determine whether the means of the two groups were statistically different at a given probability level (Gay et al., 2012). The multivariate *t* test was also used instead of multiple *t* tests because multivariate analysis compensated for family-wise error that could have occurred due to the implementation of multiple *t* tests. As an administrator within the district, the researcher had full access to all archived data.

During the 2008-2009 school year, all freshmen district-wide entered the SLCs in the Freshmen Academy at each school. The Freshmen Academy was the introductory SLC for all students entering the school district during the freshmen year. However, due to high mobility and high transient rates of students in the school district, the number of students declined as they matriculated. Some students naturally left the program and others left due to disciplinary issues. Using archival data from the Powerschool data management system, the researcher was able to retrieve student test scores for the years being studied, 2003-2013.

The 11th-grade year is the year the State of Illinois mandated that students take the ACT exam in order to graduate. Should any student fail to take the ACT exam by this time, they are given additional opportunities during their senior year to take the exam. The inclusion and availability of this data from their 10th-grade and 11th-grade years lend to the homogeneity of this study. State-mandated standardized tests and ACT scores were obtained from archival data for the 2003 to 2007 school years and 2008 to 2013 academic school years.

The researcher used archival student data from the control and experimental groups to test the research questions listed above. The control group and experimental group were tested using the multivariate t test of significance. The multivariate t test tested the means from both groups to determine the statistical difference between both groups. Mean and mode were also calculated to see descriptively the difference between both groups. The standard deviation was also used to measure the strength of the spread for the data that was used in the current study.

Summary

Public education has been in a dynamic state of flux for at least the last half century. New research, drawing on outcomes of NCLB and other educational reforms, will inform the next generation of public policy. The United States Department of Education and a majority of states are moving toward the next chapter in school reform and accountability, including common core curriculum, unified assessment standards, rigorous curriculum and college and career pathways. SLCs were once thought to be the silver bullet for fixing broken schools. Chapter II will examine the literature in this area of school reform, its origins, and next steps.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The purpose of the current study was to investigate the relationship between student achievement and SLCs in a medium sized suburban high school district in order to determine whether SLCs accomplished the goals of school reform. This chapter examines in-depth the literature and history of the federal government's role in public education and school reform.

Since the Declaration of Independence and the birth of the United States of America, the experiment of republican democracy has stood the test of time. After the ratification of the Constitution of the United States, the role of government has expanded and contracted as the needs of the nation changed. Specifically, public education has a long history and is one of a few institutions in American society that is relevant to the debate regarding federalism. The debate surrounding public education can be traced back to the 1700s. Throughout the 18th, 19th, 20th, and early 21st centuries, much of the conversation and formulation of the contemporary American public education system was influenced in part by Noah Webster, Thomas Jefferson, and Horace Mann. Each contributor had different views of the goals and structure of the system, but agreed that an educated populace was essential to the maintenance of a free and robust democratic society. The review of the literature also examined the legal context of comprehensive school reform and smaller learning communities.

Historical Framework

According to Ravitch (2008), during the Post-Revolutionary War era (1783-1840) there were no public schools in the United States. Noah Webster was one of the first to advocate for standardized public education in the United States. Webster's contribution to the modern public education system started with the publication of his first spelling book and associated curriculum in 1783. Webster's speeches, writings, and theoretical impact on the American education system spanned almost 32 years between 1783 and 1815. His position on public education included a structured school system, funding, and curricula taught from textbooks.

However, the absence of a formal infrastructure for free and accessible public education did not stop Webster. According to Ravitch (2008), Webster was a progressive thinker in terms of education. He felt that in a democracy access to an education should be free, equitable, and available to all. Webster felt that only with a vibrant public education system could a democracy be sustained and maintained over the long-run. Furthermore, Ravitch commented that Webster believed that the new nation needed, above all, a common American English language. He advanced the cause of cultural nationalism by writing schoolbooks and a dictionary of the English language with its own distinctive American pronunciations. Moreover, according to Spring (2005), Webster was an early proponent of the Common Schools Movement. He believed that education should be accessible to every class of people so that they would know and love their heritage and be productive members of society.

During the same time period that Noah Webster was advocating for free and standardized public education, Thomas Jefferson submitted legislation to the Virginia

assembly to create public schools in the State of Virginia. Jefferson proposed the Bill for the More General Diffusion of Knowledge in 1778 (Milson, et al., 2004). According to Milson et al., Jefferson's bill would have created the first state supported public education system in the country, but his reforms were not adopted. However, in contrast to the ideas proposed by Noah Webster, Jefferson's proposals were timid because his state system would not have included all children, excluding African-American children in particular, and its intent was to educate the elite of Virginia (Ravitch, 2008). Yet, for his time, Jefferson's ideas were ahead of his peers because he saw the need for a government funded public education system.

Even though there were subtle differences between Webster and Jefferson, they both strongly believed in a robust education system to counteract the potential destruction of democracy that was most often caused by an ignorant population. According to Spring (2005), Jefferson believed that only the people are the guardians of liberty. An uneducated populace could lead to an implosion of society because of the political participation of an unknowing people. Lee (1961) made this point very clear in the passage below from Thomas Jefferson:

I know of no safe depository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education. (p. 17)

According to Litz (1975), 50 years after the writings and political activism of Webster and Jefferson, a comprehensive public education system was still in its developmental stages. Based on the writings and progressive work of Webster more jurisdictions began

to adopt publicly supported education systems based on the common schools model. However, around 1827, Horace Mann began advocating for comprehensive free and public schools in the Commonwealth of Massachusetts. Nationally, between 1776 and 1827, public education was a loose connection of religious private schools and regional state supported schools (Litz). Early schools were not readily accessible to all citizens. One of Horace Mann's notable contributions to public education was the dismantling of the state supported sectarian education system and replacing it with a system structured around the common schools model. Schools organized around the common schools movement were free to all citizens, used a common curriculum, were state supported, and did not subscribe to a particular religious doctrine to help develop moral character. Schools were managed and financially supported by school districts. The school district was significant because it represented a high degree of decentralization of school control, and more importantly, it marked the separation of school, state, and municipal administration. Local school boards were formed and the districts determined the amount of school tax and appointed the teachers (Litz).

Consequently, as noted by Spring (2005), the common schools movement's roots were the infrastructural, operational, and managerial reforms instituted by Noah Webster and Thomas Jefferson and implemented during Horace Mann's tenure as Secretary of the Massachusetts State Board of Education. On a national scale, the common schools movement made public education a goal of state and local governments. It established and standardized state systems of education designed to advance the educational achievement of all students. Spring further noted that the common schools movement had three distinct features: educating all students in common schools, using schools as an

instrument for furthering government policy, and creating state agencies to control local schools.

As stated earlier, Mann and his historical colleagues agreed about providing a system of public education that would be supported by the state and be available to its citizens. However, there were differences in terms of curriculum and who should have access to public schools (Litz, 1975). Horace Mann was more aligned with the theories of Noah Webster and free common schools, as opposed to Thomas Jefferson and state-supported schools with selective enrollment and secular curriculum. According to Litz, Mann believed that the school should reach every child in the Commonwealth of Massachusetts because universal popular education was, in his opinion, the only foundation on which a republican form of government could stand. Mann believed that public education was a moral enterprise and that it was the duty of the school to provide a non-sectarian moral education.

On the other hand, Mann was not a pure sectarian. He would disagree with Webster in terms of the role public education should have in promoting religious doctrine in school. As the first Secretary of the Massachusetts State Board of Education, Mann had to contend with religious leaders who felt that there was no place for God in the public schools. Litz (1975) argued that Mann's Puritan heritage and most citizens of Massachusetts visualized the central purpose of education to be the indoctrination of Christian morality. The problem then was how to make the public school, supported by public funds, non-sectarian, and yet at the same time empowered to teach morality.

Nonetheless, over time Mann reversed his views on religion and public education. During the many debates with Puritan, Calvinist, Unitarian, and other reformed Christian

denominations, Mann began to articulate a more secular view of public education that was more consistent with contemporary thinking. According to Jones (1952), Mann argued the following during a debate with local religious leaders:

Mann insisted that Christian sects no longer formed the overwhelming majority of the population of the state but that “Liberal Christians” formed between a third and a fourth of the population. He argued the law forbade sectarianism in the schools and made it clear that the reading of the Bible without comment was the highest common denominator he could find among the sects and still insure nonsectarian teaching. (pp. 104-105)

Federalism and Local Control of Schools

The United States Constitution established two sets of sovereign entities with enumerated powers. With respect to public education, the Constitution did not specifically grant authority to the federal government. The Tenth Amendment of the Constitution reserved education as an implied power to the individual states (U.S. Const. Amend X). However, even though there was no direct constitutional authority to regulate public education, the federal government has exercised influence in the creation of the modern public education system (Dawson, 1938).

According to Dawson (1938), from the end of the Revolutionary War to the end of the Civil War (1783 -1865) the federal government did not have a role in opening, operating and funding schools across the country. The federal government’s role during this period was that of a catalyst for growth. The federal government provided land grants to schools of higher education and public schools in the new territories. Under these federal policies, more than 246 million acres of land were granted to the states for

educational and other purposes, with the majority devoted to education that amounted to more acreage than the combined areas of Alabama, Indiana, New York, and Pennsylvania.

Post-civil war, the federal government continued to make land grants and provided funding for public education infrastructure, particularly in the southern states (Dawson, 1938). However, by the mid-1930s, the federal government began to fund schools that prepared students for the workforce. This period marked the first federal legislation passed by Congress relating to public and higher education. In 1933, the federal government provided more than 120 million dollars to the states for various educational purposes through the Emergency Relief Administration. Of that amount, however, only 21.5 million dollars went to regular public schools. In addition, from 1933 to 1937, more than 213 million dollars were granted to states and localities for the construction of public-school and college buildings (Dawson).

According to Dawson (1938), the period of time between 1776 and 1938, the federal government did not make substantial financial contributions to the states for the general operation of public schools. The federal government saw public education as a primary function of the state. However, the federal government used its authority to assist states with creating the infrastructure for public education as outlined above. Dawson articulated this idea in the following passage:

It will be observed that practically all the federal grants of public funds have been for special types of education. General education as carried on in the regular public schools has been considered wholly as the responsibility of the state and local governments. (p. 227)

During the years between the end of the Civil War and the conclusion of World War I (1865-1920), the modern public school system under local control expanded. According to Bankston (2010), most states adopted the common schools ideals of public education. States guaranteed access to public education in their respective state constitutions and provided funds for public education through property taxes. Schools were divided into school districts that were managed by locally elected boards of education. Accordingly, public schools were often centers of community events and central meeting points.

The above mentioned period was one of the most active and influential eras of public education. According to Bankston (2010), although schools were a nationwide phenomenon by 1900 and had contributed to the political consolidation of the country, they remained highly localized institutions. The old tension between community and central government continued to be part of American life. During the two decades before World War II, over 120,000 school districts were formed in the United States, with board members who had to answer to the local population that supported the system.

After World War II, the federal government began to expand and exercise more authority in elementary and secondary education via monetary aid to states and local school districts. The federal government used its power of the purse to provide funds to local school districts and in return attached mandates and policy objectives that local school districts were required to implement (Bankson, 2010). In 1958, the competing forces of the Cold War led the United States to begin centralizing the federal government's policy activities as they related to public education. In order to accomplish this goal, in 1958 Congress passed the first major national education bill in the nation's history, the National Defense Education Act (NDEA). The \$900,000,000 four-year bill

marked the first move toward promoting curriculum and instruction in the areas of mathematics, science, and foreign language through grants to states and school districts. The NDEA also provided funding for testing and counseling of students, and money for teacher training (Bankston).

Moreover, even with the massive infusion of funds and federal mandates that were established as part of the NDEA, one of the most profound and prolific expansions of federal authority into the local control of public schools was the subsequent passage of the Elementary and the Secondary Education Act of 1965 (ESEA), as part of President Johnson's War on Poverty. Since the passage of ESEA, the federal government has had substantial influence in the direction of public education (Bankston, 2010).

During the 1970s, with expanding programs and the federal government's increased role via funding for local public schools, various factions and education labor associations began to push for the creation of a national Department of Education with cabinet-level rank. Throughout the history of federal vs. local control of public education, the federal government has created several agencies and bureaus to coordinate implementation of public education policy at the federal level. With the passage of the National Defense Education Act and the Elementary and the Secondary Education Act, substantial federal funds were disbursed with no formal cabinet level agency/bureaucracy coordinating implementation and disbursement of funds. Many in Congress and around the country were hesitant about a growing federal government. Specifically, those in opposition to a federal department of education argued that the federal government had no constitutional authority in this area (Stallings, 2002).

However, the movement for the creation of the Department of Education reached its climax in 1977 with the election of President Jimmy Carter. President Carter promised during the 1976 presidential campaign to streamline government and to create a central department with cabinet rank to coordinate federal education policy. According to Stallings (2002), with pressure from education labor unions and other constituencies, President Carter endorsed the plan to create the United States Department of Education. Once President Carter sent the formal request to Congress, the United States Senate supported the President's decision, and in March of 1977 drafted the Department of Education Organization Act. The debates in the Senate Governmental Operations Committee in the winter of 1977-78 were at times heated, but the bill was ultimately released to the floor of the Senate, where the measure passed. The bill did not come up for a vote in the House of Representatives during the same session, and the proceedings began all over again in 1979. The bill passed the House of Representatives in a close vote in September of 1979. President Carter signed the bill into law on October 17, 1979.

The passage and creation of the Department of Education represented one of the largest expansions of federal authority in public education since the passage of ESEA. The Department of Education was heavily involved in education at the elementary, secondary, and post-secondary levels (Stallings, 2002). Since the founding of the nation there has been a fine line between states' rights and the authority of the federal government. According to Stallings, between 1979 and 2002 the Department of Education eroded local control of public schools in favor of a more national education policy and will continue to do so as local sources of funding for education diminish and remain inequitable.

Federal Intervention and Comprehensive School Reform

From a Statutory and Historical Context

According to Feinzimer (2009), the federal government has provided funds to support public education at the state and local levels. Early funding took the form of land grants and money to support the construction of school facilities. In order to strike a balance between the role of federal, state, and local influence in public education the search for the ideal public school system has led the country through a process of continuous reflection, reaction, and change.

Based on Berends' (2004) research, the origins of comprehensive school reform can be traced back to 1957 and the height of the Cold War. In 1957, the Soviet Union launched the first satellite into orbit, Sputnik. Berends' research also uncovered that after the launch of Sputnik the United States scrambled to regain its role as a leader in mathematics, science, and technology. Accordingly, the United States Congress passed the National Defense Education Act of 1958.

Kessinger (2011) noted that even though the goal of the National Defense Education Act of 1958 was not to change the structure of schools or impose federally mandated programs; it established statutory precedent for federal funding of schools, and was the catalyst for future expansion of the federal government's role in public education. The following will provide a summary of the major statutory milestones in which the federal government provided assistance to primary and secondary public education post the National Defense Education Act of 1958.

Civil Rights Act of 1964

The Civil Rights Movement was the infrastructure of social justice and equal

opportunity for minorities, women, and underrepresented groups in the United States. As a result of the rise of the civil rights movement and the landmark Supreme Court decision *Brown vs. The Board of Education* in 1954, the United States Congress passed the Civil Rights Act of 1964. The Civil Rights Act was designed with the intention to desegregate public places, including public education buildings. The Civil Rights Act was the enforcement mechanism of the Supreme Court's ruling in *Brown vs. The Board of Education* in 1954. It was hoped that by providing equal education and opportunity to all students, the achievement gap would be reduced and quality of education in terms of expenditures and quality of classroom environment would increase (Brown, 2004).

According to Brown (2004), the Civil Rights Act of 1964 was a pivotal piece of legislation because it set the foundation for equal access to public services such as public education and gave the federal government authority to intervene and influence policy at the state and local level even when federal funds were not provided. Title VI of the Civil Rights Act (1964) specifically stated that

No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.

(Civil Rights Act, 1964, Sec. 2000d)

In addition, Title VII of the Civil Rights Act 1964 made it clear that all public institutions were required to provide education to all children regardless of whether or not they were receiving public funding. The Civil Rights Act made it clear that in terms of public education, whether the government was providing funding for the schools or not, public schools were required to follow federal legislation designed to organize and in some

cases specify how they were to implement their school programs (Brown, 2004).

Elementary and Secondary Education Act of 1965

The next statutory building block of federal expansion in public education was the passage of the Elementary and Secondary Education Act of 1965 (ESEA). ESEA was the cornerstone of President Lyndon Johnson's Great Society. As President Johnson stated in 1964, "The Great Society is a place where every child can find knowledge to enrich his mind and to enlarge his talents." (Johnson, 1964, para. 11) ESEA was created with the hope of eradicating poverty as an impediment to quality public education (Feinzimer, 2009). The law allowed the federal government to award grants to local school districts to support students from low-income families. Specifically, it helped provide low-income students with school library resources, textbooks, and other institutional materials. In addition, supplementary educational centers and other services were provided, tied to strict curriculum, accountability and regulatory guidelines (Snyder & Hoffman, 2002).

Goals 2000: Educate America Act

According to Superfine (2005), the Goals 2000: Educate America Act was the initial phase of standards-based curriculum and instruction mandated by the federal government. Enacted in 1994, the Goals 2000: Educate America Act was the first re-authorization of the Elementary and Secondary Education Act that tied federal aid to specific policy and accountability measures for public schools. Responding to some of the well-publicized shortcomings in education noted in President Ronald Reagan's administration report *A Nation at Risk* published in 1983, the Goals 2000: Educate America Act was a revolutionary attempt to promote education reform on a national scale (Superfine, 2005). Building on the standards movement, the most fundamental

components of Goals 2000 provided grants to states to develop their own standards and assessment systems linked to national standards included in the Goals 2000: Educate America Act that was passed by Congress. In addition, the law provided for increased financial flexibility at state and local levels in exchange for submitting to certain accountability measures based on standardized tests. Based on Superfine's research standards, assessments, flexibility, and accountability were thought to be key components that could spur systemic reform in the American education system's poor performing schools.

No Child Left Behind Act 2001

In 2001, President George W. Bush signed the No Child Left Behind Act, which became law in 2002. The No Child Left Behind Act required more testing and accountability. According to Mayers (2006), evaluative measures and graduated benchmarks of yearly progress of local schools were an integral part of the No Child Left Behind Act. The legislation required the use of annual assessments for monitoring and maintaining student achievement on two levels: national and state.

The No Child Left Behind Act targeted the proficient level, which is a level of full mastery of the skills required at each grade level on national academic achievement standards and assessments as the goal for the majority of students in the nation with 100% of all students in the United States being proficient by the year 2014 (Ornstein, Mann, & Malbin, 2002). The passage of the No Child Left Behind Act was the pinnacle of school reform efforts in the United States. It increased accountability for states and local districts in meeting national education goals and standards-based assessment introduced by the Goals 2000: Educate America Act and added punitive measures for

schools not making positive gains in student achievement (Mayers, 2006).

Race to the Top

Race to the Top (RTTT) was the most recent educational reform effort initiated by the federal government. According to Hershberg and Robertson-Kraft (2010), Race to the Top was not a reauthorization of the No Child Left Behind Act. However, it was a federal grant program that encouraged states and local school districts to think outside the box in order to develop and adopt more relevant and rigorous curricula, new teacher evaluation and professional development programs, and assessments that promoted accountability for teachers, schools, districts, and students.

According to Hershberg and Robertson-Kraft (2010), for states and school districts to secure grants from the \$4.35 billion RTTT fund, they were required to use data effectively to reward effective teachers, to support teachers who were struggling, and when necessary, to replace teachers who were not effective. The scale of the federal investment was unprecedented, and the core changes in education reform implemented under RTTT assured rigorous standards and internationally benchmarked assessments. Data systems tracing individual students, teachers, and school leaders were used to monitor growth and hold all stakeholders accountable. Nonetheless, using data and more rigorous academic standards to turn around struggling schools was the climax and most expansive action the federal government implemented in the realm of public education and school reform.

What is Comprehensive School Reform?

According to the Clearinghouse on Educational Management (1998), comprehensive school reform was a broad title that covered a diverse set of nationwide and local

programs. In its simplest terms, these reform programs were cross-disciplinary efforts that involved home, school, and community in the intellectual development and personal nurturing of all children. Furthermore, efforts were geared toward programmatic initiatives that involved changing and incorporating the entire school community. According to the Rand Corporation (1998), whole school reform took an integrated view of the reform process. It was based on the concept that in order to improve school performance successfully, all elements of a school's operating environment had to change at the same time in order to bring each element into alignment with a central guiding vision.

As previously stated, comprehensive school reform as an initiative was one means by which the federal government used funding to affect the way instruction was delivered at the local level. Comprehensive school reform's origins, however, were based in public private partnerships, research-based initiatives, and several model reform efforts that were implemented across the country. Smaller Learning Communities was one initiative adopted by local school districts that was intended to turn around schools, close the achievement gap, and fundamentally change the way teaching and learning was conducted (Rand Corporation, 1998).

According to Berends (2004), one adaptation of comprehensive school reform was another attempt by the federal government to address the achievement gap and other structural deficits of low performing schools uncovered in the 1983 National Commission on Educational Excellence Report, *A Nation at Risk*. After decades of relative inactivity on the part of the federal government to spur educational reform, starting in the late 1980s and early 1990s the private sector and federal government partnered to develop

research-based programs to redesign public schools. In July 1991, in conjunction with former President George H.W. Bush's America 2000 program, the New American Schools initiative was established as a nonprofit corporation funded by the private sector to create and support design teams capable of helping existing elementary and secondary schools transform themselves into high-performing organizations by using whole-school designs (Berends). Congress further supported President Bush's America 2000 initiative and subsequently President Clinton's Goals 2000: Educate America Act by appropriating funds to school districts through the Comprehensive School Reform Development program (Clearinghouse on Educational Management, 1998).

Operationally, the Clearinghouse on Educational Management (1998) noted that the New American Schools projects emphasized the need for professional development that was consistent with the goals of the designs. Because the New American Schools initiatives required at least a three-year effort to implement supportive operating environments, design teams also worked with jurisdictions to establish adequate funding, which included access to federal Comprehensive School Reform Development money from the United States Department of Education.

Smaller Learning Communities as Comprehensive School Reform

With over 50 years of research and development conducted as part of Comprehensive School Reform, SLCs emerged as one of the programs of choice for comprehensive whole-school reform. According to Levin (2010), SLCs were created when existing elementary and high schools decided to break themselves into either autonomous smaller schools or other kinds of more autonomous units, such as houses or academies. Thus, SLCs were different from small schools, which existed in stand-alone buildings and were

not usually formed from the existing staff of one comprehensive high school. They were also historically small and not part of a whole-school reform effort.

Andrzejewski, Chang, Davis, and Poirier (2010) stated that the basis of SLCs organizational changes were the formation of teams of teachers dedicated to the development of a core group of students. Structural reforms were developed to provide a safety net of support for students who were at risk of academic failure and dropping out. For teachers, these changes created a team teaching atmosphere where faculty could become familiar with a smaller cohort of students. Davis et al. further noted that the quality of teachers' behavioral engagement would trickle down to influence students' overall engagement in the classroom in positive ways.

In order to accomplish the goals of comprehensive school reform, impressive amounts of money were devoted to breaking large schools into smaller schools within schools at the federal, state, and local levels. According to Levin (2010), funding from the federal government helped 1,535 larger high schools convert into SLCs, or adopt key features of SLCs. Because the implementation history of SLCs was not very long, the depth and breadth of the research on SLCs was limited. However, according to Levin, there were several studies that evaluated the outcomes of SLCs that were initiated through grants from the United States Department of Education, the Bill and Melinda Gates Foundation, and other funding sources.

Bernstein, Millsap, Schimmenti, and Page (2008) published a report on the implementation of SLCs for the United States Department of Education that evaluated the first round of SLC grants that were awarded in the year 2000. Bernstein et al. represented the most recent analysis of SLCs by the United States Department of Education. Based

on Bernstein et al.'s findings, several short and long-term outcomes were reported. Short-term outcomes, as measured by Annual Performance Report (APR) data, indicated early changes in school-wide outcomes after receiving SLC funding were modest or neutral, with a good deal of variation between schools. Bernstein et al. further reported that where there was evidence of change, trends appeared to be moving in the right direction for school related behaviors (attendance, discipline referrals, and classroom grades). The APR data suggested an upward trend in student extracurricular participation and promotion rates from 9th to 10th grades. There was also a downward trend in the incidence of violence in SLC schools over the period of time that was studied.

Bernstein et al. (2008) further presented long-term outcomes of the implementation of SLCs during the first round of funding. The data suggested increases in the percentage of graduating students who planned to attend either two or four-year colleges. However, there were no statistically significant overall trends in academic achievement, as measured by either scores on statewide assessments or college entrance exams.

Moreover, overall results were mixed as they related to the effectiveness of SLCs as comprehensive school reform. According to Shear et al. (2008), there were many factors that influenced the success of SLCs at the school level. Funding, teacher quality, professional development, and socio-economic status are just a few of the factors that influenced success. However, Shear et al.'s study uncovered that schools that developed SLCs with grants from the Bill and Melinda Gates Foundation experienced progress toward increased attendance rates, decreased discipline infractions, and increased graduation rates. Furthermore, according to Levin (2010) and Bernstein et al. (2008), the

positive trend of anecdotal success of SLCs as stated above was consistent across the United States.

Efficacy of Smaller Learning Communities

Smaller learning communities have had marginal success, as measured by major research funded by the United States Department of Education and the Bill and Melinda Gates Foundation. With the transition of many large schools into SLCs since the turn of the 21st Century, there is statistical data and research available to attest to the efficacy of SLCs as reform initiatives in terms of student achievement, attendance, graduation rates, and the creation of safer environments when compared to larger high schools (Klonsky & Klonsky, 1999). Research has shown that smaller schools and more intimate learning communities produced better attendance, lower dropout rates, fewer discipline problems, and better academic performance (Kacan & Schipp, 2000).

McAndrews and Anderson (2002) noted that when districts chose to design schools within schools, test scores were consistently higher, administrators were better able to reform their curricula and teaching strategies, and there were improved relationships between teachers and students. Additionally, student accountability increased, teachers became more intimately aware of student performance, and there was a greater sense of belonging on the part of the students. Students also experienced improved motivation and focus when compared to larger high schools that were in other forms of school improvement.

Furthermore, Dessoiff (2004) reported that in high schools that implemented SLCs as comprehensive school reform, graduation rates improved by 85%, student attendance and behavior data improved, academic achievement on high stakes standardized tests

increased, and discipline referrals decreased as compared to larger high schools with similar demographics that did not use SLCs as school reform. Duke and Trautvetter (2009) also noted that large high schools that were restructured as SLCs experienced better results preparing students for college and careers. These SLCs had higher on-time graduation rates, reduced drop-out rates, and more students enrolling in Advanced Placement courses.

The success of SLCs was attributed to the smaller instructional environment and closer social connection between administrators, teachers, and students. According to Raywid (1997), schools with SLCs experienced lower disciplinary referrals and other negative infractions because of the close connections that administrators, deans, counselors and teachers had with their students. The faculty and support staff in the SLCs were able to get to know students on an individual basis, to resolve problems by providing proper interventions before major incidents could occur. Moreover, Meier (1996) indicated that accountability and a sense of belonging were the results of properly implemented SLCs and were central to reforming the learning environment in the SLCs.

In conjunction with the stated results of SLC as comprehensive school reform, SLCs have also had substantive success with students who attended schools in minority communities with very low socioeconomic conditions. According to Duke and Trautvetter (2009), smaller school size was shown to reverse the negative impact of poverty in economically disadvantaged communities and students of color. Based on Cotton's (2001) research, SLCs narrowed the achievement gap between White middle class affluent students and ethnic minority poor students when compared to larger high schools in school improvement status.

Negative Externalities of Smaller Learning Communities

With any new school-based educational program issues with school climate and culture, implementation and institutional acceptance permeated the execution of the new initiatives. The same was true with SLCs. According to Kacan and Schipp (2000), one of the major roadblocks to the successful implementation of SLCs was the financial start-up costs. Converting larger high schools into SLCs was a very financial-intensive process. Major costs included professional development, renovation of facilities, and programmatic supplies and materials. In some cases, considerable financial resources were devoted to the purchase of land, construction, and major equipment costs.

Curriculum and instruction was another major component in the implementation of SLCs. According to Howley (1994), school size was not the only factor that contributed to a positive academic environment. Without the existence of a quality, comprehensive, and rigorous curriculum, the successful outcomes of SLCs as noted in the previous section were drastically reduced. Moreover, Noguera (2002) noted that because schools were traditionally run as more decentralized institutions, as opposed to being run by a single corporate executive, change was something that took time and perseverance to accept. Ultimately, some schools were infamously slow to change, thus hampering full and comprehensive implementation of SLCs.

Implementing SLCs also included the entire school community. Based on research conducted by Steinberg and Allen (2002), parents, teachers, and administrators needed an equal share in the transition and building of SLCs in a traditional high school setting. Faculty needed to be reassured that the transition would not end with a decreased workforce or a contraction in professional autonomy in the classroom. Wallach's (2002)

research predicted that one of the problems with changing a large high school to one including smaller learning communities was the resistance of stakeholders simply because administrators, faculty, and members of the community would naturally be hesitant to change the way they have always done things.

Summary

Public education in America has a robust and intricate history. Contributions to the history and development of the modern public education system can be traced back to the birth of the nation. Over time the American public education system has evolved from homeschooling, religious-based institution, and regional non-compulsory schools to the large, complex system in place today. During the same period, the pendulum of influence and authority over public education has swung back and forth between the federal government and the states.

Currently, considerable focus is being devoted to turning underperforming schools around and closing the achievement gap. The federal government spends substantial sums of money to assist schools with this issue and encourage various forms of school reform. These measures represented a significant expansion of federal authority in the governing and policy development of public schools. However, with the federal government's larger budgetary flexibility it is the entity most able to make large investments. Chapter III will discuss the methodology, data collection and analysis of the current study.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this chapter is to describe the general methodological approach for the current research study. The purpose of the current study was to investigate the relationship between student achievement and SLCs in a medium sized suburban high school district in order to determine whether SLCs accomplished the goals of school reform. The high school district that was studied was selected because it received substantial funding from the United States Department of Education's SLCs grant program. The high school district received funding between the years 2008 and 2013. All three schools in the district received funding from the grant and underwent transformation as stipulated in the SLCs school reform model.

This chapter is divided into six sections. The first section addresses the research design. The next section details the population that was studied. The third section outlines the specifics of how the data were collected. The final sections of the chapter address issues relating to data analysis and limitations of the study, as well as a summary at the end of the chapter.

Chapter I was a comprehensive introduction to the current study. The foundation for the current study was established in Chapter I, including the origins of public education in the United States and the statutory framework for federal involvement in public education and comprehensive school reform. The current study addressed the following

problem statement and purpose statement: More than a decade has passed since the implementation of SLCs nationwide. Low-performing schools are still struggling to close the achievement gap and make gains on high stakes standardized tests. Results were also mixed when explaining the effectiveness of SLCs in increasing student achievement and performance on standardized tests and reducing disciplinary referrals. The purpose of the current study was to investigate the relationship between student achievement and SLCs in a medium sized suburban high school district in order to determine whether SLCs accomplished the goals of school reform.

Chapter II explored the historical background of SLCs, drawing on various philosophical and statutory advancements that influenced the creation and development of SLCs as part of comprehensive school reform. Chapter III continued the examination of SLCs as a tool for school reform through a strict quantitative analysis of the effectiveness of SLCs in a high school district in the suburbs of a major city.

Research Design

The current study was a quantitative analysis of the implementation of SLCs in a high school district in the suburbs of a major city. The goal of the current research design was to evaluate the implementation of SLCs empirically to determine if the goals of SLCs, and subsequently, comprehensive school reform, were effective in improving low performing schools. The effectiveness of SLCs was measured by analyzing any change in student achievement as indicated by GPA, ACT test scores, and discipline referrals between students who were exposed to SLCs compared to students who were exposed to a traditional high school structure. Because SLCs were used as the model for comprehensive school reform, student achievement should increase for those students

who were exposed to SLCs compared to the students who were exposed to the traditional high school structure prior to the district creating SLCs in each of the three high schools.

The researcher used a quasi-experimental design for the current study. The independent variable was smaller learning communities and the dependent variable was the traditional high school structure pre-SLCs. The experimental group included the students who entered high school during the 2008 and 2009 school years, and who graduated in 2012 and 2013. Over the course of the current study, there were some changes within both the control and experimental groups over time due to student movement into and out of the district. Those transient students were either added to or subtracted from the experimental and control groups as such movement occurred. The experimental group was compared to the control group, i.e., non-smaller learning communities' students within the district who attended during the years 2002 through 2007 and who subsequently graduated in 2006 and 2007. The school district had approximately 5,000 students, all in 9th through 12th grades. Approximately 3750 students in the district were classified as low-income.

Gay, et al. (2012) described quantitative research as the process by which a researcher decides what to study, answers specific questions, collects data from participants, analyzes the data using statistics, and conducts inquiry in an unbiased and objective manner. Quantitative research establishes relationships between measured variables and seeks to explain causes for these relationships. The statistical analysis of the current study focused on the relationship between the implementation of SLC and its ability to reform failing schools in a positive way.

An *ex post facto* research technique was used for this study. *Ex post facto* research “is research that attempts to determine the cause or reason for existing differences in the behavior or status of groups or individuals” (Gay et al., 2012, p. 235). The researcher used this type of design because both groups were fairly homogenous and data gathered from both groups were archived and pre-existing. The major challenge with this method of research was that an apparent cause-effect relationship could not be conclusively determined (Gay et al.). In the current study, the independent variable was not manipulated because the data utilized had already been collected. Both the control group and experimental group already existed and randomly assigning participants to the groups was not possible before the research began. Furthermore, there was no reasonable way to rule out any other extenuating influences that could have affected either or both groups.

The researcher analyzed and interpreted the data on student performance on ACT exams, cumulative GPA, and discipline referrals for the classes of 2012 and 2013 that composed the experimental group. These data were then compared to the same data for the control group of students. The researcher used the SPSS program for statistical analysis to test the relationship between both groups. This analysis was conducted with the approval of the district’s superintendent.

The multivariate *t* test was used to determine whether the means of the two groups were statistically different at a given probability level (Gay et al., 2012). The multivariate *t* test was also used instead of multiple *t* tests because multivariate analysis compensated for family-wise error that could have occurred due to the implementation of multiple *t* tests. As an administrator within the district, the researcher had full access to all archived data.

Population

Because the current study was an analysis of the implementation of SLCs in a specific high school district in the suburbs of a major city, the researcher had access to data sets that were representative of most of the population that was included in the current study. The current study used a nonrandom sampling process to select the participants. All students who matriculated between the years 2003 and 2013 were included. However, only data for students in the graduating classes of 2006, 2007, 2012, and 2013 were used for analysis. The classes of 2006, 2007, 2012, and 2013 were chosen because student data represented in the sample cover all years under investigation, 2003 to 2013. Students in the control group who entered high school in the year 2003 graduated in 2007. Students in the experimental group who entered high school in the year 2008 graduated in 2012. The classes of 2007 and 2013 were chosen because the time period that they were enrolled in high school overlapped the period under investigation, thereby increasing the number of participants included in the sample. Students in the 2006 and 2007 graduating classes were coded as the 2003 cohort and students in the 2012 and 2013 graduating classes were coded as the 2008 cohort. Specifically, convenience sampling was used. Convenience sampling is the process of including whoever happened to be available in the sample (Gay et al., 2012). Convenience sampling was used in order to obtain a sample size that could be generalized to the greater population of the high school district under investigation.

According to Gay et al. (2012), one major disadvantage of convenience sampling is the difficulty to describe the population from which the sample was drawn and to whom the results can be generalized. However, such was not the case in the current study.

Because of advances in technology and data management software, the researcher was able to gather data for both cohort groups that represented the entire population. The school district's data management software had archival data for all students included in both cohorts. The only students not included in the current study were those who transferred out of the school district, or were removed from the school district for disciplinary reasons. Nonetheless, the data were still included for students who left the district until the date of their departure. Both groups were homogenous except for the independent variable, participation in the SLC program. Tables 1, 2, 3, and 4 depict the descriptive characteristics of the participant sample by school and graduation year.

Table 1

Cohort 2008 Class of 2013 Demographic Data

School/Ethnicity	Female	Male	Total
High School H			
Total	169	125	294
African American	147	105	252
Asian	2		2
Hispanic	16	18	34
MultiRacial	3	2	5
White	1		1
High School D			
Total	133	82	215
African American	131	79	210
Hispanic	2	1	3
MultiRacial		2	2
High School S			
Total	206	139	345
African American	192	118	310
Hispanic	10	17	27
MultiRacial	3	3	6
White	1	1	2
District-wide	508	346	854

Table 2

Cohort 2008 Class of 2012 Demographic Data

School/Ethnicity	Female	Male	Total
High School H			
Total	38	30	68
Asian	1		1
African American	36	29	65
Hispanic	1		1
Multi-Racial		1	1
High School D			
Total	119	83	202
African American	118	81	199
Hispanic	1	1	2
Multi-Racial		1	1
High School S			
Total	206	185	391
African American	190	173	363
Hispanic	10	9	19
White	3		3
Multi-Racial	3	3	6
District-wide	363	298	661

Table 3

Cohort 2003 Class of 2006 Demographic Data

School/Ethnicity	Female	Male	Total
High School H			
Total	222	172	394
Native American	1	1	2
African American	207	154	361
Hispanic	13	16	29
White	1	1	2
High School D			
Total	174	165	339
Native American	2		2
African American	169	159	328
Hispanic	2	4	6
White	1	1	2
Multi-Racial		1	1
High School S			
Total	226	199	425
Native American		1	1
African American	204	177	381
Hispanic	15	9	24
White	7	12	19
District-wide	622	536	1158

Table 4

Cohort 2003 Class of 2007 Demographic Data

School/Ethnicity	Female	Male	Total
High School H			
Total	210	163	373
African American	202	148	350
Hispanic	8	14	22
White		1	1
High School D			
Total	159	122	281
Native American		1	1
African American	155	117	272
Hispanic	1	4	5
White	3		3
High School S			
Total	231	170	401
Asian/Pacific Islander		2	2
African American	215	147	362
Hispanic	9	11	20
White	7	10	17
District	600	455	1055

Data Collection

In order to collect data for the current study, the researcher worked very closely with the district's administrative team and the school district's data manager. Several meetings were held in which data were reviewed and evaluated for use in the study. All of the data that were used in the current study were archival and readily available to the researcher. The researcher utilized the services of the school district's data manager to retrieve data and organize them in the appropriate format. All data were digitized and formatted in a manner that made them compatible for statistical analysis with the SPSS program.

The collection of data was not a time consuming process. The school district archived the relevant information in its computerized student information system, *Powerschool and Sasi*. *Powerschool* is the current student information system used to manage student academic data. The school district has used *Powerschool* since 2008. Prior to 2008, the school district used the *Sasi* student information system. Data from both systems were used in the current study. The school district had relevant data for the years under consideration of the current study. The school district's data manager retrieved the data for the requested years over a period of weeks during the months of January, February, and March of 2014. Other than the general instructions regarding the range of years and types of data requested, there were no conditions, steps, or irregularities in collecting the data. The data was stored on an external hard drive and backed up on a thumb drive. All data was securely stored and no identifying information of any students was used. All students were coded using an anonymous identification number. Because there was no identifying information associated with the data, and all data that were used are public in nature, no consent forms were needed.

Analytical Methods

Data analyses were conducted using the statistical software SPSS. The logical next step involved the researcher coding and comparing the data. Descriptive and inferential statistics were included in this research. Descriptive statistics were used to describe the sample, and to summarize, organize, and simplify data into categories. Quantitative data for the current study included ACT scores, discipline referrals, and GPA. Data were coded and entered into SPSS for both the control and experimental groups. Because all data were cumulative, only data from the graduating classes were used. Each student in the graduating class represented the aggregation of scores for all years under evaluation of the current study. Data from the experimental group and control group were compared using the multivariate t test in order to determine statistical significance. Mean and mode were also calculated to see descriptively the difference between both groups. The standard deviation was also used to measure the strength of the spread for the data that were used in the current study.

Limitations

With any research there are limitations. First, because all the participants were from the same organization, any findings cannot be generalized to a larger population. The findings of the current study can only be generalized to the specific high school district under investigation. Secondly, SLCs were only one mechanism of comprehensive school reform. SLCs are fairly new and there is not a lot of research about their implementation. The current study only offers a snapshot of implementation in one high school district. Finally, a major limitation of this study was demographics. The students who were used in this study were not diverse in terms of race and socio-economic status. Demographics

may play a major role in school reform and the success of SLCs. The current study's findings were only able to describe the effects of SLCs on a very homogenous group.

Summary

This chapter provided a detailed explanation of the methods that were used to conduct the current study. Chapter III also discussed the specific statistical process that was used to analyze data and provided a detailed overview of the descriptive statistics of the population utilized in the current study. A thorough description of the methods used in this research was provided in order for future researchers to be able to replicate this study. The next chapter will discuss the results of the statistical analysis discussed in the current chapter and will present implications and recommendations for future research and implementation of SLCs as well.

CHAPTER IV

FINDINGS AND CONCLUSIONS

Introduction

Chapter III provided a thorough explanation of the methodology used in the current study and described how the research questions were answered. The current chapter will focus on the findings, conclusions, and implications of the study, as well as recommendations for future research.

The current study analyzed the implementation of SLCs as an option of comprehensive school reform in a suburban high school district. Two cohorts of students were compared in the study. The experimental cohort included the students who entered high school as freshmen in 2008 and 2009, and who subsequently graduated four years later in 2012 and 2013. The experimental cohort was compared to the control cohort, non-smaller learning communities' students within the district who entered high school as freshmen in 2002 and 2003, and four years later were the graduating classes of 2006 and 2007. The measures of performance examined were ACT, discipline referral rates, and GPA. The current study was guided by the following research questions:

1. To what extent is there a difference between students' GPA for students who were enrolled in the SLCs compared to students who did not participate in SLCs?

2. To what extent is there a difference between the number of discipline referrals for students enrolled in SLCs compared to students who did not participate in SLCs?
3. To what extent is there a difference between ACT scores for students enrolled in SLCs compared to students who did not participate in SLCs?

Findings

To answer the research questions, a multivariate analysis was used to compare the differences in the mean scores between the independent variable and three dependent variables. The independent variable was SLCs and the dependent variables were: GPA, ACT, and disciplinary referrals. Participants in the study were assigned to two groups based on the year that they graduated from high school. The multivariate analysis was used to determine whether the means of the two groups were statistically different at the $p < .05$ confidence level. The multivariate analysis was also used instead of multiple t tests because multivariate analysis compensated for family-wise error that could have occurred due to the implementation of multiple t tests where the dependent measures are likely to be correlated. For example, students who have higher GPA will probably have a higher ACT score. Type I error associated with the use of multiple t tests is a common theme of family-wise error that precipitates the use of multivariate analyses.

The current study used a nonrandom sampling process to select the participants. All students who matriculated between the years 2002 and 2013 were included. The classes of 2006, 2007, 2012, and 2013 were chosen because student data represented in these graduating classes covered all years under investigation, 2002 to 2013. Students in the non-SLC cohort were those who entered high school as freshmen in the years 2002 and

2003 and graduated four years later in 2006 and 2007 respectively. The classes of 2006 and 2007 were two different cohorts of students who matriculated over a four-year period. Students in the SLC cohort were those who entered high school as freshmen in the years 2008 and 2009 and graduated four years later in 2012 and 2013 respectively. As with the non-SLC cohort, the 2012 and 2013 graduating classes were two different groups of students that matriculated over a four year period. In all, the current study included four different classes of students who matriculated high school between the years 2002 and 2013. There were 1661 students in the SLC cohort and 1429 students in the non-SLC cohort after filtering for students who either entered or exited the school over the course of the of the four-year matriculation periods as discussed previously.

The results of the multivariate analysis indicated that there was a statistically significant difference between the two groups in the academic and disciplinary measures that were analyzed ($p = .000$; Hotelling's $T^2 = 13.97$). However, post-hoc comparisons indicated no statistically significant difference at the $p < .05$ level of confidence with respect to research question one and GPA ($p = .268$) and research question two and ACT scores ($p = .235$).

Nevertheless, post-hoc comparisons of disciplinary referrals for the two groups indicated a statistically significant difference at the .05 level of confidence between the control group and experimental group with respect to research question two. The 2006/2007 cohort had statistically significant fewer disciplinary referrals than the 2012/2013 cohort ($p = .000$). See Tables 5 and 6 for the specific means and standard deviations for both cohorts.

Table 5

Means and Standard Deviations for Control Group 2006 and 2007 Non-SLC Cohort

Variable	Mean	Std. Deviation	<i>N</i>
GPA	2.59	.851	1429
ACT	17.02	3.35	1429
Discipline	.89*	1.984	1429

* $p < .05$.

Table 6

Means and Standard Deviations for Experimental Group 2012 and 2013 SLC Cohort

Variable	Mean	Std. Deviation	<i>N</i>
GPA	2.56	.804	1661
ACT	16.87	3.60	1661
Discipline	1.44*	2.75	1661

* $p < .05$.

Conclusions

The first research question of the current study examined the extent to which there was a difference between students' GPA for students who were enrolled in the SLC compared to students who did not participate in SLC. Based on the descriptive statistics presented in Tables 5 and 6, there was a .03-point difference in mean GPA between both groups. Students who did not participate in SLC had a .03-point higher GPA than students who participated in SLC. However, multivariate analysis did not indicate a statistically significant difference between both groups. The difference in GPA of both groups could not be statistically explained by the implementation of SLC at the $p < .05$

confidence level. Some other factors or variables could be responsible for the decline in students' GPA after the implementation of SLC.

The second research question of the current study examined the extent to which there was a difference between the numbers of discipline referrals for students enrolled in SLC compared to students who did not participate in SLC. Based on the descriptive statistics presented in Tables 5 and 6, the 2012/2013 cohort had an average of .55 more discipline referrals than the 2006/2007 cohort. Multivariate analysis indicated a statistically significant difference between the 2006/2007 cohort and the 2012/2013 cohort as it relates regarding discipline referrals. After the implementation of SLC, the average number of discipline referrals increased. The implementation of SLC did not accomplish the goal of decreasing the number of discipline referrals for the 2012/2013 cohort.

The third research question of the current study examined the extent to which there was a difference between ACT scores for students enrolled in SLC compared to students who did not participate in SLC. Based on the descriptive statistics presented in Tables 5 and 6, there was a .15-point difference in mean ACT scores between the groups. Students who did not participate in SLC had a .15-point higher ACT score than students who were exposed to SLC. However, multivariate analysis did not indicate a statistically significant difference between the groups. The difference in ACT score of both groups cannot be statistically explained by the implementation of SLC at the $p < .05$ confidence level. Some other factors or variables could be responsible for the decline in students' ACT scores after the implementation of SLC.

Overall, the multivariate test indicated a relationship between the independent variable and the three dependent variables. However, as stated above, post hoc

comparisons only indicated a direct relationship between SLC and disciplinary referrals. Furthermore, the descriptive differences between the means of both cohorts and the three dependent variables were marginal and did not illustrate major increases or decreases in ACT scores, GPA, or discipline referrals in the SLC groups over the period that was analyzed.

Implications and Recommendations

The purpose of the current was to investigate the relationship between student achievement and SLC in a medium sized suburban high school district in order to determine whether SLC accomplished the goals of school reform. Data was analyzed quantitatively to determine the effectiveness of SLC as a form of comprehensive school reform. This analysis can guide policy decisions for the future of SLC in the high school district, as well as articulate implications and recommendations.

Cotton (2001) identified five elements that differentiate SLC from other small groups within a school setting. The elements are accountability, autonomy, identity, instructional focus, and personalization. Because some schools may not have followed the suggested implementation process and did not remain cognizant of the five elements of SLC, the schools failed to improve the initial goals of comprehensive school reform for which SLC was implemented. A strong implementation process is needed to ensure the sustainability of the program. A robust commitment by the stakeholders to the five characteristics of a smaller learning community is important if such a learning community is to succeed within a large school.

Based on the limited scope of analysis of the current study, there is no way to determine the extent to which the process that was used to implement and fund SLC

contributed to the unclear and inconsistent findings of the multivariate analysis. There were no statistically significant differences between the control and experimental groups regarding research questions one and two. However, the actual means between these groups illustrates a decline in achievement during the years of implementation of SLC. Furthermore, there was a statistically significant difference between the control and experimental groups in terms of research question three, discipline referrals. Discipline referrals increased for students who participated in SLC.

According to Kagan and Schipp (2000), well managed schools and properly implemented SLC programs should experience a reversal in the downward trend of academic and behavioral measures and also obtain improved achievement. The primary goals of SLC were to turn around failing schools and close the achievement gap. As presented in the findings and conclusions sections of the current study, turning around underperforming schools did not occur in the school district under investigation.

The reasons why a turnaround did not occur in the district under investigation is unclear. However, the following recommendations for future research may lead to more indicative results.

The first recommendation that developed as a result of the findings is the need to broaden the breadth and scope of the study. In order to measure more definitively and describe the results of any analysis, more variables are needed. Future research studies should include both quantitative and qualitative variables. These studies should use a mixed-methods approach. The researcher should include more quantitative measures of the factors that influence academic achievement, like socio-economic status, funding per pupil, attendance rates, mobility rates, graduation rates, and post-secondary plans for

college or careers. Furthermore, qualitative data such as interviews with students, parents, faculty, and administrators should be gathered to augment the quantitative data and add a missing, more robust dimension to the findings, conclusions, implications, and recommendations of the study.

A second recommendation is the need to collect and warehouse student data regarding student achievement that is accessible over time, is redundant and accurate, and can be retrieved by multiple staff members. One of the major obstacles of the current study was the researcher's struggle to access accurate data after the resignation of the school district's primary data manager. After the departure of the district's data manager, data was available, but those charged with managing data were not trained and had difficulty retrieving specific archival data that were needed for the current study.

In order to correct this issue, the district will need to train existing staff about how to input, manipulate, and archive student achievement data. The district will also need to evaluate data that was archived in order to correct gaps in data that may exist.

A third recommendation is for the district to use a more data-driven approach in decision making regarding SLCs. Before the school district makes a decision about whether or not to end SLCs in all its schools, leaders and stakeholders should take a hard look at the data presented in the current study as a starting point for further policy discussions. However, based on the results of the multivariate analysis of the data from the current study, the effectiveness of SLC as a reform model was inconclusive. Furthermore, as previously stated, it will be difficult to obtain both quantitative and qualitative data in a robust and organized structure needed to evaluate SLCs. The board of education and administrators of the district in question should contract with a

professional researcher to organize and archive data and conduct the current study again with the addition of the variables listed in the first recommendation.

Finally, as demonstrated in Chapter II, public education and school reform has been part of federal, state, and local government for most of our nation's history. Specifically, federal funding to aid low-performing schools has been part of public policy since the passage of the Great Society legislation in the 1960s. Education can provide opportunity, but for many public school students, failing schools are not providing that opportunity. Education is an unmet need of too many youth in the United States today; this need must be met. The potential factors that limit the opportunities of the disadvantaged are numerous and are as diverse as the people they impact. SLC was one research-based method developed to address the need to reform large failing schools and reform curriculum, instruction, and operations.

Although the results of the current study were not strong in terms of success or failure of SLC in the school district under investigation, the methodology can be applied to different and larger groups of students in order to help determine a focus for administrators, teachers, parents, and members of the community. The primary focus of the current study was to examine the implementation of SLC in a specific school district. The results clearly demonstrate that more research is needed. This compelling need is precisely why scholarly research must continue.

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