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An Analysis of the Implementation of a Small Learning Community in a Large, Public, Urban, Comprehensive High School in Northern New Jersey

Dennis C. Degnan
Seton Hall University

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AN ANALYSIS OF THE IMPLEMENTATION OF A SMALL LEARNING COMMUNITY IN A LARGE, PUBLIC, URBAN, COMPREHENSIVE HIGH SCHOOL IN NORTHERN NEW JERSEY

BY

DENNIS C. DEONAN

Dissertation Committee
Daniel Gutmore, Ph.D., Mentor
Ilaine Walker, Ph.D
Patricia L. McGeehan, Ed.D.
Raymond Grafje, Ph.D.

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ABSTRACT

An Analysis of the Implementation of a Small Learning Community in a Large, Public, Urban, Comprehensive High School in Northern New Jersey

Attending high schools with populations of more than 1000 students was the norm for most of the twentieth century. It was believed that large high schools were cost effective and could offer a more comprehensive curriculum. These high schools operated like factories. Students that were successful found opportunities at the university level. Those students that did plan to continue their education found unskilled jobs in the labor force. Today, however, given seats in major colleges are at a premium and technological innovation and global competition have limited accessibility to many jobs, the United States cannot afford to push students through an anonymous factory model.

Small learning communities offer students a sense of belonging and assist in building positive relationships with teachers and peers. In the wake of No Child Left Behind, it is hoped that transforming large comprehensive high schools into smaller learning communities will provide a better academic environment while avoiding some of the pitfalls facing the current high school organizational structure.

The purpose of this study is to examine the implementation of the BHS Freshmen Cluster; to observe school organizational and instructional practices related to transition into the high school; and, finally, to analyze failures, attendance, and out-of-school suspensions with respect to the cluster.

A quantitative research design examined the overall research question, “What is the impact of participation in a small learning community on academic performance and
student engagement as students make the transition from their K-8 elementary schools to a large comprehensive high school?" Descriptive statistics were used to address this research question.

The subjects consisted of 146 grade nine students. One group participated in the ninth grade small learning community and the control group participated in the traditional program.
ACKNOWLEDGEMENTS

I would like to extend my appreciation and gratitude to the many individuals who supported me in this academic endeavor and especially to the members of my dissertation committee. Dr. Daniel Gutmors, my mentor, you were the consummate professional since day one. I still recall the first evening session in Organizational Behavior and your review of the course requirements. I knew that your choice of the “Socratic Method” for presenting the class was going to keep me engaged and accountable during the entire 2-year program. You kept me on task throughout the process by always inquiring if I was “going to submit something soon?” Knowing that you were looking for the next chapter or a revision of a previous chapter was a driving force in encouraging me to complete the dissertation in a timely fashion. Thank you for your patience and support throughout all phases of the process. Dr. Elaine Walker, the knowledge I gained in your courses in Directed Research and Intermediate Statistics opened many doors for me and enabled me to attack my problem statement. I appreciate the time you took after class and on weekends to assist a lost soul in understanding the intricacies of the analysis of covariance. I could not have completed chapter 4 without your guidance.

I could not have asked for two better off-campus committee members than Dr. Patricia L. McGehee and Dr. Raymond Gafse. Dr. McGehee is a transformational leader, and, as a superintendent, she is an innovator with a clear vision for the district. Dr. McGehee sets high standards for the students of our district, as well as the staff, and gives all stakeholders the tools to reach those objectives. It was a pleasure working for Dr. McGehee as an educator, but what I appreciated most was her courage to hire a 31-year-old vice principal. By enrolling in the program at Seton Hall that she excelled in, I
hope to give back as much as possible to the district that she loves so dearly. Thank you Dr. McGeehan for making me a better educator and leader. I appreciate all that you have done for me since our days at Midtown Community School.

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As an educator, I knew all that was needed to help students excel in the classroom. However, in taking the step to vice principal in a large urban high school, I knew I would need some serious on-the-job-training. When I began my career as an administrator, I was fortunate to work with the finest executive assistant an inexperienced vice principal could ask for. Mrs. Joanne Burti guided me through my initial year as an administrator. Her organizational skills are of the highest quality. Joanne went above and beyond for me, including coming in on weekends and arriving early or leaving late during the work week. She makes the largest house in the high school run like a well-oiled machine. Joanne is my friend and has been a driving force behind my attainment of this degree since I first applied to the program in 2002. Her constant reminders of the prize at the end of the long, hard road kept me motivated throughout.
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If I ever had to make a decision regarding how to handle a problem or concern at the administrative level I would just ask, "What would Mr. Baccarella do?" Mr. Baccarella is the dynamic leader of Bayonne High School, and he was my first mentor at Washington School Summer Camp. He is an outgoing, friendly, articulate, and charismatic leader who guides one of the largest high schools in New Jersey. I appreciate all his assistance, support, and constant positive reinforcement since he started as principal.

It has been a pleasure to work as one of the six administrators of the Bayonne High School administrative team. Even though the days are pressure filled, the family of vice principals has made my work experience a most enjoyable one. I would like to thank Mr. Timothy Mercier, my first evaluator. It was his first evaluation of my teaching skills in House 5 that helped me continue in the field of education. Mr. Mercier is the senior member and brings years of educational experience to the staff and students of Bayonne High School. Thanks Tim for always being there for me as a mentor, coach, and, above all, friend. Thank you as well to Mr. Denis Wilbeck, Mrs. Karla McQuilla-Gaines, and Mr. Joseph Broderick, our moral compass. In addition, thank you Mr. Leo Smith, "Let's
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Finally, I believe I owe a debt of gratitude to my Jesuit education. I believe the Jesuit educational philosophy of specializing in a specific field, while also experiencing different disciplines, was crucial to this academic endeavor. Without a doubt, my Jesuit education assisted me in bringing the course work and dissertation to completion.
DEDICATION

To God, who makes all things possible.

To my father and mother,

Conelius and Camille.

For their dedication, encouragement, and support throughout the years in all my endeavors. I appreciate all that you have done for me in my life. This milestone could not have been accomplished without your assistance. I love you.

And to my brothers and sisters,

Suzanne, Daniel, Sharon, and Timothy.

You have been my faithful supporters. Thank you for giving me the motivation to continue with this project.

I love you all.
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CHAPTER 1

Introduction

Background of the Problem

The total enrollment of students "on roll" in Bayonne High School (BHS), a large, public, urban, comprehensive high school in northern New Jersey, in October of the 2003-2004 academic year was 2,362. BHS, located just south of New York City, is a large structure encompassing 13 acres. "Personnel at BHS face the task of meeting the extraordinary needs of many children who live in poverty, often with a single parent, and limited social and educational resources" (Ravitch & Viteritti, 2000, p. 2).

"More than 70 percent of United States high school students attend schools of more than 1,000 students according to the Department of Education" (McNeil, 2000, as cited in Allen, 2002, p. 36). BHS clearly fits the model of a large comprehensive high school. Students in college preparatory, business, and vocational tracts move throughout the complex on a 40-minute period. As noted by Cutshall (2003), the large school model first appeared following World War II but only became popular after the Soviet launching of Sputnik in 1957. In an effort to provide "raw products" for the work force, the industrial management model became the model for larger American high schools (Owen, Cooper, & Brown, 2002).

For example, in the 1920s and 1930s, students were prepared by schools for unskilled jobs at the Standard Oil Company. During World War II, the factories of the Elco Marina employed students to assist with the mass production of PT boats for the
war. Standard Oil is now part of the global juggernaut Exxon Mobil Corporation and the
wooden PT Boats are now naval war machines of the past. "As BHS moves into the 21st
Century, the Frederick W. Taylor (1911) approach of designing organizations, such as
large comprehensive high schools, for maximum efficiency and utilizing students as an
unskilled labor force will give way to 'The Information Age,' which stresses cognitive
rather than manual labor skills" (Owen et al., 2002, p. 8).

According to Fowler (2004),

Rudimentary literacy and numeracy are necessary even for the most unskilled
jobs; and many jobs necessitate advanced knowledge such as computer skills, the
ability to read and write at sophisticated levels, and specialized mathematical
knowledge. Seen from an historical perspective or from the perspective of
contemporary developing countries, our education requirements are enormous. (p.
117)

To tackle the problem of structure and function in a large comprehensive high school,
BHS was separated into six smaller schools, each closely resembling the demographic
make-up of the city. "The hope was to make BHS much smaller, less hierarchical, less
departmentalized, and customized to incoming students needs" (Greenfield & Klem, 2001, ¶ 5).

As per McAndrews and Anderson (2002), "Schools-within-a-school (SWAS) are
large public high schools that have been divided into smaller autonomous subunits" (¶ 1).

"The National Association of Elementary School Principals officially recognizes a
school-within-a-school (SWAS) as a separate entity, running its own budget and planning
its own programs. However, school safety and building operations remain vested with the
principal of the larger school, and shared space must be negotiated" (McAndrews &
Anderson, 2002, ¶ 3). Each of the six SWAS that make up BHS are administered by a
vice principal. The vice principal is responsible for a staff of roughly 60 educators and approximately 400 students.

According to Sammon (2600, as cited in Cotton, 2001), researchers have disagreed regarding the attributes of a small school or a large school. However, researchers believe an effective size is 300-400 students for an elementary school and 400-800 for a secondary school (Cotton, 1996). The 2,362 ninth-through-twelfth graders at BHS report to one of the six vice principals; however, following homeroom, they move throughout the larger complex, having physical education, lunch, and various classes far removed from their SWAS. It is also possible that a student may not attend a subject in a classroom in their SWAS or even have another class with students from their homeroom.

Paul Abramson (2004), an education industry analyst for school planning and management, suggested "that small schools within large ones become nothing more than administrative structures, with students scheduled throughout the complex. It is hard to maintain separation even when walls are placed between them” (p. 87).

BHS has been a leader in the small school movement for over 30 years but recognizes that there is more that can be accomplished. As such, BHS is continuing to restructure to improve student achievement. As noted by Cutshall (2003), students benefit academically and socially when they have a sense of belonging and when they work in an intimate setting where familiarity is fostered. It is evident that ninth graders, as a group, require a supportive, caring, and nurturing environment. Pritzker and Holet (1996) recognized “that incoming freshmen experience a transition period that is often characterized by declining academic performance, attendance, behavior, and participation in extracurricular activities, combining to put ninth graders ‘at-risk’ more than any other
 Administrators at BHS have recognized that ninth graders are the group most often referred for discipline problems and who have the poorest attendance records and highest failure rate. These concerns are further compounded by the fact that the class of 2002–2003 contained 615 ninth graders and the current class 2003–2004 will max out at upwards of 648 ninth graders. Current research supports the conclusion that the transition from elementary school (Grade K–8) to high school (Grade 9–12) is a significant juncture in the life of a 14-year-old (Roderick, 1993, as cited in Lefler, 1999, p. 12). “Young adolescents today frequently have a difficult time making the transition to high school” (Mizelle & Irvin, n.d., p. 3). “Many dropout often shortly after they enter high school, or fail behind and fail to graduate on time” (Mizelle & Irvin, n.d., p. 3).

This district has 11 K–8 elementary schools that average 550 students each. Most eighth-grade homerooms contain 25 students and many of the elementary schools have two or three eighth grades. Movement throughout these buildings is minimal and the students’ mentality is still mainly elementary because 12- and 13-year-olds walk the halls with 5- and 6-year-olds during the day. This is a far cry from a Grade 9 class of 648 moving throughout a 13-acre campus.

In an effort to further reduce the size of the large comprehensive high school, the district has instituted “The Freshmen Initiative” for the 2003–2004 academic school year. Seventy students from Grade 8 perceived to be “at-risk” for attendance, conduct, and academic achievement were placed in a small learning community (SLC) or Freshmen Cluster. Tom Vander Ark (2002), Executive Director, Education, for the Bill and Melinda Gates Foundation, asserted “that compared with historic models, most schools today serve a more diversified population that, in general, are less motivated by traditional
means (p. 55). The Freshmen Cluster will further divide the SWAS into an SLC, with a group of teachers responsible for a specific group of students. According to Duke and Traversett (2001), “A cluster contains classrooms for teachers of core subjects and perhaps a teacher workroom. A typical arrangement might involve four classrooms—English, social studies, science, and mathematics—with four teachers functioning as a team, instructing the same group of 80–120 students and planning together. Students usually take additional subjects elsewhere in the school, but at least half of each day is spent in the same cluster” (p. 5). The intention of downsizing is to provide a more intimate and familiar learning environment in order to ease the transition of ninth-grade students and to improve their overall academic success (Greenfield et al., 2001). Teachers and students in this Freshmen Cluster will build relationships and establish a sense of community and a feeling of belonging.

“Buffeted by change and under pressure to reform, urban comprehensive high schools have engaged in a growing amount of new approaches over the past decade” (Legters, 1999, p. 2). In a recent paper, Wall to Wall: Implementing Small Learning Communities in Five Boston High Schools, Allen, Almeida, and Steinberg (2001) wrote, “In a period of heightened interest in high school reform, the move to create small learning environments in large comprehensive high schools is receiving attention as a key strategy. Fueling interest in this strategy is a growing body of evidence that smaller school size has positive effects on students from low-income families” (p. 1). At this juncture the researcher must differentiate between (a) the pairing down of large high schools into smaller autonomous units and (b) SLCs established within a larger school complex.
Many districts are transforming their large comprehensive high schools into sets of smaller schools and SLCs (Steinberg & Allen, 2002). According to Raywid (1996), “Districts are attempting to implement smallness by downzizing existing buildings. Examples of school-within-schools are vertical house plans, ninth-grade house plans, at-risk schools, career academies, and special-curriculum models” (p. 1). As previously stated, BHS has decided upon a house plan to simulate smallness in its complex of over 2,000 students. “It is important to note that the evidence favoring the benefits of small schools, however, cannot be generalized to so-called ‘schools within schools,’ which to date lack a substantial research base supporting the belief that they provide benefits equivalent to smaller schools” (Howley, n.d., p. 3.6).

This suggests that perhaps a somewhat modified or partial implementation of schools-within-schools might be the answer. However, with a more mitigated implementation, a school will likely recognize more limited benefits (McCabe & Oxley, 1999; McMullen, Sipe, & Wolfe, 1994, as cited in Raywid, 1996). A recent investigation into which restructuring features had the strongest effects on achievement and its distribution concluded this way:

What might a “good” high school look like? A change that has strong support in our research is a move to smaller high schools. Without new bricks, mortar, bond issues or mileage increased, the most reasonable way to accomplish this would be to create schools within schools—smaller organization units within the existing walls of most large high schools. (Les et al., 1995, as cited in Raywid, 1996, p. 6)

Dividing large schools into smaller subcomponents is rarely enough to counteract the atmosphere of alienation inherent within many conventional high schools (Toch, 1983). It is rarely possible to replace large schools with small facilities just with a snap of the fingers. Understanding the importance of taking incremental steps in attacking the at-
risk ninth-grade issue, the administrative team at BHS chose to establish a ninth-grade cluster. "As they make the transition into high school, many young adolescents experience a larger, unwelcoming, more aggressive, and grade-oriented environment than they experienced in Grade 8" (Eccles, Midgley, & Adler, 1984, as cited in Mizelle & Irvin, n.d., ¶ 5). "Incoming ninth graders experience a greater variety of teachers and peers, and they have more options in their curricular and extracurricular activities. In this environment many young adolescents' grades plummet, and they do not attend school as regularly as they once did" (Barone et al., 1991; Eleyes, Gilloch, & Kobus, 1994, as cited in Mizelle & Irvin, n.d., ¶ 5). They also develop self-esteem issues and require additional peer friendships (Hertzog et al., 1996, as cited in Mizelle & Irvin, n.d., ¶ 5).

"A positive transition from elementary school into high school fashions a more welcoming, inviting, and accommodating place for all students. By seeking to provide ninth-grade students with a supportive learning environment and specific attention to academic needs as they enter high school, educators can work to promote a effortless transition and thrust students on a positive educational trajectory" (Kerr, 2002, Promising Practices Section, ¶ 3).

Vischer, Teitelbaum, and Emanuel (1999, as cited in Cotton, 2001) provide one of the best descriptions of what smallness can and cannot do:

Researchers who have studied small schools have stressed that reducing school size alone does not necessarily lead to improved student outcomes. Instead, they have concluded that school size should be seen as having an indirect effect on student learning. In other words, school characteristics that tend to promote increased student learning—such as collegiality among teachers, personalized teacher-student relationships, and less differentiation of instruction of ability—are simply easier to implement in a small schools (p. 5).
Because BHS is a sprawling 13-acre campus and new smaller schools or autonomous schools in the larger complex are not feasible, the ninth-grade cluster is BHS's method of addressing the issue of transition for at-risk ninth graders. As Sammon (2000, as cited in Cotton, 2001) put it, "There is no one model for the creation of small learning communities. Their variety is as individual as the schools and school systems in which they are housed."

"The test then before urban districts today is how to make equally powerful changes with a less top-down, less coercive process. Rather, there are 'works-in-progress': districts and schools across the country that are in the initial stages of altering large high schools into small schools, fabricating more varied models of high schools, and incorporating youth development principles into that work" (Steinberg et al., 2002, p. 11)

"The SLC model calls for significant changes in how schools do their responsibility. Objections to accomplishing these changes arise both from districts and schools" (National Evaluation of Small Learning Communities, 2002, p. 4). It has also been noted by Legters (1999, as cited in National Evaluation of Small Learning Communities, 2002) "that implementation of SLCs may require increases in budget, planning time, or staff in order to be successful" (p. 4).

The process of school change to improve student achievement is complex and difficult. It requires the coordination of a variety of actors and factors to make it work. As Datnow and Stringfield (2000, p. 199, as cited in Kirby, Berends, & Nafiel, 2001, p. 9) wrote,

[R]eform adoption, implementation, and sustainability, and school challenges more generally, are not processes that result from individuals or institutions acting
in isolation from one another, rather, they are the result of the interrelations between and across groups in different contexts, at various points in time. In a way, forces at state and district levels, at the design team level, and at the school and classroom levels, share the ways in which reforms fail or succeed.

In order to determine the status and future of this educational reform, the researcher will examine several implementation factors: conducting a needs assessment (data driven); becoming familiar with SLC research; establishing the mission, goals, and objectives; how stakeholder support was built and how extensive it is; student selection/placement criteria; teacher identification; professional development; school leadership and governance; and curriculum and funding.

Need for the Study

As Buechler (2002) maintained, “Education needs to be defined by the needs of children today, not by priorities from the past. For example, students need to be engaged in different ways than they did before the advent of video games and the Internet” (p. 8). “At a time when every student needs to develop the knowledge and skills to handle the rigors of college, careers in the new economy, and life in an increasingly complex world, many students appear to be moving through high school without reaching these goals” (Steinberg et al., 2002, p. 8). Since BHS is the only secondary public school in the district, this will be a golden opportunity to see if the SLC of the Freshman Cluster will have positive influence on student achievement. As Howley (n.d.) asked, “To what extent do the popular but un-researched administrative simulations of smaller size (i.e., houses, pods, “academies” or other such within school grouping arrangements) realize achievement advantages (including improvements in achievement equity) comparable to those reported for actually small schools?” (p. 318). By engaging ninth graders at a critical point in their lives, the district could influence more students and positively
impact them as they move from Grade 9 through Grade 12 and eventually earn a high school diploma.

Statement of the Problem

What is the impact of participation in a SLC on academic performance and student engagement as students make the transition from their K-8 elementary schools to a large comprehensive high school? "Entering ninth grade can be one of the most emotionally difficult, most academically challenging times in children’s lives" (Reents, 2002, p. 14). "Along with the self-esteem issues, developmental changes and environmental shakeup faced by the young adolescents, school districts risk watching ninth graders fall through the cracks without proper transitional programs in place" (Reents, p. 14). "Recent research has indicated the need for more effective strategies and the restructuring of organizations to meet the needs of all students. Additionally, a current report on high school reform, Breaking Ranks, cites anonymity and indifference as the leading causes of problems in the conventional large high school" (McPartland, Jordan, Legters, & Balfanz, 1997, p. 74). "Today’s large comprehensive high schools offer little assistance for incoming ninth graders, prompting many school and district leaders to consider innovative organizational practices and curriculum designed specifically for ninth graders" (Kerr, 2002, ¶ 1).

The organization and structure of the high school needs to be modified to promote a more accepting, caring, nurturing, and learning-centered environment. The researcher proposes to evaluate the implementation of a SLC (i.e., a freshmen cluster) on ninth-grade students in a large urban high school in the northeastern United States and its impact on ninth-grade failure rate, attendance, and out-of-school suspensions.
Purpose of the Study

The purpose of this study is to examine the implementation of the BHS Freshmen Cluster; to observe the organizational and instructional practices that ease transition into the high school; and, finally, to analyze failures and loss of credit for one or more courses, student attendance, and student out-of-school suspensions with respect to the cluster.

Research Questions

This study focuses on the effectiveness of BHS’s Freshmen Initiative program. There are three research questions addressed by this study.

Research question number 1: The first question the researcher will answer is what factors contribute to the successful implementation of the SLC (ninth-grade cluster)?

Research question number 2: The second question the researcher will answer is how does the academic progress and student engagement of ninth-grade students in a SLC compare with the academic progress and student engagement of students in a traditional level B ninth-grade program?

Research question number 3: How do the factors of race and gender of the students participating in a SLC impact on academic progress and student engagement when one controls for socioeconomic status (SES)?
The Hypotheses

This study will test two null hypotheses.

Ho 1: There will be no difference in the academic progress and student engagement of ninth graders enrolled in the SLC and those ninth graders in traditional level B education classes.

Ho 2: There will be no difference in academic progress and student engagement when one controls for SES for those ninth graders enrolled in the SLC and those enrolled in traditional level B education classes.

Limitations

1. This study is restricted to the State of New Jersey and therefore may not be indicative of the practices that occur in any other state.

2. This study is limited to this large (greater than 2000 students), public, urban high school.

3. This study specifically targets ninth-grade students.

4. This study is limited to a small sample population of approximately 140 ninth-grade students.

5. This is a new program. It commenced in the 2003–2004 academic school year.

6. This study will not yield results that can be generalized to other districts or to elementary or middle schools, because the sample is limited to this specific population.

Assumptions

Students in a large comprehensive high school feel anonymous and disengaged. Participation in the Freshmen Cluster will give at-risk students a sense of belonging. Teachers that work solely with the Freshmen Cluster will build positive, lasting
relationships. The small class size of the Freshmen Cluster will keep the students focused, more time will be spent on task, and educators will have the opportunity to clearly identify problem areas in the students’ learning.

Definition of Terms

Large comprehensive high school. “About 70 percent of all high school students in the United States attend a school with 1,000 or more students, and a substantial group attends schools of 2,000 or more” (Cutshall, 2003, ¶2). The researcher defines a large school as one containing more than 2,000 students.

School-within-a-school. “A school-within-a-school (SWAS) operates within a larger ‘host’ school, either as the only SWAS in that school or one of several. Schools-within-schools (SWS) represent different degrees of autonomy, but typically have their own personnel and program, and their students and teachers are self selected. Staff of a SWAS must defer to the principal of their host school on matters of school safety and building operations. Its principal reports directly to a district official” (Cotton, 2001, p. 8)

Small learning community. “Any separately defined, individualized learning unit within a larger school setting. Students and teachers are scheduled together and frequently have a common area of the school in which to hold most of their classes” (Sammon, 2000, as cited in Cotton, 2001, p. 9).

Cluster. “A cluster contains classrooms for teachers of core subjects and perhaps a teacher workroom. A typical arrangement might involve four classrooms—English, social studies, science, and mathematics—with four teachers functioning as a team, instructing the same group of 80 to 120 students and planning together. Students usually
take subjects elsewhere in the school, but at least half the day is spent in the same pod or cluster" (Duke & Trautvetter, 2001, p. 5).

*Ninth grader.* A student who is approximately 13–15 years of age who is enrolled in a secondary school for the first time and who takes courses in six major subjects.

*Major subject.* English, science, mathematics, social studies, world language, and physical education.

*Failing grade.* A score of 69 or less in any subject area test, quiz, or writing, homework, or class assignment. A numerical grade of 70 or above results in full academic credit for a course.

*Academic school year.* A period commencing September 1st and lasting at least 180 days and concluding no later than June 30th of the same year.

*Attendance.* By state mandate, students at BHS must attend school for a minimum of 4 hours to receive full credit for the day. Ninth graders, who fail to attend school or who are present but fail to receive 4 hours of formal instruction, are marked absent.

*Student out-of-school suspension.* Temporary exclusion from school for committing a major infraction of the school regulations or for repeated misbehavior. The suspension is limited to no more than 10 days; however, a reduction of the suspension may be granted following an appeal to the principal of the host school.

*Regular Education Level B Subject Area.* Students that have been “grouped for learning.” Regular level B students receive the same curriculum as other students; however, their pace may be slightly altered and modifications are made to assist in the learning process.
CHAPTER II

Review of Related Literature

The literature review includes four areas: (a) large comprehensive high schools, (b) transition to ninth grade, (c) small learning community (SLC) theories as they relate to student achievement at the ninth grade level, and (d) educational change research.

Large Comprehensive High Schools

More than 40 years ago, James B. Conant, former President of Harvard University, published a significant report titled The American High School Today. "Small schools with inadequate resources, he [Conant] argued, couldn't afford the specialized instruction in math, science, and foreign languages vital to the country's future. In fact, they represented, one of the serious obstacles to good secondary education throughout most of the United States" (Hill, 2001, ¶ 9). "Accordingly, the large size of most public schools was once viewed as an advantage because a large comprehensive high school had more resources, could offer more varied courses, and serve as a focal point of pride and social activity in a community" (Conant, 1959, as cited in Legters, 1999, p. 6).

"Presumably large schools functioned more effectively than small schools and offered students a wider assortment of courses and programs" (Duke & Trautvetter, 2001, p. 3).

According to Lackat (1994),

For more than 100 years, this high school met the workforce needs of an industrial society by organizing learning around curriculum delivered in standardized time periods called Carnegie units. . . . Credentials (Carnegie units) were based on "time served," and the failure of significant numbers of students was not only acceptable, but also regarded as an expected result of norm-referenced
testing. For the most part, this system of education prepared generations of high school students to find their place in American society. Where it did not, the economy had a place for people who were willing to work hard even if they lacked basic skills and formal schooling. The opportunities and demands of today’s society are different. Conditions of secondary education that allow high school students to leave school without developing essential competencies or even being challenged to fulfill their potential are no longer acceptable. Educational failure and undeveloped talent are permanent drains on society and the current reform movement has shifted emphasis from access for all to high quality learning for all. (p. 9)

BHS, the only public secondary school in its community, houses over 2,300 students and offers over 300 courses with 1,000 sections. Advanced placement courses are offered in 11 subject areas, and BHS fields a state-champion football team, an award-winning marching band, and a top-notch drama club. “It can be argued, that when students attend larger schools, they can get a wider variety of educational offerings and enhanced services that smaller schools cannot afford” (Communicator, 2002, ¶ 1).

“However, the defense of large schools depended upon cost-advantages, the offering of additional activities, and courses for the very bright” (Abramson, 2004, p. 87). According to Gregory (1992, as cited in Schoenlein, 2001), “The purported advantages of large schools—cost efficiency, a comprehensive curriculum, and increased opportunities for students—remain elusive” (p. 28). Lee, Bryk, and Smith (1993, pp.185–187, as cited in Duke & Trautvetter, 2001) “in a comprehensive review of research, find little empirical support for the benefits of economies of scale that presumably result from large schools” (p. 3). When Monk (1987) conducted an extensive study of curricular offerings and high school size in New York State he failed to find benefits for large enrollments. He concluded that a comparable curriculum could be provided at the 400-pupil level (Monk, 1987, p. 148, as cited in Duke & Trautvetter, 2001, p. 3).
"One of the most pressing issues facing educators in America today is how to best educate all of the nation’s school children" (Lehr & Lange, 2003, p. 59). As indicated by Lachat (2001), "Today’s high school students need a different approach to education as they face the demands of a technological and global society characterized by rapid change and unprecedented diversity" (p. 10). Furthermore, research and practice literature provide evidence that the current high school model might not be optimal for helping all students reach superior levels of performance (Brandt, 2000; Cawelti, 1994; Vischer & Hudis, 1999, as cited in Lachat, 2001, p. 10). "Large schools are usually impersonal places; people go about their business without acknowledging or even appearing to notice one another" (Schoenlein, 2001, p. 30).

Designed in response to different demographic and economic conditions, too many high school structures are not responsive to today’s realities, and they lack the capacities necessary for responding to multiple demands for accountability. The size, structure, and traditional orientations of these schools contribute to student alienation and academic failure. Too many are characterized by large, compartmentalized, and impersonal school settings; low expectations for student performance; and curricula guided by dated and autonomous departmental priorities. The student’s role in the educational process is passive and subordinate. There is a pervasive overemphasis on teacher directed instruction, and a fragmented curriculum prevents students from seeing the connections between the content learned in school and real life. The vast majority of these high schools find ways to divide students on some measure of ability, which diminishes opportunities to learn for some students and contributes to increasing inequalities among student over time. (Marsh & Coddington, 1999; Vischer et al., 1999, as cited in Lachat, 2001, pp. 10-11)

"Where existing facilities have been reorganized into subunits, the most accepted approaches have been to design particular corridors, wings, or floors for specific subunits. These options might not always provide complete separation, but they offer a sense of familiarity without major modifications to the physical plant" (Duke & Trautvetter, 2001, as cited in Cotton, 2001, p. 20). According to Ramsey (1967, as cited
in Greenfield & Klemm, 2001), “The idea of developing several smaller schools within a single large one has been gaining popularity since it was first implemented in the U.S. in 1961” (§ 2). By reducing the distance and anonymity between learner and teacher, the school-within-a-school (SWAS) provides a more caring and supportive context for learning, which can foster student achievement and interest in school. When students enter BHS they are assigned to a SWAS, a homeroom, a vice principal, a guidance counselor, and a homeroom teacher. These remain constants in their lives for 4 years. This continuity promotes a lasting relationship not only between student and faculty, but among peers as well. A SWAS can have a number of potential advantages. “In fact, the establishment of subunits within schools has at various times been undertaken in the interests of better administrative coordination and control (Hodgson, 1958; Prash & Wampler, 1959); better disciplinary control (Plath, 1965); decreased vandalism, crime, and delinquency rates (Garbino, 1978; Gottfredson, 1985); curriculum reorganization (Bowden, 1971; Oxley & McCabe, 1990); school governance (Lewis, 1981; Oxley, 1994); teacher teaming (Bowden, 1971); and better advisement. They also have been created in the interest of accommodating particular populations, ranging from the most at-risk students (e.g., Kadel, 1994) to the most academically talented and accomplished (Lund, Smith, & Glennon, 1983)” (Raywid, 1996). As stated by Michelle Fine, Small may be necessary condition for a nonselective high school to excel. Small is necessary if teachers are to have rich conversations with one another about practice, policy, inquiry, and student work. Small is necessary if students are to feel attached to each other and to faculty. Small is necessary if parents are to connect to faculty along lines other than, ‘your son/daughter is in trouble again.’ (1998, p. 4)

The SWAS model has been very beneficial for improved learning and relationship building at BHS. However, the ninth grade continued to account for the largest number of
students who demonstrated poor attendance, were tardy to class, caused disturbances and disruptions, and were suspended and expelled. Many of these students failed to accumulate enough credits to move to the tenth grade. “Given the disconnects between schools and societal conditions, the detachment of adolescents from their education is a severe problem” (Student-Centered High Schools, 2001, p. 2).

**Transition to Ninth Grade**

“In a 1994 national survey, nearly 40 percent of more than 20,000 high school students of all backgrounds admitted they were ‘just going through the motions’ in school” (Student-Centered High Schools, 2001, p. 2). According to Hertzog and Morgan (1998), “When students were asked to rate the area(s) that was most important to them in making the transition to the high school, the only substantial finding was an increase in the importance of developing close relationships” (¶ 4). In a study on student transition, Morgan and Hertzog (1997, as cited in Hertzog & Morgan, 1998) “found that high schools with minimal or no transition programs (two or fewer transition practices for eight-grade student/ninth-grade students at the middle and high school level) reported a retention/failure rate in Grade 9 as high as 40 percent. Furthermore, the researchers found a positive relationship between a decrease in student retention and drop out rate for both male and female students and the degree of implementation of transition program practices” (¶ 5).

“Eighth grade students want to know what high school is going to be like (Mizelle, 1995) and they and their parents need to become familiar with and be aware of high school problems and procedures” (Mac Iver, 1990; Phelan, Yu, & Davidson, 1994; Sansone & Baker, 1990, as cited in Mizelle & Irvin, n.d., ¶ 10). The transition program
must include activities to provide incoming student social support activities that give students the opportunity to get to know and develop positive relationships with older students and other incoming students (Hertzog et al., 1996; Mac Iver, 1990, as cited in Mizelle, 1999, ¶ 11).

"While most of the literature on 'getting smaller' has focused on the encouraging results achieved by new starts-ups and stand-alone small schools, a growing emphasis in urban districts today is on establishing small learning communities within large comprehensive high schools and, increasingly, on actually altering large schools into a collection of smaller, more personalized ones" (Steinberg et al., 2002, p. 10).

Relatively new to the Freshman Initiative program at BHS is the separate ninth grade cluster, which offers an opportunity for administrators to isolate "at-risk" students from the large group and attend to their developmental needs. The term "at-risk" can be defined in many different ways. Smith (2001c, as cited in Kariuki, 2002) defined "at-risk" students as those students who, because of various factors such as poverty or homelessness, are more likely to experience learning and behavior problems than other students" (p. 4). For this research study, students have been identified by their eighth-grade teachers, principals, and counselors as at-risk for possible deficiencies in academics, attendance (absences/tardiness), social skills, and possible poor academic performance in one or more of the major subject areas (Kariuki & Wilson, 2002).

"In ninth grade, for the first time, students must work for passing grades in core courses (i.e., English, physical science, social studies, and math) that carry credits for graduation. At the same time, ninth-grade students are confronted with demands both in terms of independent study skills (Reith & Polsgrove, 1994, as cited in Fulk, 2003) and in
the quantity of subject matter covered in each class" (¶ 4). As noted by Fulk (2003),
"Some students who were at-risk for failure may have advanced through earlier grades
due to individual teacher attention and vigilant monitoring that may not be possible or
desirable within the larger secondary school culture" (¶ 4). According to Roderick
(1996), "Even students who come to high school with a strong desire to succeed fail. Not
because they, their parents, or their teachers do not care; but because they are unsettled
by chaotic environments that differ greatly from their eighth-grade experience. They are
given too much independence and are expected to meet increased academic demands
without the day-to-day follow-up and support they need to succeed" (as cited in Bhanu,
1996, ¶ 5). Catterall (1998, as cited in Fulk, 2003, ¶ 4) listed the three most common
reasons students give for dropping out as (a) not liking school, (b) not getting along with
teachers and others, and (c) failing. "Youth who fail to complete high school have twice
the unemployment rate of graduates, in addition to diminished opportunities for post-
secondary school or continued training" (Learner, 1997, as cited in Fulk, 2003, ¶ 6).

Small Learning Community (SLC) Theories

In Small Learning Communities: A Review of the Research, Oxley (n.d.) cited
Cotton, as defining "the term 'small learning community,' as encompassing the elements
small structure along with curricular specialization and choice and including a focus on
learning and learners and, in particular, the active and collaborative nature of teachers'
and students' work. Furthermore, it is a designation that emphasizes the importance of
autonomy and flexibility in functioning within large, rigid, educational bureaucracies
(Cotton, 2001), and it reflects the movement to a student-centered curriculum,
instruction, and collaboration among all members of the community (Fine & Somerville,

By carefully examining student demographics and performance and determining what resources are available to address them, a school can start to develop a school design that is connected to student needs and that is organized to help all students succeed. For example, if a school finds itself with a "bulge" in the ninth grade, due to a large number of ninth grade repeaters, the design might include the formation of small, intensive ninth grade clusters, with an advisory support system and additional supports and opportunities that help young people meet district-level benchmarks and move forward with their high school education (p. 13)

"Decades of research on school size provide extensive evidence that small high schools are more often associated with encouraging student outcomes than are large high schools" (Cotton, 2001; Gladden, 1990, as cited in Oxley, n.d., p. 5). "Small high schools have unquestionably greater holding power: Students are less likely to drop out, more likely to attend, and more likely to be involved in school activities" (Lindsay, 1982; Pittman & Haughwout, 1987, as cited in Oxley, n.d., p. 5). Small high schools evidence less student turmoil and violence (Garbino, 1978; Gottfredson, 1985, as cited in Oxley, n.d., p. 5).

Mary Anne Raywid has written extensively on the benefits of small schools. In Educational Leadership (1997) she reveled "that a number of large-scale studies, involving thousands of students, documents the effects of school size. . . . Among the findings: low-income students in small schools significantly outperformed those in large schools on standardized test scores of basic skills; size had more influence on student achievement than any other factor controllable by educators; and youngsters—especially
disadvantaged ones—learn more in math, reading, history, and science in small schools than in large ones” (p. 34).

“Research on half-day SLCs has shown positive effects on students’ sense of community and academic achievement” (Felner & Adan, 1988; Felner et al., 1997; McMullan, Sipe, & Wolf, 1994; Oxley, 1990, 1997, as cited in Oxley, n.d., p. 6). As noted by Legters (1999), “In general, SLCs have been found to have positive effects on students’ relationships with peers, teachers, and staff, extracurricular participation, and a sense of community and teamwork among staff. Students participating in SLCs also have been found to have better attendance, higher course passage rates, and fewer suspensions compared to demographically similar students in more traditional high school settings” (p. 7).

It is apparent from both research and practice that students register slight to no sense of community from two-course blocks such as the language arts/social studies blocks frequently found in high schools (Oxley, 1990; Oxley, Croninger, & DeGroot, 2000). Moreover, splitting up the half-day equivalent of SLC classes among classes outside the SLC community also diminishes its impact (Oxley, n.d., p. 6).

“Small learning communities that have achieved national distinction on the basis of their students’ accomplishments include the entire 4 years of high school study” (Cook, 2000; Meier, 1995, as cited in Oxley, n.d., p. 7). “The overall goal for this freshman cluster is to provide a more supportive and personal learning environment to entering ninth-grade students as they make the transition from elementary school to a large high school, to enhance their likelihood of completing school successfully” (Greenfield et al., 2001, ¶11). Research by Quint, Miler, Pastor, and Cytron (1999, as
cited in Oxley, n.d.) "indicates that small unit organization confined to just the ninth
grade level, as in interventions designed to alleviate students' transition to high school,
has positive but modest effects on students' academic outcomes. These researchers
concluded that wide-ranging intervention was required" (p. 7).

"The SLC organizes teachers—one from each major subject area—into an
interdisciplinary team that shares its students in common, creating a more student-
centered form of schooling than in traditionally organized schools. These
interdisciplinary teams allow for coordination of student support and instruction across
core subjects" (Oxley, n.d., p. 8). Research on learning and cognitive development
(Bransford, Brown, & Cocking, 1999; Caine & Caine, 1994) indicates that consistency in
academic programs allows students to absorb new understandings into prior knowledge
and to revise prior knowledge when required.

Research often identifies common preparation time as a feature of successful
planning and academic programs linked to positive student outcomes (Felner et al., 1997;
McPartland et al., 1998; Newmann et al., 2001; Oxley, 1997). This is a nearly constant
item on short lists of SLC practices necessary for maintaining focus on instructional
improvements (e.g., Northwest Regional Educational Laboratory, 2003). Physical
proximity of teachers' classrooms assists teacher partnerships (Christman, Cohen, &
Macpherson, 1997; Wasley et al., 2000), encourages interaction among teachers and
students (Anceas, 1995; Oxley, 1990), and helps establish an independent identity and
sense of community among members (Raywid, 1996). The freshman cluster will allow
the teachers to compare and share notes about student progress. Teachers have greater
opportunities to work together and learn from each other. As maintained by Owen,
Cooper, and Brown (2002), "The smaller learning community context will allow teachers to diagnose and remediate with a more highly focused eye on the individual student—less driven by the confines of the master schedule in a large high school" (p. 10). "Students take advantage of school when they have a sense of belonging, and students' benefit from a more personal setting in which their presence is more readily and repeatedly accepted" (Cutshall, 2003, ¶7).

"In transforming large high schools into SLCs care must be taken not to inadvertently re-establish tracking at the school by allowing low-achieving students to pool in the cluster" (Buechler, 2002, p. 4). "Offering transition services only to selected students runs the risk of negative labeling by the students themselves or by their peers, with damaging consequences to their self-esteem and sense of efficacy as learners" (Allen, 2001, p. 9). A supportive social environment is rather like small size itself; that is, it is an important precondition for productive schooling but does not guarantee it. Researcher Sarah Dewees explained why SLCs must be independent and distinctive in order to realize their full potential:

The most critical factor for success is a commitment to implementing the program fully, allowing for complete administrative separation of the sub-school and the creation of a separate identity (McCabe & Oxley, 1989; McMullen, Sipe, & Wolfe, 1994; Raywid, 1996). Without full implementation, many of the benefits of small-scale schooling, such as establishing community and symbolic identity, cannot be realized. (1999, p. 17)

**Educational Change Research**

Before addressing the issue of implementation research, the researcher must define the school environment. More specifically, the researcher will examine the school as an organization. According to Bowman and Deal (2003, p. 40), "Organizations are complex, surprising, deceptive, and ambiguous: they are formidable difficult to
understand and manage.” Peter Senge (1990, as cited in Smith, 2001b) argued that learning organizations are “organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together” (¶ 6). Finally, Argyis and Schon (1978, as cited in Smith, 2001c) suggested that “each member of an organization constructs his or her own representation or image of the theory-in-use of the whole. The picture is always incomplete and people, thus, are continually working to add pieces and get to a view of the whole” (¶ 1).

“From a basic blueprint of operating core, administrative component, technostructure, and support staff, Henry Mintzberg (1979) offered a conception of five structural operations: simple structure, machine bureaucracy, professional bureaucracy, divisionalized form, and adhocracy. Unlike simple hierarchies, machine bureaucracies have large support staff (para-professionals, aides, custodians, secretaries, and transportation staff) and a sizable techno-structure (curriculum directors and vice principals) with many layers between strategic apex (central office administration) and operating core (educators and students)” (as cited in Bowman & Deal, 2003, p. 75). “Beginning with the precepts of scientific management in the early twentieth century, there have been recurring efforts to improve public schools by getting them to work more like a machine bureaucracy in which teachers are the production workers. These initiatives have included ‘teacher proof’ curriculum, incentive pay schemes, and promoting test scores as the primary indicator of school effectiveness” (Bowman & Dean, 2003, p. 76). Entering the 21st century, a large comprehensive high school clearly
resembles the structure and organization of the machine bureaucracy model as outlined in Mintzberg’s five principles:

“Schools, as organizations that are subject to the burdens of many environmental pressures such as parental wishes and the changing needs of society, are dynamic changing organizations” (Salvaterra & Adams, 1998, p. 2). Planned changes differ from longer evolutionary changes in that a planned change has an individual or individuals leading the change and there is “a conscious and deliberate attempt to manage events so that the outcome is redirected by design to some predetermined end” (Hanson, 1996, p. 284, as cited in Salvaterra & Adams, 1998, p. 2). “Planned changes generally meet with resistance in the initial stages of implementation” (Salvaterra & Adams, p. 2). “Visibility of changes due to the proliferation of educational journals, professional conferences, staff development opportunities, and an increased rational interest in education has created an environment where schools are increasingly expected to change to reflect what is considered to be the best educational practice of the time” (Salvaterra & Adams, p. 2).

“Business leaders, parents, school board members, teachers, students and members of the religious community—even the President—have all shifted in fundamental ways towards a reexamination of what our schools should be doing and what steps need to be taken to make our schools more competitive in the new global economy” (Negroni, 1992, p. 2).

As Negroni has also argued,

Our schools are presently organized around an industrial model rather than informational model. Schools are presently organized to produce young people that are capable of working in isolation and taking direction. They are meant to produce young people who can relate to machines and not to other people. The role of the school is such that it attempts to extinguish the natural desire of people to gather, be inquisitive, and interact. Schools are organized as places where learning is a private psychological matter. The new world requires a total transformation of the organizational structure of school. (1992, p. 6)
With that in mind, BHS implemented a SLC with the central assumption that a small, personalized high school learning environment will lead to improved and more equitable results for students.

In general, SLCs have been found to have positive effects on students' relationships with peers, teachers, and staff, extracurricular participation, and a sense of community and teamwork among staff. Students participating in SLCs have been found to have better attendance, higher course passage rates, and fewer suspensions as compared with demographically similar students in more traditional high school settings (Steinberg & Allen, 2002). These studies further show that weak implementation limits positive outcomes for student and staff (Fine, 1994; Oxley, 1990).

“Research has consistently shown that the depth and quality of program implementation is a powerful factor in the success of school reform programs. Comprehensive reform efforts can succeed if they are implemented well. Most responses to the call for educational reform have primarily focused on students mastering more complex knowledge, using standards to identify outcomes, and holding teachers more accountable for the academic achievement of their students” (Banks & Banks, 1997, as cited in Gutmore & Walker, 2000, Section V, ¶2). Such variability has sparked an interest in the implementation process as a major focus of reform research. Within this context, schools are viewed as dynamic systems in which the issues of implementation are played out and whose classroom setting has been almost impervious to external reform (Morris, 1996, as cited in Gutmore & Walker, 2000, Section V, ¶2). Moreover, some researchers have avoided the issue of innovation by maintaining that it is the perception
of innovation which is relevant rather than the actual newness of the idea or program
(Sieppendel, 1996, as cited in Gutmore & Walker, 2000, Section V, ¶ 2).

As MacRae-Campbell (2002) noted, "At present, numerous schools across the
country have accepted the challenge of updating and upgrading their services. However,
as administrators and faculties forge ahead to rethink their educational mission,
organizational structure, academic program, teaching methods, personnel roles, or
community relationships, their renewal efforts often falter because schools lack effective
action plans. Many involved in efforts to change are unaware of guidelines for the
successful initiation and implementation of an innovation" (¶ 1). Concerned people in
local schools have expended considerable energy and resources aimed at making schools
better. Some changes in practice have occurred but not nearly with the depth or scope that
was intended. According to Mann (1978), "innovations or revisions in programs have had
only about a 20% success rate in education. Other studies have concluded that successful
implementation is much more complex and difficult than one might expect" (Lortie,
1975; Miles, 1979; Sarasoa, 1971; Fullan & Pomsret, 1977, as cited in Parish & Arends,
1983, p. 62). "The twenty-odd years of research on change in schools have offered a
wealth of information on processes that succeed and others that do not work. For many,
however, the successful implementation of new programs and processes, or innovations,
remains a quandary" (Stiegelbauer, 1994, ¶ 1).

According to Gutmore and Walker (2000), "The literature dealing with
innovation, diffusion, and implementation often consider these three elements
interchangeably, although the issues associated with innovations are concerned with the
elements of creativity and newness" (Section V, ¶ 3). Implementation and diffusion
research often consider the innovation as an integrated element of a comprehensive process (Ford, 1996, as cited in Gutmore & Walker, 2000, Section V, ¶ 3). “Innovation is defined as the introduction to an applied situation of means and ends that are new to that situation as perceived by the implementers” (Glittner & Hollander, 1968; Rogers, 1995; Zaltman, Duncan, & Holbeck, 1973, as cited in Gutmore & Walker, 2000, Section V, ¶ 3). “Diffusion is defined as the process by which an innovation is communicated through certain channels over time among the members of the organization” (Rogers, 1995, as cited in Gutmore & Walker, 2000, Section V, ¶ 3). “Implementation is viewed as the organization as determined by the perceptions of the participants” (Van de Ven, Angle, & Poole, 1989, as cited in Gutmore & Walker, 2000, Section V, ¶ 3).

“There are many methods to the study and practice of change and improvement in schools. These assorted models often have different underlying notions and values about change. But, despite these differences, all approaches reflect one (or more) of the three broad perspectives derived from classic research on change (Chin & Benne, 1969) but which have been modified by House (1981) to fit education systems better. They are: (a) the rational-scientific or R&D perspective, (b) the political perspective, and (c) the cultural perspective” (Sashkin & Egermeir, 1993, p. 2). 

“The R&D perspective on the change process is clear-cut, if simplistic. It assumes that people accept and use information that has been scientifically shown to result in educational progress” (Sashkin & Egermeir, 1993, p. 2). “The political perspective was especially well-known in major top-down state-level reforms that followed the shift in initiative from federal to state levels in the early 1980s. This perspective was demonstrated, for example, by strong external policy controls derived through processes
of bargaining and political compromise among power groups. The most basic version of this perspective was to authorize changes and outcomes, often by law" (Saskin & Egermeir, 1993, p. 2). In their extensive analysis of the use of policy for school change and improvement, McDonneli and Elmore (1972, as cited in Saskin & Egermeir, 1993) described four policy instruments used by states: mandates, inducements, capacity building, and system changing (p. 2). Finally, the cultural perspective emphasizes changes in meanings and values within the organization undergoing change. Cultures change as a consequence of the actions of leaders who transform their organizations. This has become a dominant point of view or metaphor of major school redesign and restructuring efforts in the 1990s, reflecting current approaches in the business sector (Moveman & Egermeir, 1992, as cited in Saskin & Egermeir, 1991, p. 3).

As maintained by Ellsworth (2000) in Surviving Change: A Survey of Educational Change Models, “Current research in educational change can trace its roots to two philosophical ‘ancestors.’ The first one of these, emerging as its own discipline in the 1940s, is most commonly referred to as the Diffusion of Innovations tradition. The second, articulated in the 1950s, is the General Systems Theory tradition” (p. xvii).

“Throughout much of the 1990s, change research had seen little discussion among the classic factions (each remaining convinced that its approach is most valuable). Thus, no strategy had emerged from inside these camps to merge their parts in service of the Change Communication Model as a whole. Fortunately, the past few years have seen an increasing acknowledgment on all sides that there is ‘value in uniting the empirical knowledge base of the classic model within a systemic context’” (Ellsworth, 2000, pp. 24–25).
In his book *Surviving Change: A Survey of Educational Change Models*, James Ellsworth (2000) "used the concept of change as a specialized instance of the general communications model to illustrate how the tactics represented by the classical models may be fused into a comprehensive, systemic strategy for the change process as a whole" (p. 25). "Considering the general communication model: a sender wishes to communicate a message to a receiver. This is accomplished using a medium, which is essentially a means for establishing a change through the environment between the two communicants. However, this environment also contains interference, which can disrupt the medium or distort the message" (Ellsworth, pp. 25–26). "With this in mind, now consider the particular instance of a model that is change. In this context we have a change agent who wishes to communicate an innovation to an intended adopter. This is accomplished using a change process that established a channel through the change environment between the two communicates. However, this environment also contains resistance that can disrupt the change process or distort how the innovation appears to the intended adopter" (Ellsworth, p. 26).

When a researcher talks about process, we are talking about the factors that make up the three phases of educational change. They are (a) initiation or deciding on an agenda and beginning work, (b) implementation or putting the innovation into action in context, and (c) institutionalization or continuation or seeing the innovation in place and integrated into the daily life of the school (Stiegelbauer, 1994, Processes, ¶ 1).

*Initiation: The innovation*. The innovation is an initial stage where schools examine areas for improvement and develop feasible, coherent plans that will be later implemented. This is a time of thinking, discussing, analyzing, planning, and motivation.
Fung (1992), "Innovation is often viewed as one unique kind of change and Miles (1964), for instance, called it a species of the genus change" (p. 2). Marklund (1972) made a clear distinction between educational innovation and change:

> The term innovation as used in school and teaching is often synonymous with the term change. If this change is on a broad scale and affects an entire school system, one frequently speaks in terms of reform. It would be incorrect however to refer to every change as an innovation. It must imply an improvement towards a predetermined objective. Innovation always presupposes one or more qualitative criteria. (Dulin, 1973)

An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption (Rogers, 2003, p. 12). "During the initiation phase a high priority need is identified, key people are engaged and actively advocate the change, and the focus is on what needs to be changed" (Busick, 1994, p. 6). Huberman and Miles' (1984, as cited in Busick, 1994) "research about people in the process of change suggests that a period of apprehension is part of the change process and that people often change their practices before they change their beliefs and perceptions. People involved in change efforts need to be aware of the politics of power in the change process" (p. 4).

The innovation decision process theory (Rogers, 1995) states that diffusion is a process that occurs over time and can be seen as having five well-defined stages. The stages in this process are knowledge, persuasion, decision, implementation, and confirmation. Everett Rogers' individual innovativeness theory model looks at the way innovations are taken up in a population. An innovation is an idea, practice, or object that is perceived as new by its audience. Diffusion researchers have found that, for any given behavior, an audience can be broken down into five segments based on their propensity to accept the new idea or behavior. Adoption begins with visionary, imaginative
innovators, attracts experimental early adopters, and eventually sweeps in majority
audiences, with skeptics holding out to the bitter end (Rogers, 1995).

Ruberman and Miles (1984, as cited in Busick, 1994) suggested that “innovation
is about power and the redistribution of power. Restructuring initiatives, for example,
focus on shared decision-making that opens up the change process to teachers, parents,
and community members. This represents a distinct departure from the power structure
that currently exists in schools and in departments of education” (p. 4). Therefore,
according to MacRae-Campbell (1991), “Restructuring can begin only with the initiation
of honest dialogue at a school. Those who promote school renewal will necessarily and
frequently have to engage individuals, small groups, and full faculty meetings in repeated
school appraisal and restructuring conversations” (p. 56).

Rogers identified five attributes of innovations, which have been validated both
by further qualitative inquiry (e.g., Newell, 1992) and by sophisticated quantitative
techniques (e.g., Holloway, 1978). Rogers’ innovation attributes (Rogers, 1995, p. 208)
are as follows:

1. Relative Advantage (“Is it better than what I have now?”)
2. Compatibility (“Does it conflict with my values, practices, or needs?”)
3. Complexity (“Is it too difficult to understand or use in authentic setting?”)
4. Trialability (“Can I try it out first, and can I go back to what I was doing if I
don’t like it?”)
5. Observability (“Can I watch someone else using it before I decide whether to
adopt?”)

Fullan (1991) made the following comments about the change process:

The first issue is how reform can get started when there are large numbers of
people involved. There is no single answer, but it is increasingly clear that the
changes require some impetus to get started. There is no evidence that wide
spread involvement at the initiation stage is either feasible or effective. It is more
likely the case that small groups of people begin and, if successful, build
momentum. Active initiation, starting small and thinking big, bias for action, and learning by doing are all aspects of making change more manageable, by getting the process underway in a desirable direction. Participation, initiative-taking, and empowerment are key factors from the beginning but sometimes do not get activated until a change process has begun. (pp. 90–92)

In his exploration of the situational factors contributing to successful change in libraries, Ely (1976, as cited in Ellsworth, 2000, p. 76) pioneered the investigation of environmental conditions and their influence on the change process. According to Ellsworth (2000), the phrase, *conditions of change*, has come to represent this method of inquiry (p. 76). Ely (1990) identified eight conditions that facilitate an innovation's diffusion and adoption. Supported by subsequent research using both qualitative (e.g., Newton, 1992) and quantitative (e.g., Rauder, 1993) methods, these eight conditions were

1. Dissatisfaction with the status quo ("There has to be a better way.")
2. Knowledge and skills exist ("I can do this" or "I can learn quickly.")
3. Resources are available ("I have everything I need to make it work.")
4. Time is available ("I have time to figure this out and to adapt my other practices.")
5. Rewards or incentive exist for participants ("I'm going to get something out of this too.")
6. Participation is expected and encouraged ("This is important, and I have a voice in it.")
7. Commitment by those who are involved ("Administrators and faculty leaders support it.")
8. Leadership is evident ("I know who to turn to for encouragement, and they are available.")

Once an innovation is created, management must decide between two paths for its implementation. According to Lindquist and Mauriel (2000, as cited in Van deVen et al., 2000), "The first approach, a depth adoption strategy, assumes that after an innovation has been successfully adopted and debugged by a demonstration unit, it can be transferred and diffused to other organizational units" (p. 561). "Depth is defined as an innovation effort that focuses on a specific work group or organizational unit. This
approach to innovation implementation would concentrate on one division (a school) of an organization but involve more diverse stakeholder groups in a more ‘top-to-bottom’ effort” (p. 562).

“Breadth is defined as the number of organizational lines crossed horizontally in the innovation adoption process. The breadth approach assumes that a more effective way to change an organization is to introduce and implement an innovation across the board, often through successive hierarchical levels across all organizational units. A innovation that emphasizes a breadth approach to implementation would involve more similar organizational units and fewer diverse stakeholder groups” (Van deVen et al., 2000, p. 563).

Yin (1979) developed a framework that identified two passages and cycles and four features that most innovations experience on the path to institutionalization. Yin identified and labeled three basic stages of innovation implementation: improvisation, expansion, and disappearance.

Yin (1979, as cited in Van deVen et al., 2000) suggested that although the improvisation stage is important, the expansion and disappearance stages are critical to long-term incorporation of an innovation into an organization. The improvisation stage involves the organization of activities during which the innovation begins to operate following its adoption. The expansion stage involves the diffusion of an innovation to all parts of the organization and the disappearance stage involves the gradual incorporation of the innovation into the daily procedures and routines of the organization. (p. 564)

Consistent with several large studies of implementation, the larger the scope of the change and the more personally demanding it is, the greater the chance of success (Crandall, Eisman, & Louis, 1986; Fullan, 1991, as cited in Stiegelbauer, 1994, Clarity, ¶ 1). In essence, “the greatest success is likely to occur when the size of the change is large
enough to require noticeable, sustained effort, but not so massive that typical users find it necessary to adopt a coping strategy that seriously distorts the change (Crandal et al., 1986, p. 26, as cited in Stiegelbauer, 1994, Clarity, ¶ 1). In short, innovations must be practical.

One way to improve clarity in innovation and to reduce the potential of distortion is to employ the concept of innovation configurations (Heck, Stiegelbauer, Hall, & Loucks, 1981, as cited in Stiegelbauer, 1994, Clarity, ¶ 2). Research along these lines to date has been led by Hall and various colleagues, beginning in the early- to mid-1970s with the concerns-based adoption model (CBAM). “First proposed by Hall, Wallace, and Dessett (1973), CBAM recognized that the effective change facilitator [must] understand how he or her clients (e.g., teachers) perceive change and adjust what he or she does accordingly” (Hall & Hord, 1987, p. 5 as cited in Ellsworth, 2000, p. 146). The CBAM (Hall & Loucks, 1979) described seven levels of concern that teachers experience as they adopt a new practice: awareness, informational, personal, management, consequence, collaboration, and refocusing. The CBAM is one of the tools often used to guide implementation efforts in schools (Hall & Hord, 1987).

To change something requires that first someone has to change. Hord, Rutherford, Hulling-Austin, and Hall’s (1987) work is particularly useful, because it suggests that anticipating people’s concerns can enable innovators to focus on appropriate forms of support. Their work also reassures us that it is possible to anticipate exactly of what will happen during a change process (Busick, 1994, p. 6). According to Ellsworth (2000), “The Concerns-Based Adoption Model (CBAM) is a powerful framework for assessing and tracking change’s progress at the level of the individual adopter, where success is
ultimately determined. It offers tools for spotting and addressing concerns before they mushroom; assessing the extent to which the innovation is actually being used in practice; and defining what adaptations can be made without reducing its effectiveness” (p. 158).

Both the change process and the people involved in it go through developmental stages. Different kinds of activities are needed to address each stage. At its simplest, an image of this process can be figured around Hall and Ford’s (1987, as cited in Ellsworth, 2000, p. 158) stages of concern (SoC) model.

Stages of Concern (SoC) (Which affective issues is the adopter focused on?)

Stage 0: Awareness (“I am not concerned about the innovation.”)
Stage 1: Informational (“I would like to know more about it.”)
Stage 2: Personal (“How will using it affect me?”)
Stage 3: Management (“Just using it is taking all of my time!”)
Stage 4: Consequence (“What effect is using it having on students’ learning?”)
Stage 5: Collaboration (“How might I integrate my use with other teachers’ use?”)
Stage 6: Refocusing (“I have some ideas about something that might work even better!”)

Early in the process, activities need to be addressed to personal issues, then to management tasks, and, later, to refinement issues (Stieglebauer, 1994).

According to Busick (1994), “Educational leaders must seek to understand the concerns of all individuals involved in the process of change. They must design strategies to address concerns, to ease tensions, and to pave the way for successful innovations” (p. 7).

Implementation. Implementation is the phase in the innovation process that follows the initiation stage (Fung, 1992, p. 18). “During the implementation stage, staff and school leaders take the innovations developed during the initiation stage and implement the suggested activities and tasks. The implementation stage is a time of staff
development, of the execution of plans, and of problem solving. Implementing a plan may seem initially simple, but it is in fact quite complex as implementers face the realities of schools and the on-going needs of teachers” (Comprehensive Regional Assistance Center Consortium, 1997, ¶ 4). It is a time for aid and support, training and feedback, capacity building and problem solving (Louis & Miles, 1990, as cited in Comprehensive Regional Assistance Center Consortium, 1997, ¶ 4).

Reviews of the literature have noted that many educational innovations often fail because they lack proper attention to implementation (Doyle & Ponder, 1977; Hurst 1983; Morris, 1986). For successful implementation of an SLC, the district must first develop and communicate a clear vision and mission. “The district must state clearly why such changes are necessary and how the changes will help the school accomplish its core mission” (Steinberg & Allen, 2002, p. 11). “There must be a sense of where we are going,” wrote Fine and Somerville (1998, p. 106).

Michael Fullan’s work on education change synthesizes his own research and the work of others. He defines implementation as “the actual use of an innovation in practice.” The implementation perspective, on his account, covers “the content and process dealing with ideas, programs, activities, structures, and policies that are new to the people involved” (Fullan, 1996, as cited in Surry & Ely, n.d., From Diffusion, ¶ 1). Describing the complex relationship between key implementation factors and successful educational change, Fullan suggested that “the more factors supporting implementation, the more change in practice will be accomplished.” Fullan’s (1989, as cited in Busick, 1994, p. 7) research on successful educational change identified five major implementation factors: orchestration, shared control, pressure and support, and rewards.
Orchestration is concerned with leadership. Effective school leaders are crucial to large-scale, sustainable education reform. For some time, educators have believed that principals must be instructional leaders if they are to be the effective leaders needed for sustained innovation. Newmann, King, and Youngs (2000, as cited in Fullan, 2002a), for example, found that school capacity is the crucial variable affecting instructional quality and corresponding student achievement. At the heart of school capacity are principals who are focused on the development of teachers' knowledge and skills, of the professional community, of program coherence, and of technical resources (Newmann, King, & Youngs, 2000, as cited in Fullar, 2002a, ¶ 1). Orchestration, at its most simple, is coordination.

Managing school change and improvement is one of the most complex tasks of school leadership. As Fullan (1993), Sparks (1993), and others have pointed out, school leaders need to understand the change process in order to lead and manage change improvement efforts effectively. They must learn to overcome barriers and cope with the chaos that naturally exists during the complex process of change (Fullan & Miles, 1992). The key to successful change is the improvement in relationships between all involved and not simply the imposition of top-down reform (Fullan, 2001, as cited in Hammonds, 2002, ¶ 5). The focus moves away from an emphasis on structural change towards changing the culture of classrooms and schools and an emphasis on relationships and values (Fullan, 2001, as cited in Hammonds, 2002, ¶ 5). Sergiovanni described this as his community of responsibility: "Communities embody civic virtue—the willingness of individuals to sacrifice their self-interest on behalf of the common good. And this virtue is the reason why communities are so powerful in uniting parents, teachers, and students"
in common purpose" (2001, p. 67). Various researchers have endorsed the contribution of a caring productive atmosphere (e.g., collegial relationships among staff and a sense of community in the school) to sustain change. They also have indicated that group expectations and the availability of affective support and leadership are essential in supporting the implementation of instructional change (Boudab, Logun, & Greenwood, 2001; Boyd & Hord, 1994; Gersten & Dimino, 2001; Greenberg & Domirovich, 2002, as cited in CCE Center, n.d., p. 3).

"Shared responsibility and ownership by those involved is absolutely necessary for the success of any implementation plan" (Busick, 1994, p. 7). Thus, ownership has to take precedence in the process of change.

According to Goldman, Boyatzis, & McKee (2002, as cited in Fullan, 2002),

The single factor common to successful change is that relationships improve. If relationships improve schools get better. If relationships remain the same or get worse, ground is lost. Thus, leaders build relationships with diverse peoples and groups—especially with people who think differently. In complex times, emotional intelligence is a must. Emotionally intelligent leaders are able to build relationships because they are aware of their own emotional makeup and are sensitive and inspiring to others (Improving Relationships, ¶ 1).

For a smooth transition to effective implementation, all partners are vital to the process. It is imperative that everyone involved has a shared understanding and commitment to the change process, knowledge of the strategies necessary to effect change, and a commitment to implement changes (Busick, 1994, p. 7).

Schools must create a school schedule that supports the goal of personalization for students and of increased collaboration for teachers. "A fundamental benefit of small learning communities is the opportunity they provide for a group of teachers to know and be collectively responsible for the success of a subgroup of students" (Steinberg & Allen,
Reformer Ted Sizer (1984) is just one of those who have emphasized the necessity for teachers to know students well in order to be able to help them learn and grow. "The smaller learning community contact will allow teachers to diagnose and remediate with a more highly focused eye on the individual student—less driven by the confines of the master schedule in a large high school" (Owen, Cooper, & Brown, 2002, p. 10). "Students reap the benefits of having consistent adults who stay with them over an extended time period" (Owen, Cooper, & Brown, p. 10). "When teachers and students are able to build relationships, both are motivated to work and to make a success of the schooling enterprise. Teachers, moreover, can become knowledgeable about students' learning strengths and needs and identify ways to respond to them in a way that is not possible in the typical large high school" (Cotton, 2001, Personalization, ¶ 1).

"High school teachers typically teach five or six different classes per day and have little or no interaction with teachers in other subjects who teach those same students, making it very difficult for them to know any individual student and his/her capabilities well" (LaPoint, McPartland, & Perr Towns, 1996, as cited in Legters, 1999, p. 9). "To preserve the benefits of subject-area specialization but eliminate its isolating and potentially alienating aspects, restructuring high schools are experimenting with interdisciplinary teacher teaming" (Lee & Smith, 1995; Newman & Wehlage, 1995; Stinson, 1994, as cited in Legters, 1999, p. 9). "Better known as a middle school practice, the most prevalent form of interdisciplinary teaming is a four-teacher team made up of a math, an English, a science, and a social studies teacher. These teachers share responsibility for the curriculum, instruction, evaluation, and often the scheduling and discipline of a group of 100–150 students" (Alexander & George, 1981; Arhar, 1992;
Mac Iver & Epstein, 1991, as cited in Legters, 1999, p. 9. “Like small learning communities, this arrangement helps personalize the learning environment by increasing knowledge and communication among teachers, students, and parents about each student’s successes and problems in each subject. This sharing of students may not only provide teachers, parents, and students with a more integrated view of students progress, but may also help students feel that there is a group of concerned adults looking out for them (Legters, 1999, p. 9).

Fullan (as cited in Busick, 1994) noted “that both pressure and support are essential during the implementation phase. Pressure without support leads to conflict; support without pressure can limit results. Expectations, such as time lines for the completion of actions and products, are important to assure continued forward movement” (p. 7).

Kathleen Busick (1994) posited,  

‘implementation will not take place and be effective if it has to be accomplished within competing priorities. This does not mean that everything else that is happening must be dropped to accommodate the intended change. What needs to be done is some serious group rethinking and consensus building—share responsibility—in prioritizing the needs and allocation of essential resources. . . . Along with money, another essential resource that must be prioritized and allocated is time and effort. For any implementation to be effective, there must be “protected time” allocated, a form of support that is essential in helping to establish a sound basis for long-term growth. (p. 8)

“Fullan and others also documented the importance of ongoing technical assistance. Creating and sharing knowledge is central to implementation. Information, of which we have a glut, only becomes knowledge through a social process. Organizations must foster knowledge giving as well as knowledge seeking” (Fullan, 2002, Knowledge Creation, ¶ 1).
Fullan's final implementation factor is rewards. This is the notion that in the early stages of implementation the rewards are few and the costs are high. Researchers identify the rewards factor as crucial to success and recommend that innovators carefully incorporate early rewards into their planning (Busick, 1994, p. 8).

At some point in the change process, programs witness a dip in outcomes (e.g., teacher satisfaction or student test scores). This emotional phenomenon is the "implementation dip" (Fullan, 1982). As stated by MacRae-Campbell (1991),

> "When people agree to implement a new procedure or policy, a decline in their performance or work quality is experienced during their initial attempts. This can be humiliating and frustrating, and feelings of awkwardness and guilt often emerge. However, it is important to note that decline in skills is only temporary. Once the dip has been reached, performance usually organizes at a higher level than before. (p. 56)"

"Many educational innovations, initiated with high expectations and enthusiasm, flounder and die in the face of the implementation dip. Persistence, patience, and, especially, the time element are critical for sustaining the implementation" (Busick, 1994, pp. 8–9).

The school improvement process takes place in three stages: initiation, implementation, and institutionalization (Louis & Miles, 1990). Knowing about the challenges and problems, as well as the success factors, associated with each stage of the change process can increase the likelihood of success (Fullan, 1993). "Change is a journey, not a blueprint, because you don't know what really matters until you are into the journey. School reforms are so complex that solutions for particular schools simply cannot be known in advance" (Fullan, 1993).

"Researchers repeatedly find that implementation of the structural elements of SLCs is incomplete" (Felner et al., 1997; Oxley, 2001, as cited in Oxley, n.d., p. 2). "Members of interdisciplinary teams lack common planning time or teach only a few of"
their classes in the SLC; an SLC has hundreds of students in it, offers only a few courses, or fails to admit a mix of students.” (Osley, n.d., p. 2).

“CRESPAR recommends that schools take an entire year to plan once they have committed to implementing this set of reforms. This is because the effective implementation of a ninth-grade academy and multiple career-focused academies requires participation of the entire faculty and staff” (Legters, 1999, p. 21).

“Restructuring a comprehensive high school is a very difficult task that requires a tremendous coordination of effort and resources, but it is a task that must be attempted. Our nation, and especially our inner cities, can ill afford the social and economic consequences of maintaining the status quo” (Legters, 1999, p. 23).

“Before making such basic decisions as the number and size of SLCs, how students and faculty will be assigned, and the degree to which the units will be autonomous, it is critical for a school leadership team to do both a needs and a resource assessment. This will involve looking at disaggregated student data, as well as human resource data—a more comprehensive and all-inclusive analysis than most schools undertake—targeting both classroom performance of particular populations of students and teaching capacity” (Steinberg & Allen, 2002, p. 12). The most successful restructured learning units are those whose teachers and students have chosen to be there. This makes sense intuitively, and the Architecture Research Institute researchers made the reasons explicit:

A self-selected staff and constituency results in a school community that is cohesive and committed to common goals. Ideally, therefore, small-school teachers must volunteer to work in the school. Similarly, students benefit most when they elect to enroll, and when the student body is assembled on the basis of shared interest. (1993, p. 3)
According to Oxley (n.d.),

Significant investments of time, effort, and funds in professional development and curriculum and instruction planning are needed to make small communities small learning communities. Without the implementation of key SLC organizational structures, these investments are quickly dissipated, teachers become cynical, and the dismal history of school reform that faculty of almost every high school are familiar with is repeated again. (p. 3)

"Since half-hearted implementation of the small school concept simply does not bring out real change, Wasley and Lear's (2001) advice is go for broke: When mired in bureaucracy, habits, and resistance to change, schools need a clean break with practices that have served many students poorly—not a conditional and timid incrementalism." (Cotter, 2001, p. 36).

Summary

Increasingly, nations need a skilled, knowledgeable workforce and a population equipped to function in a complex world. Competent workers and citizens, in turn, need a sound understanding of mathematics, English, science, and social studies. Public education in the form of elementary and secondary schools is the means to that end. During the 20th century, the top-down, highly structured, factory model of the large comprehensive high school was equipped to meet these demands. The most qualified students were afforded the opportunity to continue their education at the collegiate level, while average students had access, within the job market, to the manufacturing and service industries.

Available data on U.S. student performance in mathematics and science presents a mixed picture. Although data shows overall gains in performance over the last 50 years, most students perform below levels considered proficient or advanced by a rational panel of experts. Furthermore, substantial achievement gaps persist among various U.S. student
populations in language arts literacy and social studies and the United States continues to do poorly in international comparisons of overall academic performance, particularly in the secondary grades.

Affordable home computers and readily available access to the Internet has leveled the playing field in education on the international scene. Now, with a touch of a button, companies, both large and small, can utilize modern technology for mass production of items or to assist in hazardous tasks. Corporations can outsource customer service positions overseas to reduce personnel costs (jobs that were once offered to average U.S. students). In addition, an increase in competition at the collegiate or university level, otherwise known as the “brain drain,” is also a concern. A desk and classroom is no longer a prerequisite, but rather a laptop with Internet access and e-mail account is all that is necessary to earn a degree. Jobs, once readily available for citizens of the United States, are not as accessible in the new millennium, and, thus, a paradigm shift in pedagogy is required. As the United States moves from an industrial model to an information-, technology-based model, school districts are going to have to rethink the way they go about preparing students for life in the global village.

Feeling the squeeze from international competition and from cries of inadequacy on the home front, and understanding that the very future of the United States is at risk, President George Bush signed the No Child Left Behind (NCLB) Act into law and state legislatures jumped on board to raise the bar for all stakeholders. Under NCLB’s accountability provisions, states must decide how they will close the achievement gap and make sure all students, including the subpopulations that were once ignored (i.e., low socio-economic status, gender, race, and special education), achieve academic
proficiency. The NCLB Act was designed to change the culture of America’s schools by closing the achievement gap, offering more flexibility, giving parents more options, and teaching students based on what works.

Some districts have attempted to curtail the number of partially proficient students by requiring educators to be highly qualified in their particular curricular areas; by offering supplemental services, such as free tutoring or after-school assistance; by increasing access to technology; and by reducing class size. If the school is not making adequate yearly progress after 5 years, dramatic changes in school governance might occur. NCLB puts special emphasis on determining what educational programs and practices have been proven effective through rigorous scientific research. It is evident, from this review of the literature, that small schools have positive impacts on student achievement.

BHS is a large comprehensive high school with over 2,000 students and is comprised of four buildings spread across 15 acres. Breaking this high school up into four smaller stand-alone schools containing approximately 500 students each, as the research suggests, is not plausible. The school, as a whole, contains two gymnasiums, three cafeterias, and numerous labs but these are not found in every building. A more simplistic way to simulate smallness, and at the same time meet the demands of NCLB, was to create a school-within-a-school. Six smaller houses, of 400 students each, would report to one vice principal and one guidance counselor from Grades 9 through 12. Even though the student was one of approximately 2,000 in the larger school, there was always that sense of family as the homeroom and administrative and student personnel staff remained consistent over 4 years.
Data collected year-after-year by each house director showed that ninth graders accounted for the greatest number of out-of-school suspensions, had the poorest attendance records, and lowest retention rate, failing multiple courses and having the lowest grade point average of any level in the high school. If the empirical evidence supported the fact that association with a house would increase a sense of belonging, boost self-esteem, and raise confidence, why was this specific population doing so poorly in an age of increased accountability?

"Currently, the median high school size is about 1,200 (Lee & Smith, 1997), with approximately 40% of public secondary schools serving more than 900 students (Bryk et al., 1993). In a school of this size, anonymity is the rule. Teachers do not know other teachers, teachers do not know their students, and students do not know each other" (Husbands & Beese, 2001, p. 3). This is compounded by the fact that ninth graders are making the transition from a smaller neighborhood school to the extremely large high school. With structural features such as subject-based departmentalization and tracks for students assumed to be destined for different pathways, such large schools do not foster the collegiality and collaboration that supports learning (Bransford et al., 1999).

Moreover, in their study of school size, Lee and Smith (1997) found that while high school size matters for all students, it matters most for students in schools with high minority enrollments and/or characterized by a high proportions of low socio-economic status (SES) students. Their findings suggested that “large numbers of socially disadvantaged students attend high schools of a size where, in fact, students like them appear to learn the least” (p. 215).
Creating schools-within-schools or smaller learning units such as clusters does not necessarily increase student achievement. Other factors, such as class size, program type, teacher's level of education, teacher performance, and student selection, correlate with high academic performance and positive student engagement as well. To establish a SLC that meets the demands of addressing student performance for all students, school districts must remember to properly implement the specific program.

Research has consistently shown that the depth and quality of program implementation is a powerful factor in the success of school reforms. In the 1960s, after an outbreak of innovative reforms failed to make a difference in schools, concerns about the implementation of programs surfaced (Fullan, 2001). Daniel and Stringfield (2000) discussed the problem of initial and continuing implementation. In one study of 8 schools that had implemented given reform models, only 3 continued to use them after a few years. Educational change of any significance involves changes in organizational structures, communication, resource allocation, and beliefs and attitudes. Change is difficult and often unsuccessful. It is evident from the review of the literature that to achieve the successful implementation of a SLC (ninth-grade cluster) and impact student engagement and performance, the program must pass through at least three phases: adoption, implementation, and institutionalization.
CHAPTER III
Methodology

This chapter describes the methods and procedures used in this study. It is organized in the following subsections: (a) community demographics, (b) selection process, (c) participants, (d) procedures, and (e) design and methodology.

Community Demographics

The high school used in this study is one of three high schools in the city. The other high schools are a female-only private secondary school and a co-educational private secondary school. These private schools are small by local standards. The public high school is large by local standards, serving 2,362 students in Grades 9–12, with approximately 337 faculty members. The high school was located in an urban, multiethnic, blue-collar community. Most adults worked locally; however, some commuted to New York City. The number of freshmen on-roll during the 2001–2002 school year was 478. In 2002–2003, the number exploded to 615 freshmen. The enrollment for the current school year (2003–2004) was 648. The major ethnic groups were Caucasian, Hispanic, and African American. The community was served by 12 K–8 elementary schools, the largest of which served 1,200 students. The high school was double that population. "This high school presented a very different and more impersonal environment to incoming students compared to their previous schools" (Greenfield, 2001, Method, ¶ 1).
Selection Process

In the spring semester of their final year in elementary school, educators were asked to identify eighth-grade regular education students who would be at-risk at the high school level. Teachers used failures in major subjects such as math and English, poor attendance, and discipline referrals as indicators. New Jersey GEPA scores were also possible gauges. Using these criteria, 70 students were identified to participate in the small learning community (SLC) known as the Freshmen Cluster.

In the spring of 2000, recognizing the need to provide a more supportive and personal learning environment to entering ninth-grade students, the administration of BHS formally requested for educators to assist with the Freshmen Cluster SLC. "Perhaps the most fundamental feature of an effective learning environment was the presence of adults who demonstrated genuine interest and belief in youth who participate. 'Teachers who care' was the usual response of young people to the question of what they most want in a learning environment" (Steinberg, 2002, p. 21). Four teachers with evaluations exceeding expectations and temperaments suited to work in the Freshmen Cluster SLC were selected. These educators taught math, English, science, and social studies.

Participants

The subjects (140 students) were incoming ninth-grade students, approximately 13–15 years of age who were enrolled in the high school for the first time in the school district being studied. Seventy students characterized as at-risk by their elementary principals because of poor attendance, multiple failures, and chronic disciplinary concerns were recommended to participate in the Freshmen Cluster. The 70 at-risk students were divided between the four volunteer educators. A group of 70 regular
education students not in the Freshmen Cluster were designated as the control group. These students participated in the regular level B traditional program.

**Procedures**

The vice principals in the high school were required to monitor the attendance of their students. Attendance was taken daily. The homeroom teacher marked students absent or present. At each marking period the attendance record was transcribed on the report card. The researcher utilized the report card to obtain quarterly totals and the final attendance report on the final day of school. The mean, median, and mode with regards to attendance were determined for both the Freshman Cluster and the regular level B students in the traditional high school program. The principal or his designee utilized the report cards, as well as daily attendance records containing coded identities, to identify the race (designated as white or nonwhite), gender (male or female), and socioeconomic status (SES) (free/reduced lunch) of participants in the Freshmen Cluster. The same held true for the participants in the traditional level B program.

There was a student folder kept for every student at BHS. All correspondence, grades, standardized test scores, and discipline referrals were kept on file. In-school suspensions, as well as out-of-school suspensions, were kept on file in the student’s folder and the data was collected by the principal of the host school and forwarded to the central office. The number of suspension days was determined and the mean, median, and mode were utilized for comparison between the Freshman Cluster and the traditional level B program.

The school year was divided into four marking periods. Educators were required to submit grades quarterly. Every major subject also had a final comprehensive exam.
during the final week of school. Educators in the high school provided grades quarterly with a final exam grade. The four marking period grades, as well as the final exam grade, and final overall grade in each subject were designated on the year-end report card.

GEPA scores from the previous year were also on record. The researcher utilized final grades in math, English, science, and social studies.

Summary of Procedures

The investigation was retrospective and examined outcome data collected from the traditional level B program and the Freshmen Cluster. The researcher utilized coded data from students who were involved in the program. The investigation included outcome data from two groups of students: (a) participants in the Freshmen Cluster and (b) nonparticipants in the Freshmen Cluster. Approximately 70 students participated in the Freshmen Cluster during the 2003–2004 academic school year, and a random sample of ninth-grade students who did not participate in the Freshmen Cluster were utilized as a comparison group. Students in each of the two groups had as similar a background as possible, except for certain desired variables: participation in the SLC, gender, and race. The building principal or designee assigned each participant a three digit numerical code. This code was the only identifying student information written on the data collected by the researcher.

Design and Methodology

Descriptive research was appropriate for this study because the intent was to explain patterns or relationships in the data and not to determine cause and effect. Differential statistical analytical methods were utilized using SPSS software. The statistical treatment chosen was analysis of covariance (ANCOVA).
ANCOVA assists in eliminating sources of variance due to confounding variables. An analysis of variance (ANOVA) is only concerned with the dependent and independent variables. ANCOVA, however, introduces a new type of variable, the covariate. The covariate helps reduce the error term. The covariate also assists in controlling for extraneous variables. ANCOVA adjusts each group's means on the dependent variable. Assumptions that apply to ANCOVA are linearity of the covariance, independence of the covariate, and reliability of the covariate.

One ANCOVA was utilized to analyze the main effect of participation in a small learning community (SLC) and any interaction effect between participation in a SLC and gender while applying statistical control to SES. Another ANCOVA was run to analyze the main effect of participation in a SLC and any interaction effect between participation in a SLC and race while applying statistical control to SES. In this study, the primary independent variables were participation in a SLC, gender, and race. The covariate was SES. The three dependent variables for this study were: (a) final grades in four major subjects (i.e., math, English, science, and social studies), (b) attendance, and (c) out-of-school suspensions.

From the review of the literature it was apparent that numerous moderating variables existed and impacted on the program type. The research has shown that SLCs have different impacts for different groups of pupils (i.e., depending on race and/or gender). The researcher utilized race and gender as the main effects and elected to test their impact on student achievement and engagement and the interaction between the main effects and SLC participation while controlling for SES. The use of this statistical treatment afforded the researcher the opportunity to test the null hypothesis presented in
the study and to provide answers to the research questions. Data collected in this study was statistically analyzed utilizing SPSS software and coded as in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Coding of the Key Variables of the Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Variable</td>
</tr>
<tr>
<td>Small Learning Community</td>
</tr>
<tr>
<td>Participant</td>
</tr>
<tr>
<td>Nonparticipant</td>
</tr>
<tr>
<td>Socioeconomic status</td>
</tr>
<tr>
<td>Does not qualify</td>
</tr>
<tr>
<td>Qualifies for free/reduced lunch</td>
</tr>
<tr>
<td>Student Gender</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Student Race</td>
</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>Nonwhite</td>
</tr>
</tbody>
</table>

The pertinent statistical method used to examine each of the null hypotheses is stated below. The significance of each hypothesis was determined at the .05 probability level, which is standard for social research.

Hypotheses

Null Hypothesis 1: No significant interaction exists between program type and student gender on the math final grades while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student gender on math final grades while controlling for SES.

Null Hypothesis 2: No significant interaction exists between program type and student race on the math final grades while applying statistical control to SES.
Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student race on math final grades while controlling for SES.

Null Hypothesis 3: No significant interaction exists between program type and student gender on the English final grades while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student gender on English final grades while controlling for SES.

Null Hypothesis 4: No significant interaction exists between program type and student race on the English final grades while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student race on English final grades while controlling for SES.

Null Hypothesis 5: No significant interaction exists between program type and student gender on the science final grades while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student gender on science final grades while controlling for SES.

Null Hypothesis 6: No significant interaction exists between program type and student race on the science final grades while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student race on science final grades while controlling for SES.
Null Hypothesis 7: No significant interaction exists between program type and student gender on the social studies final grades while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student gender on social studies final grades while controlling for SES.

Null Hypothesis 8: No significant interaction exists between program type and student race on the social studies final grades while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student race on social studies final grades while controlling for SES.

Null Hypothesis 9: No significant interaction exists between program type and student gender on student attendance while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student gender on student attendance while controlling for SES.

Null Hypothesis 10: No significant interaction exists between program type and student race on student attendance while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student race on student attendance while controlling for SES.

Null Hypothesis 11: No significant interaction exists between program type and student gender on out-of-school suspensions while applying statistical control to SES.
Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student gender on out-of-school suspensions while controlling for SES.

Null Hypothesis 12: No significant interaction exists between program type and student race on out-of-school suspensions while applying statistical control to SES.

Relevant Statistical Technique: An ANCOVA was performed to analyze the data. The analysis tested the interaction between the program type and student race on out-of-school suspensions while controlling for SES.
CHAPTER IV

Analysis of the Data

The purpose of this research design was to determine the impact of participation in a small learning communities (SLCs) on academic performance and student engagement during the transition from K–8 elementary schools to a large comprehensive high school. The data was collected in a large comprehensive high school in northern New Jersey. The eligible population consisted of 146 ninth-grade students. Seventy ninth-grade students participated in the SLC, while another 70 ninth-grade students participated in the traditional level B program. Final grades were collected in the areas of math, English, science, and social studies. Student attendance and out-of-school suspensions were also collected. In addition, student demographic data (gender and race) were collected. The main effect of program type (participation SLC vs. nonparticipation SLC) on student engagement and student achievement was determined while statistically controlling for socioeconomic status (SES). In addition, the interaction of program type on each of the student demographics of race and gender was determined while statistically controlling for SES.

The study utilized 12 null hypotheses to analyze the data. The researcher utilized the statistical treatment of analysis of covariance (ANCOVA) to compare the means for final class averages in the major subjects (math, English, science, and social studies) for academic achievement and the means for attendance and out-of-school suspensions for student engagement. Final grades, as well as attendance and out-of-school suspensions,
were considered as the dependent variables. The researcher ran the ANCOVA with SES as the only covariate and models were built with the following effects: (a) program type, (b) race, (c) gender, and (d) the interaction between gender and program type and the interaction between race and program type.

Research Question 1

Research Question 1: How do the main effects of program type and gender and the interaction effect of program type and gender impact on math final grades while controlling for SES?

Null hypothesis 1: No significant difference exists between the math final grades of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of gender when controlling for SES.

The dependent variable (outcome) was math final grades. The main effect of program type was not significant, $F = .513, df = 1, 135, p < .75$. The mean score of ninth-grade students participating in the SLC was 80.365 ($SE = 1.900, n = 70$), and for students in the ninth-grade traditional level B program the mean score was 81.474 ($SE = 1.990, n = 70$). The results of the ANCOVA indicate no statistical difference between ninth-grade students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 2). Although ninth-grade students who participated in the traditional level B program outperformed ninth-grade students who participated in the SLC in math final grades, the difference of 1.111 was not significant.
Table 2

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>$SS$</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>31,449</td>
<td>.412</td>
<td>.522</td>
</tr>
<tr>
<td>Main Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>39,163</td>
<td>.513</td>
<td>.475</td>
</tr>
<tr>
<td>Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>626.165</td>
<td>8.287</td>
<td>.005</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>.395</td>
<td>.005</td>
<td>.943</td>
</tr>
</tbody>
</table>

The main effect of gender was significant, $F = 8.207, df = 1, 135, p < .005$. The mean score of ninth-grade male students was 78.699 ($SE = 1.087, n = 71$), while the mean score of ninth-grade female students was 83.140 ($SE = 1.104, n = 69$). Thus, the null hypothesis was rejected. The results of the ARCOVA indicate a statistical difference between ninth-grade male students and ninth-grade female students in math final grades while controlling for SES. Ninth-grade female students outperformed ninth-grade male students in math final grades and the difference of 4.441 was statistically significant.

The third effect, an interaction between program type and gender, was found not to be significant, $F = .005, df = 1, 135, p < .943$. 
Research Question 2

Research Question 2: How do the main effects of program type and race and the interaction effect of program type and race impact on math final grades while controlling for SES?

Null hypothesis 2: No significant difference exists between the math final grades of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of race when controlling for SES.

Table 3

Analysis of a Covariance for Math Final Grades of Ninth-Grade Students Based on Program Type and Race

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>17,984</td>
<td>.224</td>
<td>.537</td>
</tr>
<tr>
<td>Main effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>222.812</td>
<td>2.782</td>
<td>.098</td>
</tr>
<tr>
<td>Race</td>
<td>Between Subjects</td>
<td>1</td>
<td>51.239</td>
<td>.640</td>
<td>.425</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>63.128</td>
<td>.788</td>
<td>.376</td>
</tr>
</tbody>
</table>

The dependent variable (outcome) was math final grades. The main effect of program type was not significant, $F = 2.782, df = 1, 135, p < .098$. The mean score of
ninth-grade students participating in the SLC was 79.658 (SE = 1.086, n = 70), and for ninth-grade students in the traditional level B program the mean score was 82.207 (SE = 1.090, n = 70). The results of the ANCOVA indicate no statistical difference between ninth-grade students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 3). Although ninth-grade students that participated in the traditional level B program outperformed ninth-grade students that participated in the SLC in math final grades, the difference of 2.549 was not statistically significant.

The main effect of race was not significant, \( F = .640, df = 1, 135, p < .425 \). The mean score of ninth-grade white students was 80.305 (SE = 1.117, n = 67) and that of ninth-grade nonwhite students was 81.559 (SE = 1.071, n = 73). Thus, the null hypothesis was retained. Although ninth-grade nonwhite students outperformed ninth-grade white students in math final grades, the difference of 1.254 was not statistically significant.

The third effect, an interaction between program type and race, was found not to be significant, \( F = .788, df = 1, 135, p < .376 \).

Research Question 3

Research Question 3: How do the main effects of program type and gender and the interaction effect of program type and gender impact on English final grades while controlling for SES?

Null hypothesis 3: No significant difference exists between the English final grades of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of gender when controlling for SES.
The dependent variable (outcome) was English final grades. The main effect of program type was significant, \( F = 6.134, df = 1, 135, p < .014 \). Thus, the null hypothesis was rejected. The mean score of ninth-grade students participating in the SLC was 77.519 (SE = .908, n = 70) and that of students in the ninth-grade traditional level B program was 80.686 (SE = .900, n = 70). The results of the ANCOVA indicate a statistical difference between ninth-grade students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 4). Ninth-grade students that participated in the traditional level B program outperformed ninth-grade students that participated in the SLC in English final grades, as the difference of 3.167 was statistically significant.

Table 4

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>136.728</td>
<td>2.627</td>
<td>.107</td>
</tr>
<tr>
<td>Main effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>319.253</td>
<td>6.134</td>
<td>.014</td>
</tr>
<tr>
<td>Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>199.361</td>
<td>3.831</td>
<td>.052</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>1.232</td>
<td>.024</td>
<td>.878</td>
</tr>
</tbody>
</table>
The main effect of gender was borderline significant, $F = 3.831, df = 1, 135, p < .052$. The mean score of ninth-grade male students was 73.850 ($SE = .897, n = 71$) and that of ninth-grade female students was 80.355 ($SE = 9.12, n = 69$). Thus, the null hypothesis was rejected. The results of the ANCOVA indicate a borderline statistical difference between ninth-grade male students and ninth-grade female students on English final grades when controlling for SES. Ninth-grade female students outperformed ninth-grade male students in English final grades, and the difference of 2.505 was borderline statistically significant.

The third effect, an interaction between program type and gender, was found not to be significant $F = .024, df = 1, 135, p < .878$.

Research Question 4: How do the main effects of program type and race and the interaction effect of program type and race impact on English final grades while controlling for SES?

Null hypothesis 4: No significant difference exists between the English final grades of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of race when controlling for SES.

The dependent variable (outcome) was English final grades. The main effect of program type was statistically significant, $F = 605.879, df = 1, 135, p < .001$. The mean score of ninth-grade students participating in the SLC was 77.802 ($SE = .876, n = 70$) and that of students in the ninth-grade traditional level B program was 81.205 ($SE = .866, n = 70$). The results of the ANCOVA indicate a statistical difference between ninth-grade
students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 5). Ninth-grade students that participated in the traditional level B program outperformed ninth-grade students that participated in the SLC in English final grades, as the difference of 4.203 was statistically significant.

Table 5

Analysis of Covariance for English Final Grades of Ninth-Grade Students Based on Program Type and Race

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>196.889</td>
<td>3.782</td>
<td>.054</td>
</tr>
<tr>
<td>Main effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>605.879</td>
<td>11.638</td>
<td>.001</td>
</tr>
<tr>
<td>Race</td>
<td>Between Subjects</td>
<td>1</td>
<td>186.479</td>
<td>3.582</td>
<td>.061</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>13.412</td>
<td>.258</td>
<td>.613</td>
</tr>
</tbody>
</table>

The main effect of race was not significant, \( F = 3.582, df = 1, 135, p = .061 \). The mean score of ninth-grade white students was 77.907 (SE = .901, \( n = 67 \)) and that of ninth-grade nonwhite students was 80.300 (SE = .63, \( n = 73 \)). Thus, the null hypothesis was retained. Although ninth-grade nonwhite students outperformed ninth-grade white students in English final grades, the difference of 2.393 was not statistically significant.
The third effect, an interaction between program type and race, was found not to be significant, $F = .258$, $df = 1, 135$, $p < .613$.

**Research Question 5**

Research Question 5: How do the main effects of program type and gender and the interaction effect of program type and gender impact on science final grades while controlling for SES?

Null hypothesis 5: No significant difference exists between the science final grades of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of gender when controlling for SES.

Table 6

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Covariate Effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>20.147</td>
<td>.334</td>
<td>.564</td>
</tr>
<tr>
<td><strong>Main Effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>524.584</td>
<td>6.685</td>
<td>.004</td>
</tr>
<tr>
<td>Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>253.685</td>
<td>4.200</td>
<td>.042</td>
</tr>
<tr>
<td><strong>Interaction Effect</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>90.683</td>
<td>1.501</td>
<td>.223</td>
</tr>
</tbody>
</table>
The dependent variable (outcome) was science final grades. The main effect of program type was significant, $F = 8.685$, $df = 1, 135$, $p < .004$. The mean score of ninth-grade students participating in the SLC was 75.544 ($SE = .979, n = 70$) and that of students in the ninth-grade traditional level B program 79.403 ($SE = .969, n = 70$). Thus, the null hypothesis was rejected. The results of the ANCOVA indicate a statistical difference between ninth-grade students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 6). Ninth-grade students that participated in the traditional level B program outperformed ninth-grade students that participated in the SLC in science final grades, and the difference of 4.059 was statistically significant.

The main effect of gender was significant, $F = 4.200$, $df = 1, 135$, $p < .042$. The mean score of ninth-grade male students was 76.160 ($SE = .967, n = 71$) and that of ninth-grade female students was 78.987 ($SE = .382, n = 69$). Thus, the null hypothesis was rejected. The results of the ANCOVA indicate a statistical difference between ninth-grade male students and ninth-grade female students in science final grades when controlling for SES. Ninth-grade female students outperformed ninth-grade male students in science final grades, and the difference of 2.827 was statistically significant.

The third effect, an interaction between program type and gender, was found not to be significant, $F = 1.501$, $df = 1, 135$, $p < .223$.

Research Question 6

Research Question 6: How do the main effects of program type and race and the interaction effect of program type and race impact on science final grades while controlling for SES?
Null hypothesis 6: No significant difference exists between the science final grades of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of race when controlling for SES.

Table 7

Analysis of a Covariance for Science Final Grades of Ninth-Grade Students Based on Program Type and Race.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>25.565</td>
<td>.410</td>
<td>.523</td>
</tr>
<tr>
<td>Main effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>853.049</td>
<td>13.677</td>
<td>.000</td>
</tr>
<tr>
<td>Race</td>
<td>Between Subjects</td>
<td>1</td>
<td>43.164</td>
<td>.692</td>
<td>.407</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>38.034</td>
<td>.610</td>
<td>.436</td>
</tr>
</tbody>
</table>

The dependent variable (outcome) was science final grades. The main effect of program type was significant, $F = 13.677, df = 1, 135, p < .000$. The mean score of ninth-grade students participating in the SLC was 75.357 ($SE = .558, n = 79$) and that of students in the ninth-grade traditional level B program was 80.544 ($SE = .948, n = 70$). Thus, the null hypothesis was rejected. The results of the ANCOVA indicate a statistical difference between ninth-grade students who participate in the SLC as compared with
ninth-grade students participating in the traditional level B program (see Table 7). Ninth-grade students that participated in the traditional level B program outperformed ninth-grade students that participated in the SLC in science final grades, and the difference of 2.549 was not statistically significant.

The main effect of race was not significant, $F = .692$, $df = 1, 135$, $p < .97$. The mean score of ninth-grade white students was 77.275 ($SE = .986$, $n = 67$) and that of ninth-grade nonwhite students was 78.426 ($SE = .345$, $n = 73$). Thus, the null hypothesis was retained. Although ninth-grade nonwhite students outperformed ninth-grade white students in science final grades, the difference of 1.151 was not statistically significant.

The third effect, an interaction between program type and race, was found not to be significant, $F = .610$, $df = 1, 135$, $p < .436$.

Research Question 7: How do the main effects of program type and gender and the interaction effect of program type and gender impact on social studies final grades while controlling for SES?

Null hypothesis 7: No significant difference exists between the social studies final grades of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of gender when controlling for SES.

The dependent variable (outcome) was social studies final grades. The main effect of program type was not significant, $F = 3.615$, $df = 1, 135$, $p < .085$. The mean score of ninth-grade students participating in the SLC was 75.819 ($SE = .966$, $n = 70$) and that of students in the ninth-grade traditional level B program was 78.180 ($SE = .957$, $n = 70$).
The results of the ANCOVA indicate no statistical difference between ninth-grade students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 8). Although ninth-grade students that participated in the traditional level B program outperformed ninth-grade students that participated in the SLC in social studies final grades, the difference of 2.361 was not significant.

Table 8
Analysis of a Covariance for Social Studies Final Grades of Ninth-Grade Students Based on Program Type and Gender

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>221,331</td>
<td>3.760</td>
<td>.055</td>
</tr>
<tr>
<td>Main effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>177,476</td>
<td>3.015</td>
<td>.085</td>
</tr>
<tr>
<td>Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>70,370</td>
<td>1.195</td>
<td>.276</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>112,281</td>
<td>1.997</td>
<td>.170</td>
</tr>
</tbody>
</table>

The main effect of gender was not significant, $F = 1.195$, df = 1, 135, $p < .276$.

The mean score of ninth-grade male students was 76.255 ($SE = .954, n = 71$) and that of ninth-grade female students 77.744 ($SE = .970, n = 69$). Thus, the null hypothesis was retained. The results of the ANCOVA indicate no statistical difference between ninth-
grade male students and ninth-grade female students in social studies final grades when controlling for SES. Although ninth-grade female students outperformed ninth-grade male students in social studies final grades, the difference of 1.489 was not statistically significant.

The third effect, an interaction between program type and gender, was found not to be significant, $F = 1.907, df = 1, 135, p < .170$.

*Research Question 8*

Research Question 8: How do the main effects of program type and race and the interaction effect of program type and race impact on social studies final grades while controlling for SES?

Null hypothesis 8: No significant difference exists between the social studies final grades of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of race when controlling for SES.

The dependent variable (outcome) was social studies final grades. The main effect of program type was significant, $F = 5.212, df = 1, 135, p < .024$. The mean score of ninth-grade students participating in the SLC was 75.812 ($SE = .931, n = 70$) and that of students in the ninth-grade traditional level B program was 78.804 ($SE = .921, n = 70$). Thus, the null hypothesis was rejected. The results of the ANCOVA indicate a statistical difference between ninth-grade students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 9). Ninth-grade students that participated in the traditional level B program outperformed ninth-
grade students that participated in the SLC in social studies final grades, and the
difference of 2.992 was statistically significant.

Table 9

| Analysis of a Covariance for Social Studies Final Grades of Ninth-Grade Students Based on Program Type and Race |
| --- | --- | --- | --- | --- |
| Effect               | Source                | df | SS   | F    | p   |
| Covariate Effect     |                       |    |      |      |     |
| SES                  | Between Subjects      | 1  | 278.360 | 4.727 | .031 |
| Main effect          |                       |    |        |      |     |
| Program Type         | Between Subjects      | 1  | 306.926 | 5.212 | .024 |
| Race                 | Between Subjects      | 1  | 131.406 | 2.232 | .138 |
| Interaction Effect   |                       |    |        |      |     |
| SLC*Gender           | Between Subjects      | 1  | 52.267 | .888  | .348 |

The main effect of race was not significant, $F = 2.232$, $df = 1, 135$, $p < .138$. The
mean score of ninth-grade white students was 76.304 ($SE = .958, n = 67$) and that of
ninth-grade nonwhite students was 78.312 ($SE = .918, n = 73$). Thus, the null hypothesis
was retained. Although ninth-grade nonwhite students outperformed ninth-grade white
students in social studies final grades, the difference of 2.008 is not statistically
significant.

The third effect, an interaction between program type and race, was found not to
be significant, $F = .888$, $df = 1, 135$, $p < .348$. 

Research Question 9

Research Question 9: How do the main effects of program type and gender and the interaction effect of program type and gender impact on student attendance while controlling for SES?

Null hypothesis 9: No significant difference exists between student attendance of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of gender when controlling for SES.

Table 10

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>2.925</td>
<td>.035</td>
<td>.552</td>
</tr>
<tr>
<td>Main effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>53.445</td>
<td>.635</td>
<td>.427</td>
</tr>
<tr>
<td>Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>100.240</td>
<td>1.190</td>
<td>.277</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>586.135</td>
<td>6.959</td>
<td>.009</td>
</tr>
</tbody>
</table>

The dependent variable (outcome) was student attendance. The main effect of program type was not significant, $F = .635, df = 1, 135, p < .427$. The mean score of
ninth-grade students participating in the SLC was 8.419 (SE = 1.156, n = 70) and that of students in the ninth-grade traditional level B program was 7.123 (SE = 1.145, n = 70). The results of the ANCOVA indicate no statistical difference between ninth-grade students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 10). Although ninth-grade students that participated in the traditional level B program attended school more often than ninth-grade students that participated in the SLC, the difference of 1.296 was not significant.

The main effect of gender was not significant, \( F = 1.190, df = 1, 135, p < .277 \). The mean score of ninth-grade male students was 8.659 (SE = 1.142, n = 71) and that of ninth-grade female students 6.882 (SE = 1.160, n = 69). Thus, the null hypothesis was retained. The results of the ANCOVA do not indicate a statistical difference between ninth-grade male student attendance and ninth-grade female student attendance when controlling for SES. Although ninth-grade female students attend school more often than ninth-grade male students, the difference of 1.777 was not statistically significant.

The third effect, an interaction between program type and gender, was found to be significant, \( F = 6.959, df = 1, 135, p < .009 \). This disordinal interaction shows that females that participate in the SLC (\( M = 5.380, SE = 1.374 \)) tend to attend school more often than females that participate in traditional level B program (\( M = 8.285, SE = 1.371 \)). Interestingly, male students that participate in the traditional level B program (\( M = 5.861, SE = 1.839 \)) tend to attend school more often than males that participate in the SLC (\( M = 11.457, SE = 1.353 \)).
Research Question 10

Research Question 10: How do the main effects of program type and race and the interaction effect of program type and race impact student attendance while controlling for SES?

Null hypothesis 10: No significant difference exists between student attendance of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of race when controlling for SES.

Table 11

Analysis of a Covariance for Attendance of Ninth-Grade Students Based on Program Type and Race

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>36,736</td>
<td>.427</td>
<td>.514</td>
</tr>
<tr>
<td>Main effect</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>197,242</td>
<td>2.295</td>
<td>.132</td>
</tr>
<tr>
<td>Race</td>
<td>Between Subjects</td>
<td>1</td>
<td>363,183</td>
<td>4.226</td>
<td>.042</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>83,671</td>
<td>.974</td>
<td>.326</td>
</tr>
</tbody>
</table>

The dependent variable (outcome) was student attendance. The main effect of program type was not significant, $F = 2.295$, df $= 1, 135$, $p < .132$. The mean score of
ninth-grade students participating in the SLC was 9.800 (SE = 1.125, n = 70) and that of students in the ninth-grade traditional level B program was 7.402 (SE = 1.113, n = 70). The results of the ANCOVA indicate no statistical difference between ninth-grade students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 11). Although ninth-grade students that participated in the traditional level B program attended school more often than ninth-grade students that participated in the SLC, the difference of 2.398 was not statistically significant.

The main effect of race was significant, $F = 4.226$, $df = 1, 135, p < .042$. The mean score of ninth-grade white students was 10.271 (SE = 1.157, n = 67) and that of ninth-grade nonwhite students was 6.932 (SE = 1.109, n = 73). Thus, the null hypothesis was rejected. Ninth-grade nonwhite students attended school more often than ninth-grade white students, and the difference of 3.339 was statistically significant.

The third effect, an interaction between program type and race, was found not to be significant, $F = .974$, $df = 1, 135, p < .326$.

**Research Question 11:** How do the main effects of program type and gender and the interaction effect of program type and gender impact on student out-of-school suspensions while controlling for SES?

Null hypothesis 11: No significant difference exists between student out-of-school suspensions of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of gender when controlling for SES.
Table 12

Analysis of a Covariance for Out-of-School Suspensions of Ninth-Grade Students Based on Program Type and Gender

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between</td>
<td>1</td>
<td>2.807</td>
<td>.583</td>
<td>.447</td>
</tr>
<tr>
<td></td>
<td>Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between</td>
<td>1</td>
<td>.001</td>
<td>.000</td>
<td>.391</td>
</tr>
<tr>
<td></td>
<td>Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Between</td>
<td>1</td>
<td>30.519</td>
<td>6.336</td>
<td>.013</td>
</tr>
<tr>
<td></td>
<td>Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between</td>
<td>1</td>
<td>5.243</td>
<td>1.089</td>
<td>.299</td>
</tr>
<tr>
<td></td>
<td>Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The dependent variable (outcome) was student out-of-school suspensions. The main effect of program type was not significant, $F = .006, df = 1, 135, p < .991$. The mean score of ninth-grade students participating in the SLC was .698 ($SE = .276, n = 70$) and that of students in the ninth-grade traditional level B program was .674 ($SE = .274, n = 70$). The results of the ANCOVA indicate no statistical difference between ninth-grade students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 12). Although ninth-grade students that participated in the traditional level B program were suspended less than ninth-grade students that participated in the SLC, the difference of .004 was not significant.
The main effect of gender was significant, $F = 6.336, df = 1, 135, p < .013$. The mean score of ninth-grade male students was 1.186 ($SE = .273, n = 71$) and that of ninth-grade female students .206 ($SE = .277, n = 69$). Thus, the null hypothesis was rejected.

The results of the ANCOVA indicate a statistical difference between ninth-grade male student out-of-school suspensions and ninth-grade female student out-of-school suspensions when controlling for SES. Ninth-grade male students were suspended more often than ninth-grade female students, and the difference of .98 was statistically significant.

The third effect, an interaction between program type and gender, was found not to be significant, $F = 1.088, df = 1, 135, p < .299$.

Research Question 12:

Research Question 12: How do the main effects of program type and race and the interaction effect of program type and race impact on student out-of-school suspensions while controlling for SES?

Null hypothesis 12: No significant difference exists between student out-of-school suspensions of ninth-grade students participating in the SLC and ninth-grade students participating in the traditional level B program and the selected demographic factor of race when controlling for SES.

The dependent variable (outcome) was student out-of-school suspensions. The main effect of program type was not significant, $F = 1.065, df = 1, 135, p < .305$. The mean score of ninth-grade students participating in the SLC was .965 ($SE = .270, n = 70$) and that of students in the ninth-grade traditional level B program was .573 ($SE = .267, n = 70$). The results of the ANCOVA indicate no statistical difference between ninth-grade
students who participate in the SLC as compared with ninth-grade students participating in the traditional level B program (see Table 13). Although ninth-grade students that participated in the traditional level B program were suspended less than ninth-grade students that participated in the SLC, the difference of .392 was not statistically significant.

Table 13

Analysis of Covariance for Out-of-School Suspensions of Ninth-Grade Students Based on Program Type and Race

<table>
<thead>
<tr>
<th>Effect</th>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>Between Subjects</td>
<td>1</td>
<td>6.319</td>
<td>1.276</td>
<td>.261</td>
</tr>
<tr>
<td>Main effect</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program Type</td>
<td>Between Subjects</td>
<td>1</td>
<td>5.256</td>
<td>1.062</td>
<td>.305</td>
</tr>
<tr>
<td>Race</td>
<td>Between Subjects</td>
<td>1</td>
<td>16.618</td>
<td>3.357</td>
<td>.069</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLC*Gender</td>
<td>Between Subjects</td>
<td>1</td>
<td>.891</td>
<td>.180</td>
<td>.672</td>
</tr>
</tbody>
</table>

The main effect of race was not significant, $F = 3.357, df = 1, 135, p < .069$. The mean score of ninth-grade white students was $1.126 (SE = .278, n = 61)$ and that of ninth-grade nonwhite students was $0.412 (SE = .266, n = 73)$. Thus, the null hypothesis was retained. Although ninth-grade nonwhite students were suspended less than ninth-grade white students, the difference of .714 was not statistically significant.
The third effect, an interaction between program type and race, was found not to be significant, $F = 180, df = 1, 135, p < .072$.

**Summary**

In summary, when the model was created using program type and gender as the independent variables and when controlling for SES, there was a significant impact on math final grades. Ninth-grade female students ($M = 83.140, SE = 1.104$) outperformed their ninth-grade male counterparts ($M = 78.699, SE = 1.087$) by 4.441 points.

In the area of English, when the model was created with program type and gender as the main effects, there was a significant impact on the final grades when controlling for SES. Students that participated in the ninth-grade traditional level B program ($M = 80.686, SE = .900$) scored significantly higher on English final grades than ninth graders that participated in the SLC ($M = 77.519, SE = .908$). In addition, there was also a borderline effect on gender in this model. Female students ($M = 80.355, SE = .912$) outscored male students ($M = 77.850, SE = .897$) by 2.505 points in English.

Furthermore, in the area of English, when the model was fashioned with program type and race as the main effects, there was a significant impact on the final grades when controlling for SES. Ninth-grade students that participated in the traditional level B program ($M = 81.205, SE = .866$) outscored members of the SLC ($M = 77.002, SE = .876$) by 4.203 points.

When the model was created using program type and gender as the independent variables and when controlling for SES, there was a significant impact on science final grades. Traditional level B ninth-grade students ($M = 79.603, SE = .969$) scored statistically higher than participants in the SLC ($M = 75.544, SE = .979$) by 4.059 points.
Also, female students ($M = 78.987$, $SE = .982$) outperformed their male counterparts ($M = 76.160$, $SE = .967$) by 2.827 points.

When the model was created utilizing program types and race, students that participated in the traditional level B program ($M = 80.344$, $SE = .948$) scored significantly higher on science final grades when controlling for SES than participants in the SLC ($M = 75.357$, $SE = .958$). Nonparticipants outscored participants by 4.987 points in the area of science.

An ANCOVA for social studies final grades of ninth-grade students based on program type and race indicates that there is a significant correlation. Students in the traditional level B program ($M = 78.804$, $SE = .921$) outperformed students in the SLC ($M = 75.812$, $SE = .931$) by 2.992 points.

The research shows that there was a significant interaction effect in the area of attendance when the model was created utilizing program type and gender. The disordinal interaction indicated that females that participated in the SLC ($M = 5.380$, $SE = 1.874$) attended school more often than females that participated in the traditional level B program ($M = 8.385$, $SE = 1.371$). However, male students that participated in the traditional level B program ($M = 5.861$, $SE = 1.371$) attended school more often than males in the SLC ($M = 11.457$, $SE = 1.353$).

When the model was created using program type and race as the independent variables and when controlling for SES, there was a significant impact on attendance in the SLC as compared with the traditional level B program. Ninth-grade nonwhite students ($M = 6.932$, $SE = 1.069$) attended school more often than ninth-grade white students ($M = 10.271$, $SE = 1.157$). The difference of 3.339 was statistically significant.
Finally, an ANCOVA for out-of-school suspensions of ninth-grade students based on program type and gender reveals that ninth-grade male students \( M = 1.186, SE = .273 \) were suspended more often than ninth-grade female students \( M = .206, SE = .277 \). The difference of .98 was statistically significant.
CHAPTER V
Conclusions and Recommendations

Introduction

As Gregorian has written (as cited in Baldwin, 2001), "The age of the nineteenth century and the early decades of the twentieth were the age of the mass production industrial worker, in which public schools were expected to provide no more than the very basic skills and a sense of common citizenship for most children. A century later, ours has become the age of the knowledge worker, in which education has taken on a greater importance for the personal development of individuals, for the civic, social, and economic development of the nation, and for the search for solutions to the global challenges facing humankind" (p. 1). School districts are no longer permitted to just go through the motions educating two-thirds of the population and allowing the bottom third to fend for themselves. The No Child Left Behind Act has mandated that all children must be academically proficient by the year 2011 and that districts must meet the needs of specific populations (i.e., LEP, low socioeconomic status, special services, and minority) whose failure, in the past, was expected and accepted.

"Large high schools were created to offer more resources and a wider curriculum to students while taking advantage of economies of scale" (Bill & Melinda Gates Foundation, 2002, p. 2). "However, research has demonstrated that large schools and high enrollment often create impersonal, institutional environments that make students feel alienated, teachers disempowered, and parents disenfranchised" (Lee et al., 2000, as
cited in Bill & Melinda Gates Foundation, 2002, p. 2). According to Jacobson (2001), “Most public high school parents and their children’s teachers say breaking up large high schools into smaller ones would help educators identify troubled students and make the schools more welcoming places” (p. 5). Rethinking the organization of high schools and their structures is one way to provide students in the new millennium a fighting chance in the era of high-stakes testing, increased accountability, and global competition.

The high school in this study educated 2,362 students during the 2003–2004 academic school year. “Compared with schools a generation ago, most schools serve students who are more diverse, come from more varied life circumstances, and are less motivated by traditional means” (Ark, 2002, p. 55). It was evident from previous years that one cohort, ninth-grade students, accounted for the majority of poor attendance records, discipline referrals, and academic failure in major subject areas. To combat this situation, the administration at BHS instituted a small learning community (SLC) to ease transition to the large high school for the most at-risk ninth graders. Research has shown that students in SLCs have better attendance records, fewer discipline problems, and more academic success.

As Baldwin (2001) maintained, “Most students are not known well in school by any adult, since in the course of a day teachers may have over 150 students in their classes with little time to get to know individuals or to focus on their goals, strengths, weaknesses, and interests” (p. 2). “Students need at least one school-based adult who knows them well, who cares about them, and who models mature character traits, someone to help them become healthy, intellectually reflective, caring, ethical citizens capable of pursuing a lifetime of meaningful work” (Baldwin, 2001, p. 2).
Secondary administrators at BHS have long understood the advantages of positive relationships between educators and students. Trust, respect, mutual obligation, and concern for others' welfare can have powerful effects on educators' and learners' academic achievement and overall school progress (Manning & Saddlemire, 1996, p. 41). The SLC or ninth-grade cluster was established with a band of 70 ninth-grade students working with four educators. These four educators in mathematics, English, science, and social studies met with each other during common preparation periods and discussed student progress, curriculum content, instruction, and discipline referrals.

Communities and teachers organizing in interdisciplinary teams have several similarities. Both encourage collaboration, cooperation, a sense of belonging, respect, and student-centeredness; both encourage participants being known; both require shared ideas and authentic relationships; both require effective leadership; and both work to resolve conflicts positively (Manning & Saddlemire, 1996, p. 45). As indicated by the Carnegie Council on Adolescent Development (1989, as cited in Manning & Saddlemire, 1996), “Learners can be organized in such a manner that they learn and socialize with the same heterogeneous group each day. Students organized into communities of learners become acquainted with each other, have the same peers each day, and have a responsible adult and other community members with whom to discuss the importance of harboring positive feelings about oneself, one’s academic progress, and one’s school” (p. 45).

The goal at BHS, then, was to ensure that the SLC was implemented in a suitable fashion. Sergiovanni suggested (1994, as cited in Manning & Saddlemire, 1996) that “community building takes courage; there is no recipe for building community. No correlates exist to implement. There is no list available to follow, and there is no package
for trainers to deliver” (p. 44). Developing SLCs requires careful planning. According to McAndrews and Anderson (2002), “Administrators must assess the need for and purpose of their plan before committing resources. Initial plans must include components for hiring faculty and staff, developing curriculum and admission policies, and selecting facilities and equipment” (p. 1). As stated by Schwartzbeek (2002), “Implementation is a much studied and often discussed topic among researchers and educators alike. . . . One consensus that emerged quickly is that there is no set pattern of change across schools, across models, and within schools from classroom to classroom” (p. 1). “School-wide programs encompass a wide variety of components, actions, and issues from developing clear goals to reviewing student performance data, from designing plans to implementing new programs. Research and best practices point to three important stages of the change and improvement process (Fullan, 1991; Guskey, 1996; Huberman & Miles, 1984; Louis & Miles, 1990). These stages include: (a) the Initiation-Planning Stage, (b) the Implementation Stage, and, finally, (c) the Institutionalization Stage. Understanding the issues that occur in each stage can help schools improve on the success of their school-wide programs” (Comprehensive Regional Assistance Center Consortium, 1997, p. 1).

“Small, in and of itself, can be as silly as big,” noted Michelle Fine, a professor at the City University of New York (as cited in Gerwertz, 2001). “It will produce a sense of belonging almost immediately. But hugging is not the same as algebra. Rigor and care must be braided together, or we run the risk of creating small nurturing environments that aren’t schools” (Fine, as cited in Gerwertz, 2001).
Purpose of the Study

The main focus of the study was to examine the implementation of the BHS Freshmen Cluster; to observe the organizational and instructional practices that ease ninth-grade transition into the high school; and, finally, to analyze failures and loss of credit for one or more courses, student attendance, and student out-of-school suspensions with respect to the SLC. The main purpose of the research design was to determine if ninth-grade students participating in the SLC had significantly higher academic achievement in math, English, science, and social studies and were more engaged in the educational process (as seen in significantly higher attendance and significantly lower out-of-school suspensions) than their counterparts in the traditional level B program.

Statement of the Problem

What is the impact of participation in a SLC on academic performance and student engagement as students make the transition from their K–6 elementary schools to a large comprehensive high school? The main effect of program type (participation SLC vs. nonparticipation SLC) on student engagement and student achievement was determined while statistically controlling for socioeconomic status (SES). Moreover, the interaction of program type on the student demographic factors of race and gender was determined while statistically controlling for SES as well.

Description of the Sample

The high school in question enrolled 2,362 students in Grades 9–12 during the 2003–2004 academic school year. The ninth-grade class contributed 64% students to the overall student population. During the previous semester, the administration identified 70 at-risk students in Grade 8. As a result of poor attendance, numerous disciplinary
referrals, and failures in one or more major academic subjects, these regular education
students were recommended for the SLC known as the Freshmen Cluster.

The Freshmen Cluster consisted of four classroom situated in close proximity in a
large urban high school. The educators volunteered to be part of the cluster and were
selected for their expertise in dealing with this type of student. The educators in these
four cluster classrooms taught math, English, science, and social studies, and the
classrooms contained no more than 18 students. The interdisciplinary teaching team had a
common preparation period and was expected to meet once a week to discuss the
progress or lack thereof of the cluster students. Communication was also a key
component of the cluster. Phone calls home, as well as bi-weekly progress reports and
parental conferences, were vital ingredients of the SLC. Finally, the cluster educators
were afforded the support services of social workers and a school psychologist to discuss
major or minor issues.

The traditional level B program was comparable to any other large high school in
New Jersey. The students in the level B program were grouped for learning. Most
attended subjects in classrooms scattered across the 13-acre campus. Grade 9 classrooms
averaged approximately 25 students but no more than 30 students. Most educators had a
roll of approximately 150 students, and, thus, these students received less personal
attention than those in the cluster group. Students in the traditional program also had
different educators in the areas of math, English, science, and social studies. Educators in
the traditional program were qualified but did not share a common preparation period.
Moreover, the individual classroom teacher was left to their own devices to meet the
needs of struggling students. Seventy students from the traditional level B program were utilized as a comparison group.

Students in each of the two groups had as similar a background as possible, except for the manipulation of desired variables: participation in the SLC, gender, and race. The building principal or designee assigned each participant a three-digit numerical code. This code was the only identifying student information written on the data collected by the researcher.

Methods of the Research

The statistical procedure utilized in this research design was an analysis of covariance (ANCOVA). ANCOVA adjusts each group’s means on a dependent variable where the researcher examines what happens to the independent variable(s) after controlling for some other variable or variables (the covariate). A review of the literature demonstrated that SLCs had different impacts for different groups of pupils (i.e., race and gender). The researcher utilized race and gender as the main effects and elected to test their impact on student achievement and engagement and the interaction between the main effects and SLC participation, all while controlling for SES. The use of this statistical treatment would afford the researcher the opportunity to test the null hypotheses presented in the study and provide answers to the research questions.

Research Questions

The purpose of this investigation was to compare ninth-grade participation in a SLC with that of students participating in the traditional level B program. Three research questions were developed. Research question number 1: What factors contribute to the successful implementation of the ninth-grade cluster? Research question number 2: How
does the academic progress and student engagement of ninth-grade students in a SLC compare with the academic progress and student engagement of students in a traditional level B ninth-grade program? Research question number 3: How do the factors of race and gender of the students participating in a SLC impact academic progress and student engagement when one controls for SES? A presentation of the findings for each research question follows.

Summary of the Findings

Student Achievement (Math, English, Science, and Social Studies)—Gender and Participation (SES = Covariate). In summary, when the model was created using program type and gender as the independent variables controlling for SES, there was a significant impact on English final grades. Students that participated in the ninth-grade traditional level B program (M = 80.686, SE = .900) scored significantly higher on English final grades than ninth-graders that participated in the SLC (M = 77.519, SE = .908). The difference of 3.167 was statistically significant.

When the model was created using program type and gender as the independent variables controlling for SES, there was a significant impact on science final grades for participants in the SLC as compared with the traditional level B program. Traditional level B ninth-grade students (M = 79.603, SE = .969) scored statistically higher than participants in the SLC (M = 75.544, SE = .979) by 4.059 points.

No significant impact was observed on math and social studies final grades when the model was created using program type and gender as the independent variables controlling for SES. The null hypothesis was retained.
Student Achievement (Math, English, Science, and Social Studies)—Race and Participation (SES = Covariate). In the area of English, when the model was fashioned with program type and race as the main effects, there was a significant impact on the final grades when controlling for SES. Ninth-grade students that participated in the traditional level B program ($M = 81.205, SE = .866$) outscored members of the SLC ($M = 77.002, SE = .876$) by 4.20\% points.

Students who participated in the traditional level B program ($M = 80.344, SE = .948$) scored significantly higher on science final grades, when controlling for SES, than participants in the SLC ($M = 75.357, SE = .958$) when the model was created utilizing program types and race. Nonparticipants outscored participants by 4.987 points in the area of science.

An analysis of the covariance for social studies final grades of ninth-grade students based on program type and race indicates that there is a significant impact. Students in the traditional level B program ($M = 78.894, SE = .921$) outpaced participants in the SLC ($M = 75.812, SE = .931$) by 2.992 points.

There was no significant impact on math final grades when the model was created with race and program type while controlling for SES. The null hypothesis was retained.

Student Engagement (Attendance and Out-of-School Suspensions)—Gender and Participation (SES = Covariate). The results of the ANCOVA indicate no statistical difference in attendance between ninth-grade students who participate in the SLC and ninth-grade students participating in the traditional level B program when the model was created between program type and gender with SES as the covariate. The same held true for out-of-school suspensions. When the model was created with program type and
gender and controlling for SES, there was no significant difference in out-of-school suspensions for members in the SLC as compared with participants in the traditional level B program.

Student Engagement (Attendance and Out-of-School Suspensions) - Race and Participation (SES = Covariate). The results of the ANCOVA indicate no statistical difference in attendance between ninth-grade students who participate in the SLC and ninth-grade students participating in the traditional level B program when the model was created between program type and race with SES as the covariate. The same held true for out-of-school suspensions. When the model was created with program type and race and controlling for SES, there was no significant difference in out-of-school suspensions for members in the SLC as compared with participants in the traditional level B program.

Unhypothesized findings. The results of the ANCOVA indicate a statistical difference between ninth-grade male students and ninth-grade female students in math final grades when controlling for SES. The mean score of ninth-grade male students was 78.699 (SE = 1.087, n = 71) and that of ninth-grade female students was 83.140 (SE = 1.104, n = 69). Ninth-grade female students outperformed their ninth-grade male counterparts in math final grades, and the difference of 4.441 was statistically significant.

The main effect of gender was borderline significant in English final grades. The mean score of ninth-grade male students was 77.856 (SE = .857, n = 71) and that of ninth-grade female students was 80.355 (SE = .912, n = 69). The results of the ANCOVA indicate a borderline statistical difference between ninth-grade male students and ninth-grade female students in English final grades when controlling for SES. Ninth-
grade female students outperformed ninth-grade male students in English final grades, and the difference of 2.505 was borderline significant.

The mean score of ninth-grade male students was 70.160 ($SE = .967, n = 71$) and that of ninth grade female students 78.987 ($SE = .982, n = 69$) in science final grades. The results of the ANCOVA indicate a statistical difference between ninth-grade male students and ninth-grade female students in science final grades when controlling for SES. Ninth-grade female students outperformed ninth-grade male students in science final grades, and the difference of 2.827 was statistically significant.

The mean score of ninth-grade white students was 10.271 ($SE = 1.157, n = 67$) and that of ninth-grade nonwhite students was 6.932 ($SE = 1.109, n = 73$). Ninth-grade nonwhite students attended school more often than ninth-grade white students when controlling for SES, and the difference of 3.339 was statistically significant.

The mean score of ninth-grade male students was 1.186 ($SE = .273, n = 71$) and that of ninth-grade female students was .266 ($SE = .277, n = 69$). The results of the ANCOVA indicate a statistical difference between ninth-grade male student out-of-school suspensions and ninth-grade female student out-of-school suspensions when controlling for SES. Ninth-grade male students were suspended more often than ninth-grade female students, and the difference of .98 was statistically significant.

A review of the literature clearly indicates an advantage for nonwhite students in SLCs in terms of student achievement and engagement. In this particular study, the mean score of math grades of nonwhite students in the SLC was 81.56 as compared with a mean score for white students in the traditional level B program of 80.31. The same held true in the three other curricular areas. Nonwhite students scored 80.30, 80.34, and 78.31
in English, science, and social studies, respectively, and outperformed their traditional level B white counterparts who scored 77.91, 77.28, and 76.30 in English, science, and social studies, respectively. In the domain of student engagement, nonwhite students on average attended school more often (0.93) and were suspended less (0.41) than their white counterparts (attendance, 10.27; suspension, 1.13). Districts officials should make an attempt to assign nonwhite students to the cluster but, at the same time, should maintain a heterogeneous cluster and avoid tracking or the grouping of all low performers into the cluster cohort.

Finally, an interaction between program type and gender was found to be significant. This disordinal interaction illustrated that females that participate in the SLC (M = 5.380, SE = 1.874) tend to attend school more often than females participating in the traditional level B program (M = 8.285, SE = 1.371). However, male students that participate in the traditional level B program (M = 5.861, SE = 1.339) tend to attend school more often than males that participate in the SLC (M = 11.457, SE = 1.353).

Discussion and Implications

“Poverty rates nearly doubled in many large cities since the early 1980s, making urban students more than twice as likely to attend high-poverty schools. A high concentration of poverty among students and in surrounding neighborhoods also meant health, safety, and early transitions into adult roles loomed large in the daily operation of urban high schools” (Education Week/Pew Charitable Trust, 1998, as cited in Legers, 1999, p. 5). “In addition, urban high schools faced higher levels of academic, linguistic, and cultural diversity than nonurban high schools” (Legers, 1999, p. 5). Furthermore, findings from Student-Centered High Schools (2001) suggested that “it was possible that
low academic performance resulted when high schools treated all students uniformly, de-personalizing the high school experience to achieve outcomes that were the same for all students" (p. 3). The goal of the BHS Freshmen Cluster or SLC was to positively impact student achievement and engagement.

"Research on the effects of communal school organization reported academic and social benefits to students, including improved student achievement, behavior, and engagement, as well as less absenteeism and lower dropout rates" (Bryk & Driscoll, 1988; Lee, Bryk, & Smith, 1993, as cited in Karr, 2002, ¶ 17). When the ANCOVA models were created with gender and participation as the main effects and when controlling for SES, the findings were somewhat inconsistent with the literature. The researcher expected a significant impact on math, English, science, and social studies in favor of the SLC. The literature review suggested that the smaller class sizes and interdisciplinary team teaching would allow for greater contact between teachers and students and hence increase cluster accountability and academic achievement. However, the findings illustrate that, in this instance, traditional level B students significantly outperformed SLC students in the areas of English and science.

The effect was similar when the ANCOVA models were created with race and participation while controlling for SES. Traditional level B students statistically outperformed cluster students in English, science, and social studies. The implication then would be to place incoming ninth-grade students into the traditional level B program for increased academic performance. However, this researcher has a different interpretation of this data. Even though the traditional level B students outperformed their cluster counterparts, it is impossible to determine what would have happened if the
district did not make an attempt to cluster the at-risk ninth-grade population. Would a greater number of these students have fallen through the cracks? It is also possible that this cluster of ninth graders exceeded their own academic expectations and surpassed their prior performance.

In mathematics, there was no difference between traditional and SLC students. Cluster students performed at the same level as their peers in ninth-grade mathematics. According to Fouts (1994, p. 14, as cited in Raywid, 1996, Outcomes, ¶ 3), "Attending small learning communities does not always result in higher grades and, in fact, may result in a slight decline." Since BHJ's SLC initiative is in the initiation stage, the researcher would expect some inconsistencies in the data. It is this researcher's belief that the social aspect of the SLC will reap greater benefits in the long run in the area of academic performance as young people build bonds with adults, thus increasing their personal commitment to school. "Ninth grade is clearly the 'make or break' year in terms of secondary school success or failure" (Reishard, 1997, as cited in Fulk, 2003, Abstract, ¶ 4). Students who fail their classes are likely to: (a) beginquestioning their ability to make graduation requirements, (b) lose interest in school, and (c) consequently drop out of school" (Wagner, 1989, as cited in Fulk, 2003, Abstract, ¶ 4).

"An overwhelming proportion of the studies examining subunit arrangements suggest that they enhance the school's expressive activities. These in turn have a positive effect on attendance rates, behavior, students' school continuation, their satisfaction with school, and sometimes on their self-esteem. Thus, a number of studies of the subunit arrangement report favorable comparisons and/or improvements in attendance rates" (Ascherbaker, 1991; Corcoran, 1989; Fouts, 1994; Gordon, 1992; Torpepins, 1998, as
cited in Raywid, 1996, Outcomes, ¶2). Reports of lowered suspension and disciplinary referral rates are also common (Fouts, 1994, as cited in Raywid, 1996, Outcomes, ¶2).

When the ANCOVA models were created with participation and gender, no significant difference was observed between the SLC and the traditional level B program in attendance and out-of-school suspensions. The same held true for SLCs and the traditional level B program when the models were created with race and participation. Here again, there was no statistical difference between attendance and out-of-school suspensions.

Students at BHS are not permitted to be absent for more than 12 days. Students that exceed the 12-day limit must present appropriate documentation (i.e., medical, court, immigration, or DMV records). In the past, at-risk ninth-grade students accounted for the poorest attendance records, the most violations of the 12-day attendance policy, and the most frequent loses of credit for the year. The implication was that numerous ninth-grade students would transfer to the adult night school at age 16 or, even worse, drop out of school altogether. The data indicates that students in the cluster attended school just as often as traditional level B students. The means were well below the 12-day policy. This indicates that students that were part of the cluster were coming to school more often.

There was no statistical difference in out-of-school suspensions between the cluster group and the traditional level B program. The data trend to indicate that an average cluster students were being suspended at the same rate as traditional level B students. The mean for suspensions was also under one day. The implication was that most ninth graders were acting in an appropriate manner, and at-risk students' suspension days were reduced as educators and administrators had identified them as endangered and
were more willing to make behavioral modifications, thus reducing the suspension rate. Common prep periods, as well as an association with the student service program, could also account for the decreased suspension days.

According to Sashkin and Egermeier (1993), "An approach to educational change must take a broad systemic approach that involves structural change. This is done by allowing and attaining autonomy at the school-site level and by building strong school cultures that foster professional (and student) growth and development, encourage innovation and constant improvement, and are accountable for their results" (p. 20). The leadership of this district recognized that they had to make a stand to protect the countless numbers of ninth-grade students failing to make a successful transition to high school. The leaders disrupted the status quo by formulating a SLC inside the larger facility. What factors, then, contribute to the successful implementation of the ninth-grade cluster?

In this particular study, the statistics favor the traditional level B program. Since this initiative was in its early stages, many variables could have hampered its progress and skewed the results in favor of the traditional program. For instance, this ninth-grade cluster was still part of the larger complex. Students only spent half their day in the SLC and the remainder in the larger complex. For most students, the social context in the large high school is tough and unforgiving, with sharp distinctions between the small groups of social laves and the far larger masses of have-nots. This mixing of the cluster students could possibly undo the strong relationships built in the SLC as students became aware of the surroundings outside their environment.

According to Cox (1983), "In the implementation of new classroom practices, teachers, of course, are on the front line, they are most often the actual 'users' of the new
methods" (p. 10). Did the educators in the SLC receive the appropriate personal professional development opportunities to develop expertise in knowledge and skills to teach students of this type? It is important to point out that these particular educators could have been tougher evaluators than their counterparts in the traditional level B program.

Teacher selection is not the only concern in the planning stage. There must also be specific criteria for student identification. It would be prudent to engage students that volunteered for the program and parents that supported this strategy. Failure to have student–parent buy-in may have resulted in slanted statistics.

For successful implementation to take place, there must be a clear vision for the SLC. If possible, the SLC should be removed from the general population. Teachers that volunteer for the program should train together at least a year in advance of inception. Students should not only be selected, but should also be offered the chance to volunteer to participate. Parents should be notified of the selection process. Students should be assigned to a subpopulation of 15 students for the academic school year. The pedagogy should not be a small version of the larger high school curriculum. New methods should be used to engage these at-risk learners, including, but not limited to, Gardner’s multiple intelligences, collaborative groups, and increased technological offerings.

Recommendations

Recommendations for the district. "Evidence suggests that by creating schools-within-schools, large urban districts can reduce the 'experienced' size of large schools and see results similar to those documented in the research literature on small schools—a logical assumption, but one that researchers are just beginning to examine" (AEL, Inc.,
2003, p. 2). "It is difficult to disentangle the effects of school size from other equally important factors such as student demographics, school resources and climate, and curricular strategies and reform... The findings of all the small schools research, at this point, are more suggestive than definite" (EEL, Inc., 2003, p. 2). This researcher acknowledges the fact that the central office administration and high school staff have developed a clear vision and mission and understand why the SLC is necessary and how the implementation of the SLC will accomplish the objective of addressing the ninth-grade at-risk problem.

This researcher recommends that the district set clear guidelines for identifying the at-risk population. It is essential to evaluate NJ ASK 3/4, GEPA scores, cumulative folders, and acquire teacher, guidance, and elementary principal input. It would be in the best interest of the district to generate parental support. A student satisfaction survey should be administered to SLC participants and B level participants the summer before entering high school. An exit survey should be administered at the conclusion of the academic school year. The researcher would suggest conducting observations and interviews throughout the semester to gain qualitative data.

In this particular design, the researcher did not control for all possible variables when comparing the cluster group to the traditional level B students. It is recommended that the district, as well as future researchers, investigate not only quantitative data, but also take a hard look at affective domain characteristics, such as self esteem, alienation, sense of belonging, intelligence quotient, emotional quotient, and personality traits. Other factors might be single, nuclear, or foster families, as well as position in the family hierarchy.
The researcher suggests that the district continue to track the 2003–2004 group until their anticipated graduation date of 2006–2007. The HSPA scores of these 70 individuals should also be evaluated. The district could utilize the data to see if the relationships built in the formative freshman year lasted throughout the high school career. It is imperative to see if the cluster students were retained in later years and to identify their progress in math, English, science, and social studies. It would be advantageous to see if these individuals were successful or not. This could be seen by examining the number of cluster students graduating on time from day school.

The researcher recommends extending the program to Grades 10–12. Moreover, it would most likely benefit the students if they were to remain with the same subgroup of 15–18 students throughout the day, rather than switching classes. Teacher selection is of utmost importance, as well. Educators should attend professional development in SLCs to see if they are a possible fit for the program. Some educators do not have the patience to work with immature ninth graders and this is noticeable in poor grades and numerous disciplinary referrals.

Raywid (1995, as cited in Visher et al., 1999) “concluded that the benefits of smallness appear contingent on the ability of the sub-school to (a) establish a collective identity (separateness); (b) project clear, identifiable boundaries (autonomy); and (c) display differences that are perceptible to students (distinctiveness)” (p. 22).

It is this researcher’s opinion that BHS is still in the implementation stage of this school reform. “Key issues for the district to address include: (a) finding the time and resources for activities in the plan, (b) coordinating existing resources, people and programs, and (c) providing the type of in-depth, on-going technical assistance and
training that is needed to implement learning in this cluster" (CRACC, 1997, ¶ 4).

Leaders must also be prepared to recognize Fullan’s implementation dip. “Many educational innovations, initiated with high expectations and enthusiasm, flounder and die in the face of the implementation dip. Persistence, patience, and, especially, the true element are critical for sustaining the implementation” (Busick, 1994, pp. 8–9). The researcher recommends that the visionary leaders continue their support for the initiative even in the face of adversity. According to Parish and Arends (1983), “For effective implementation to occur, it is essential for those in schools, such as principals and teachers, and those from outside, developers and change agents, to understand the cultures of the groups involved and plan their implementation efforts accordingly” (p. 64).

Mark Buechler (2002, p. 4), in Enhancing Equity and Accountability Through Smaller Learning Communities in High Schools, strongly cautions districts to avoid two common pitfalls. First, transformation into SLCs does not necessarily lead into changes in classroom practice. “It is not enough to create SLCs and hope teachers will develop new instructional strategies. Leaders need to provide clear expectations and the means for teachers to parley these structures into more engaging and challenging experiences for students.” Second, transformation of SLCs can result in a new version of tracking. “Leaders must make sure that low-achieving students are not allowed to pool in selected clusters. Each cluster must be held to the same high standards.”

Recommendations for further research. Several recommendations for further research can be made based on the findings of this research study.
1. The study should be conducted in other large high schools (>2000 students) that are implementing SLCs.

2. A comprehensive longitudinal study should be conducted tracking the students of this 2003–2004 cluster group.

3. Focus group interviews with students in both SLC and traditional level B programs should be conducted to gather information regarding student alienation and sense of belonging. This qualitative approach will provide in-depth information about the perceptions of eighth-grade students as they transfer to the larger, more impersonal high school. A qualitative approach in the affective domain in areas of student motivation, self-esteem, and alienation may provide insight that cannot be acquired by a quantitative approach alone.

4. Compare SLCs in large urban districts with SLCs in suburban districts.

5. Compare SLCs in different district factor groups (DFGs) throughout the State of New Jersey.

6. Evaluate districts where students are designated to the SLC for 4 years.


Boyd, V., & Hord, S. M. (1994). *Schools as learning communities. Issues ... about change*. Austin, TX: Southwest Educational Development Laboratory.


MacRae-Campbell, L. (1991, Winter). How to start a revolution at your school: If schools continue to educate in the ways of the past, we will forfeit the future of our children. The Learning Revolution, 27, (56). Retrieved June 12, 2005 from http://www.context.org/ICLIB/IC27/MacRaeC.htm


Appendix A

Letter of Solicitation/Informed Consent—Superintendent of Schools
To: Particia L. McGeehan, Ed.D.
    Superintendent of Schools

From: Dennis C. Degnan
    Vice Principal - House 6

Date: August 5, 2005

Re: Dissertation

Enclosed is a Letter of Solicitation that I must submit to you as a requirement to conduct my dissertation. The statement of the problem is: What is the impact of participation in a Small Learning Community (SLC) on academic performance and student engagement as students make the transition from their K-8 elementary schools to the large, comprehensive, high school? In response to this Letter of Solicitation I will need you to write an official letter approving the study. This study is a post hoc review of district data and does not require any direct interaction between the students and myself.

It is imperative for my mentor, as well as the Institutional Review Board that I remain unbiased; therefore, I suggest that you recommend someone who can code the students' information (protecting their identities) and courses prior to submitting it to me for analysis. Mrs. Carol Christie and Mrs. Mary Pacyea in the computer room are excellent candidates to assist me. On the administrative level, I'm sure that vice principals Mr. Timothy Mercier and Mr. Joseph Frederick could contribute as well.

If this meets your approval, I will need an official letter.

- Granting permission to conduct the study.
- Suggesting you will assign a designated person to replace identifiable student information with numerical codes and course codes prior to submitting the records and data to me.

Thank you for your consideration regarding this matter.
Patricia J. McGeehan, Ed.D.
Superintendent of Schools
Bayonne Board of Education
669 Avenue A
Bayonne, NJ 07002

Dear Dr. McGeehan:

I am currently pursuing a doctoral degree in Educational Leadership, Management and Policy as a part of the Executive Ed.D. program at Seton Hall University. As a partial requirement in fulfillment of my degree, I have to conduct research and write a dissertation on a topic of interest in the field of educational administration. I would like to study the impact of participation in a Small Learning Community on academic performance and student engagement as students make the transition from their K-8 elementary schools to the large, comprehensive, high school.

“At a time when every student needs to develop the knowledge and skills to handle the rigors of college, careers in the new economy, and life in an increasingly complex world, many students appear to be moving through high school without reaching these goals” (Steinberg et al., 2002, p.8). Since BHS is the only secondary public school in the district, this will be a golden opportunity to see if the small learning community of freshman clusters will have positive influence on student achievement. As outlined by Howley (2002), “To what extent do the popular but un-researched administrative simulations of smaller size (i.e., houses, pods, "academies" or other such within school grouping arrangements) realize achievement advantages (including improvements in achievement equity) comparable to those reported for actually small schools” (p.3.187)? By engaging ninth graders at that critical point in their lives, the district could influence more students and positively impact their lives as they move from grade nine through grade twelve and eventually earn a high school diploma.

The "Freshman Initiative" commenced in the 2003-2004 school year and to date the district has not conducted any empirical studies on how the academic progress and student engagement of ninth grade students in a small learning community compares with the academic progress and student engagement of students in a traditional level B nine grade program.
The research will be conducted as a post hoc study of student participation during the 2004-2005 academic school year. Although this is a yearlong study, it is retrospective in nature; thus does not require that, as the researcher, have any contact with the students participating in the study.

The investigation will involve two groups of students: (1) the students participating in the ninth grade cluster during the 2004-2005 academic school year and (2) a random sample of ninth grade students from the traditional level B program during the 2004-2005 academic school year. Data will be collected from report cards (final averages in math, science, English, and social studies as well as gender and race). The district computer analyst will assist in identifying socioeconomic status (free or reduced lunch), and the designated vice principal will assist with student attendance and suspension data. All participants will be given a coded identification number assigned by the vice principal or year designee to protect the identity of the students. Only the coded identification numbers will be written on all student report cards, attendance, and assessment records prior to being released.

This data will be used to answer the following research questions:

Research question number 1: The first question the researcher will answer is what factors contribute to the successful implementation of the ninth grade cluster?

Research question number 2: The second question the researcher will answer is how do the academic progress and student engagement of ninth grade students in a small learning community compare with the academic progress and student engagement of students in a traditional level B ninth grade program?

Research question number 3: How do the main effects of race and gender of students participating in a small learning community impact on academic progress and student engagement when one controls for socioeconomic status?

Although this investigation may provide your district with a meaningful analysis of your "Freshman Initiative Program", your participation in the study is strictly voluntary.

To preserve the anonymity of the participating students post hoc output data collected from each participant in the study will be assigned a numerical code. All references to participants will be made using their numerical codes.

Student anonymity and confidentiality will be preserved. Only the building principal, or your designee will have access to student identities and other personal information. The data will be sorted based on the numerical codes assigned by the building principal or your designee. The data will be securely stored in a locked file cabinet in a room in my home for a period of three years. With the exception of a statistical mentor, no additional people will have access to the data.

College of Education and Human Services
Executive Ed St. Program
Tel: 973-275-2738
600 South Orange Avenue • South Orange, New Jersey 07079-3088
In closing I ask that you seriously consider granting approval to conduct this study as it has practical implications for your district leaders. It will not only examine the implementation of programs, but also the effect of transition to high school from your K-8 elementary schools. With NCLB legislation, the federal government has ultimately placed the high stakes accountability in the hands of district leaders who must make decisions regarding curricular programming. The study presented here will give district leaders a platform on which to evaluate transition programs designed for at-risk students; make informed choices regarding the cost effectiveness of such programs; and conduct future research regarding the sustained effects of participation.

Thank you in advance for your time and cooperation.

Sincerely,

Dennis C. Degnan

College of Education and Human Services
Department of Education Leadership, Management and Policy
732-789-9321
400 South Orange Avenue • South Orange, New Jersey 07079-2645

REACHING THE MIND, THE HEART AND THE SPIRIT
Appendix B

Letter of Permission—Superintendent of Schools
August 19, 2005

Mr. Dennis Cleeghan
293 Avenue E
Bayonne, NJ 07002-3755

Dear Mr. Degnan:

Please be advised that permission is granted for you to conduct a study on the impact of participation in a Small Learning Community on academic performance and student engagement as students make the transition from their K-8 elementary schools to a comprehensive high school.

To assure anonymity of participating students, I will assign Mr. Joseph Broderick, Vice Principal, to monitor the computer personnel in the replacement of identifiable student information with numerical codes prior to submitting the records and data to you as the researcher of the project. The data will be sorted based on the numerical codes assigned by Vice Principal Joseph Broderick. The data must be securely stored in a locked file cabinet for a period of three years.

I will anxiously await the results of the “Freshman Initiative Program” which will aid our district in the evaluation of the effectiveness of this transitional program, academically as well as financially, for our at-risk students.

Sincerely,

Patricia L. McGeehan
Superintendent of Schools

cc: Joseph Broderick, Vice Principal – Bayonne High School