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The Change Process: A Study of the Move to Block Scheduling in Five Pennsylvania High Schools

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THE CHANGE PROCESS: A STUDY OF THE MOVE TO BLOCK SCHEDULING IN FIVE PENNSYLVANIA HIGH SCHOOLS

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Title: The Change Process: A Study of the Move to Block Scheduling in Five Pennsylvania High Schools

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The process of large-scale change is difficult in any organizational structure, and this is particularly true in the field of education. This qualitative study investigated the change process used by five high schools in eastern Pennsylvania while initiating, implementing and sustaining a large-scale change from traditional to block scheduling. This study looks at the entire large-scale change process from inception through evaluation. Through the lens of the large-scale change to block scheduling, the researcher analyzed change in five schools with similar demographics to determine whether similarities existed in the change process and whether school change can be linked to a specific model of change.

This study, conducted using a three interview protocol (Seidman, 1998), was guided by one primary research question: What is the process used by high schools to plan, implement and sustain large-scale change? Three research sub-questions supported the primary question: 1) What was the impetus for change to block scheduling?; 2) What process was used by the district to plan and implement the change to block scheduling?; and 3) How has the change to block scheduling been sustained by the district? The participants interviewed included five superintendents, five high school principals and twenty classroom teachers who worked at the participating schools during the transition to block scheduling.

Several common characteristics were identified which contributed to the successful implementation of a large-scale change initiative. These include the creation of a committee to plan and implement the change, involvement of stakeholders, and the use of professional development to support the change. A major implication of this study is the identification of the importance of effective leadership during the change process.

It was found that the impetus for change involved an organizational leader with a vision for change. One interesting finding was that though all five schools were successful in implementing the change, very little has been done to help sustain the change. Contrary to the research in the literature, this study found that ongoing professional development is not essential to sustaining large-scale change.

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TABLE OF CONTENTS

LIST OF TABLES

TABLE PAGE

CHAPTER 1

INTRODUCTION

The process of large-scale change is difficult in any organizational structure, and this is particularly true in education. Marzano, Waters and McNulty (2005) stated that one of the constants within K-12 education is that someone is always trying to change it. Since the publication of *A Nation at Risk* in 1983, government agencies and leaders of American business have applied tremendous pressure for educational change. The lack of substantial changes over the past several decades has led to more calls for accountability through standardized testing and *No Child Left Behind* legislation (U.S. Department of Education, 2002). Quite often educational changes are implemented in response to some mandate but quickly lose their fervor.

Carr (2009) stated that in order for a people-intensive business like education to successfully implement change, administrators must win over the hearts, minds, and behaviors of their employees. The often overlooked key concept is the notion of changing behavior. Once the novelty of a change wears off, people tend to revert to the behaviors that guided them throughout their careers. Fullan, Hill and Crevola (2006) suggested that school reform often fails because the implemented changes are too superficial. Rarely do changes infiltrate the classroom. In order for schools to change, the behavior and strategies used by teachers in the classroom must also change. Unfortunately, the process of change encounters many imposing obstacles. One major issue is the problem of self-preservation within the school setting. Often change is resisted because it threatens to modify deeply engrained processes or practices. Without understanding and embracing the need for change, stakeholders will predictably oppose it (Christensen, Aaron and Clark, 2005).

What is Large-scale Change?

Large-scale change can be defined as very complex school and system-wide change requiring major changes in the roles of teachers, principals, and schools. (Van Den Berg & Vandenberghe, 1986). Such comprehensive changes involve an intricate process and usually take three to five years to implement. This process generally involves a strategic plan, budgeted resources to support on-site training, policies that address implementation and the collection of data to measure the impact of the change (Hall & Hord, 2001).

Models of Change

When studying the process used to plan, implement and sustain large-scale change, it is important to identify models of change that have been successfully used to guide the process. Those planning to initiate change rely on these classic change models to guide their thinking. The following series of models are frameworks which may be used by practitioners to implement change.

The Change Process

Havelock and Zlotolow (1995) developed a seven stage process for change known as the C-R-E-A-T-E-R model. This circular model of change has seven stages: care, relate, examine, acquire, try, extend and renew. Each stage was assigned a number from zero to six.

The care stage was assigned the number zero because it represents the "rock bottom prerequisite for a change" (Havelock & Zlotolow, 1995, p.6). Stage one, related, is the period when the change agent focuses on building relationships and developing a collaborative environment within the organization. During stage two, examine, the change agent identifies the problem which needs to be changed, and conveys this need to the client. Stage three, acquire, focuses on "seeking and finding relevant resources, which may be as diverse as electronic or

print materials, people, or products" (Havelock & Zlotolow, 1995, p.91). The gathering of information provides the rationale for a prospective change.

The fourth stage, try, consists of a six-step process which equates to implementation. The steps in this stage include: 1) assemble and sort the relevant findings from the acquire stage; 2) derive implications from the knowledge base that affect the client system; 3) generate a range of solutions; 4) test feasibilities; 5) adapt solutions to the needs of the client; and 6) pilot test the solution (Havelock & Zlotolow, 1995, p.109-110). Stage five, extend, is designed to gain deeper and wider acceptance for the change, while step six, renew, calls for an evaluation of the change by stakeholders.

The process of large-scale change outlined by Havelock and Zlotolow (1995) contains a series of steps which may be used by school systems to plan, implement and sustain large-scale changes. The researcher will investigate the process used by the five schools included in this study to determine whether or not they follow this model of change.

Systematic Change

The change model developed by Reigeluth and Garfinkle (1994) suggests that a fundamental change in one aspect of an educational system requires fundamental changes in other aspects in order for the change to be successful (Reigeluth & Garfinkle, 1994). This comprehensive change model is divided into four sections: theory, models, components and examples.

The theoretical section of this approach addresses the impact of state and local policy on systematic change, the role of collaboration, the need for a process of evaluation and the need for a directed approach to systematic change (Reigeluth & Garfinkle, 1994). The second section of the systematic change model looked at four specific models or examples of systematic design.

The third section identified key components of educational systems which impact systematic or large-scale change. These components include state school finance formulas and the influence of local school board politics. The final section of this model looked at three successful examples of systematic change. These examples demonstrated how districts were able to deal with the complexities inherent in large-scale change. Key conditions were identified which are viewed as necessary if a change is to be sustained over time. These conditions include a common vision, developing an implementation plan, obtaining support from all stakeholders and providing an effective means of communication to keep stakeholders informed throughout the process (Reigeluth & Garfinkle, 1994).

Conditions of Change

Ely (1990) was the first researcher to emphasize the role of environmental conditions on the change process. Beginning with his study of change in libraries conducted in 1976, he began to identify a series of factors that can enhance or inhibit change. Ely's educational change model identifies eight conditions that contribute to the adoption and implementation of educational changes. These conditions include: "dissatisfaction with the status quo; knowledge and skills exist; resources are available; time is available; rewards or incentives exist for participants; participation is expected and encouraged; commitment by those who are involved and evidence of leadership" (Ely, 1990 p. 300-302).

Concerns Based Adoption Model

Hall and Hord (1987) developed the Concerns Based Adoption Model (CBAM) of educational change. This model has four basic components: stages of concern, levels of use, innovation configurations and intervention taxonomy. The stages of concern component classifies attitudes and feeling of individuals as they go through the change (Hall & Hord, 1987,

p. 60). The levels of use component addresses whether the innovation or change is being used and to what extent. The third component of the CBAM model is innovation configurations. This component addresses the variation in the innovation from one user to another. The final component, intervention taxonomy, deals with the role of the change facilitator in the implementation process. The facilitator has the responsibility of monitoring the change process and using the conceptual framework provided by the model to help guide the process (Hall& Hord, 1987).

In summary, there are many models of change discussed in the literature which can be used as foundation for large-scale change in schools. The four models discussed in this literature review contain features present in the change processes used by the five schools included in this study.

School Change

School systems seem to be in a constant state of change, yet they seem unable to sustain change (Fullan, 1993). The mentality that "we have always done it that way, so why change" is pervasive in education. The culture in a typical school is generally supportive of the status quo and is resistant to change. Betts (1992) addressed this phenomenon by suggesting that schools are "pattern maintenance" institutions that are proud of stability, and are institutions where change is resisted. Fullan (2005) stated that when faced with change, teachers often revert to learned behavior. In essence, it is less stressful to resist change than it is to espouse it. Gallagher, Bagin and Moore (2005) pointed out that the rate of acceptance of new initiatives is also a variable that must be considered. They stressed that even the best innovation can fail if it is not properly implemented.

The concept of large-scale change is not new to education, yet many scholars argue that these changes are simply cosmetic and lack substance (Sarason, 1990). Cuban (1990) labeled these changes, designed to fix the existing educational programs by changing some of the components, first order changes. These changes attempt to improve the current system by addressing deficiencies in policies and procedures. First order changes are not designed to change the overall structure of an organization. Second order changes are designed to transform the existing structure of an organization. A large-scale change, such as the move to block scheduling, would be examples of second order change, because the change substantially alters the way the organization functions (Cuban, 1990).

In discussing the roadblocks to organizational change, Bolman and Deal (1997) stated that major organizational change generates four categories of concern. First, it affects individuals' ability to feel effective, valued and in control. People essentially become inert unless they are properly trained and motivated to accept the change. Second, change disrupts existing roles and relationships, producing confusion and uncertainty. Third, and possibly most significantly, change creates conflict between those who benefit from the change and those who do not. While this conflict is often based on individual perception, it can significantly hinder the success of an initiative. Finally, change causes loss of meaning for people on the receiving end of the change (Bolman & Deal, 1997, p. 339).

When studying change in the context of public education, it is important to understand that, while the goals and expectations have evolved, the organization of schools in America has remained relatively stagnant for decades. Methods of organization that govern how schools are designed, how teachers design instruction and how administrators allocate resources have become the Achilles heel of school reform movements (Christensen, Aaron, & Clark, 2005).

Sergiovanni (2000) suggested that educational reform tends to favor process over substance. He highlighted that schools are rewarded for aligning with state-standards and performing well on standardized tests. This approach advocates changing teaching methods for the sake of performing well on the assessment, a short-term goal.

The cookie-cutter model of American school systems needs a systemic transformation. Society no longer tolerates the notion that some students will not receive the quality of education to which they are entitled. Christensen, Aaron and Clark (2005) observed that the only way to achieve systematic transformational change is to scrap the current system and start from scratch. Hargreaves and Shirley (2008) argued that education policy is undergoing a global transformation and the United States is not catching on. They metaphorically stated that the United States is not only losing, but it is not even playing the right game.

Given the propensity for change in education outlined above, it is important to understand the underlying current which leads to change. This study looks at the entire large-scale change process from inception through evaluation. Through the lens of the large-scale change to block scheduling, the researcher analyzed change in five schools with similar demographics to determine whether similarities existed in the change process and whether school change can be linked to a specific model of change.

The Impetus for Educational Reform

Educational reform has often been a reaction to some political or economic event. The classic example of this was the push for new math and science initiatives following the Soviet launch of Sputnik in 1957 (Goodson, 2001). The technological world today places greater demands on schools than ever before. School systems must train students for jobs that do not yet exist. Educational reform has historically been a very slow and difficult process. However, the

pace of technological innovation has compelled educators to change this traditional approach in order to provide students with the skills necessary to survive in the 21st century workforce.

An important consideration in any study of educational change is the attitude of teachers, students and the community with regard to the change. Fullan (1991) stated that teachers who receive positive feedback about their performance demonstrate a greater commitment to the change. Without such recognition, teachers often become apathetic and may experience burnout. When describing student attitudes toward change, Fullan wrote that they could be categorized as indifference, confusion, temporary escape from boredom and heightened engagement. Community attitudes toward a change initiative generally lead to one of three actions. These include pressure on the administration to implement change, opposition to the change or apathy (Fullan, 1991).

Christensen, Aaron and Clark (2005) pointed out that, while America spends more money on education than any other nation in the world, Americans still underachieve in many critical areas as indicated by standardized test scores. They suggested that successful school reform requires more than just adding resources. Simply put, adding computers, textbooks, teachers and classroom space does not close the achievement gap. School budgets are under ever-increasing scrutiny due to America's current economic climate (Christensen, et al. 2005). Even if school leaders believed increasing expenditures would solve educational problems, such a solution is not practical. This is particularly true in Pennsylvania due to budgetary restrictions imposed by Act 1 (Pennsylvania Department of Education, 2006). If continual increases in expenditures are not the answer, perhaps school leaders need to reflect on the change process itself in order to create significant, measurable improvement in public schools.

Over the years, many large-scale changes have been attempted in schools. Some, such as the movement to middle schools and the concept of creating a school within a school, have been successful, while others have gone by the wayside. Currently many states are focusing on accountability-based reforms. These tend to measure improvement by looking at student performance on standardized testing. Another popular trend in education is the movement toward school choice. The advent of the internet and the creation of the cyber school option have made this an attractive option to some.

The philosophical change from junior high schools to middle schools is a good example of successful change in the American educational system. This change provides a valuable point of comparison. In 1987 the Carnegie Council on Adolescent Development (CCAD) created a task force to study educational approaches used with 10 to 15-year-old students. The goals of this task force included improving educational opportunities and promoting healthy development. In its concluding report, *Turning Points*, the CCAD determined that the existing curriculum and organizational structure did not meet the intellectual, emotional and interpersonal needs of adolescents. *Turning Points* listed eight essential principles for improving middle grade education (CCAD, 1989, p. 32).

According to Jackson and Davis (2000), few reports on education have been as widely read as *Turning Points*. They explained the popularity and success of this report in terms of the process that was used to develop it. The task force, headed by leaders with great credibility in the field of education, conducted extensive research on best practices and provided a succinct set of recommendations to improve instruction at the middle level. In short, the process used by the CCAD was critical to the success of the middle school reform movement.

In the past several decades, no reform in education has made as profound an impact on the usage of time in American secondary schools as the movement toward block scheduling (Veal & Flinders, 2001). Many varieties of alternative schedules have appeared since the mid 1980s, and implementation of block scheduling has become common in many areas of the nation. The traditional high school schedule, consisting of five or six academic classes meeting for 40–50 minutes each day, evolved from recommendations made by the National Education Association's Committee of Ten in 1892 (Gorman, 1971).

High schools continued to use this format until the advent of flexible modular scheduling (FMS) in the late 1960s. Goldman (1983) estimated that 15% of American high schools employed FMS during the late 60s and early 70s. Although both teachers and students reportedly preferred FMS when compared to traditional schedules, parents and community members were less supportive. Schools did not show noticeable improvement in student achievement under FMS. As a result, most schools reverted to traditional scheduling by the late 1970s (Goldman, 1983). Yet, many schools recently changed their scheduling format in favor of block scheduling. The unanswered question is, "Why?" Very little research exists to explain the reasons for creating a fundamental change in the high school schedule.

The report *Prisoners of Time*, published by the National Education Commission on Time and Learning (1994), has been an influential document in the shaping of educational philosophies across the nation. In the report, the commission criticized the prevailing educational philosophy described as holding time constant and insisting that everything and everyone should adapt. Statements indicated that educators tend to pay more attention to bus schedules, bells and vacations than to student achievement. In most instances, school calendar years lasted about ten months or 180 days, and the average length of a class period was 51

minutes (1994). The study concluded that in terms of time, schools remained essentially stagnant while the world around them evolved dramatically.

Prisoners of Time is significant to this study in that the first of the eight recommendations made by the commission suggested that schools be reinvented around learning, not time. As a result, research began to focus on how students learn. Teaching methodology became a central focus. These themes were not necessarily tied to an arbitrary time frame as was customary. The recommendations put forth in the study compelled many schools to rethink their basic scheduling formats and spawned a tremendous amount of new educational research dealing with the effectiveness of various scheduling techniques.

The Need for Change in Scheduling

The primary purpose of the block scheduling format is to provide longer "blocks" of time for instruction. In a traditional schedule, classes meet anywhere from 40 to 60 minutes each day. In block scheduling, classes meet for 80 to 120 minutes. Block scheduling can be implemented in several ways in order to fit the dynamics or needs of a school. Most schools institute block scheduling in an alternate-day approach or a 4x4 plan. In the 4x4 model of block scheduling, students receive instruction in four classes every day for about 90 minutes. Each course meets only for a semester. During the second semester, the student receives an entirely new slate of courses. The alternate-day or A/B model uses extended time periods with each class meeting every other day for the entire year (Rettig & Canady, 1996).

According to Rettig and Canady (1999), approximately 30% of America's secondary schools use some form of block scheduling. Hottenstein (1999) pointed out that the school administrator's goal for configuring the schedule should be to devise a system that meets the needs of all students. The researcher points out that the rationale for modification of any existing

schedule should be the desire to improve student achievement; merely responding to a trend is no reason to change. Educators must consider the strengths and weaknesses of current educational systems before they seek to implement change.

Rettig and Canady (1999) contend that the majority of teachers, parents, students and administrators who have experience with block scheduling prefer it as a scheduling model. Following an initial learning curve, all parties appear to adjust well to the format. They also pointed out that in nearly every instance where block scheduling was implemented, discipline referrals declined by 25%–50% on average. As one would expect, the number of class tardies dropped off substantially in block scheduling due to the fact that students changed classes fewer times per day. Evidence also consistently indicated improvement in student achievement when instructional time increased.

One of the most rational arguments for block scheduling is that students will have more time on task and that teachers are essentially forced to vary instructional methodology for such a large block of time (Canady & Rettig, 1996). In evaluating scheduling models, it is best to "look before we leap." A plethora of research exists on the topic of scheduling models. However, one can become hopelessly trapped in the quagmire of the aforementioned research if no purpose for studying the topic of time and scheduling exists within the district. The goals of scheduling research need to be identified and then relevant research can be used to implement change. Difficulty arises when research is used to validate a change even though the research is totally unrelated to the situation under study. Having the research data to support change is important, but only if the data, in fact, drives the change process.

Perhaps the most ambitious attempt to ascertain which scheduling format was best suited to a particular school occurred in a mid-western high school in 1997. The student population

consisted of three groups. One group followed a traditional pattern with six periods a day, one group worked on a 4x4 block and the third group had a combination of both types. During the three-year trial period, research was collected on teaching methods, opportunities for reflection, teacher-student rapport and anxiety levels. Teachers in this study reported two significant changes, both of which are commonly linked to block scheduling. The first changed noted was an increase in the variety of instruction, specifically more student-centered instruction. Teachers also reported improved student-teacher relationships as a result of the change. In addition to these benefits, some teachers reported significant challenges such as more frequent use of handouts and increased pace of instruction (Veal & Flinders, 2001).

Effective leadership strategies are the key to successful implementation of block scheduling. Change is typically met with some anxiety and, of course, some resistance. Hottenstein (1999) provided an interesting perspective when he developed his "six-step recipe for success" (p. 23). He argued that the entire organization must see the need for change and must be actively involved in the change process. Stakeholders need to feel ownership of the new scheduling format. This will obviously help to gain popular support. Selection of the proper schedule for each school is another important ingredient in Hottenstein's recipe. Selection or development of a scheduling model that meets the specific needs of the school is extremely vital. Scheduling plans can then be further shaped and molded by the administration as necessary. Clear guidelines need to be enumerated to the instructional staff with regard to classroom expectations.

Statement of the Problem

Throughout the history of American education, one of the few constants that can be identified is change. American high schools in particular seem to be in a constant state of

change, yet often the purpose of a change is not clearly articulated. Why do schools initiate large-scale change? How do they plan and implement large-scale changes? How are these large-scale changes sustained? These are the fundamental questions that drove this research study. According to Daggett (2004) it is not an exaggeration to suggest that more scientific and technological innovations will occur in the next few years than have occurred in the last two centuries. If this is true, how will the American high school change to keep pace?

One way to study change is to focus on a particular situation involving large-scale change. Since block scheduling is one of the major changes to occur in the last 20 years, it was the vehicle through which large-scale change was studied. In investigating why school districts chose to initiate block scheduling, the researcher uncovered generalized data relating to the overall impetus for change. The issues addressed in this study were why schools switched to block scheduling and how they evaluated its success. The change process within schools was examined through the lens of block scheduling. Research on block scheduling includes a wide range of topics, often centering on student achievement or methods of instruction. However, one substantial void in the research concerns the impetus for switching to block scheduling. Block scheduling provides educators with the opportunity to spend more time actively engaging students in the learning process (Irmsher, 1996, Pryzblick, 2009).

Purpose of the Study

The purpose of this study was to investigate the process used by schools to plan, implement and sustain large-scale change within a school system. Using the change to block scheduling as a lens, this study attempted to identify the forces that influenced large-scale change, the change process and sustainability of change in the high school. The researcher interviewed teachers, principals, and superintendents who worked in five schools that employed

block scheduling. Participants in the study worked in the respective schools at the time the change to block scheduling occurred. The interview questions explored both the rationale for change and the perception of subjects with regard to the success of block scheduling within their schools.

Research Questions

This study utilized the Three Interview Series Protocol (Seidman, 1998) (Appendix C). The primary research question used to guide this study was:

> What is the process used by high schools to plan, implement and sustain large-scale change?

Three sub-questions were used to gather data related to the primary research question. The sub-questions used in this study were:

1. What was the impetus for change to block scheduling?
2. What process was used by the district to plan and implement the change to block scheduling?
3. How has the change to block scheduling been sustained by the district?

Methodology

A qualitative methodology was employed to conduct the research for this study, which was considered exploratory and descriptive in nature. The researcher utilized a triangulated approach to gather the data from teachers, superintendents, and principals who worked at the participating schools during the transition to block scheduling. The researcher then used these personal interviews for data collection. The principals from each school who were directly involved in the change process were interviewed as a part of this study. These principals were

asked to provide a list of teachers who were actively involved in the change to block scheduling. These teachers were also asked to participate in this study.

Significance of the Study

This study was meant to fill a void in the research regarding large-scale change and delineated why schools initiate change, how they implemented change and how change is sustained. Given that schools are in a constant state of change, it is important to understand the elements of large-scale change and insure that schools are using an effective process. Furthermore, as part of evaluating how change was sustained, the researcher explored the methods used by schools to evaluate the success of this change, for example, whether the change was made to improve student achievement, improve the school climate, or for another reason.

Fullan and Stiegelbauer (1991) described the role of various stakeholders in the change process. They asserted that the school principal was the most significant personality in the change process. They also indicated that, in order to ensure support from the teachers, they must be actively involved in the change process from the inception. This study was designed to ascertain who initiated the change in each case, who was involved in the change, and what impact this had on the success of the scheduling switch.

The use of professional development is an important aspect to consider when studying the process used by schools to plan, implement, and sustain large-scale change. An essential goal of this study was to ascertain the degree to which teacher participants felt properly trained to teach in a block scheduling format. The researcher gathered this information from questions related to professional development and preparation within the included schools. The responses of participants interviewed in the study led to an evaluation of the preparations made prior to the

change and an analysis of the perceptions of the participants with regard to the success or failure of the implementation process.

Definition of Terms

A/B block scheduling: an alternate day block-scheduling format; students are enrolled in eight courses; courses meet every other day for 90–120 minutes for the entire school year.

Block scheduling: a scheduling format in which students enroll in four courses that meet for approximately 90–120 minutes. Teachers teach three classes per day (Rettig & Canady, 1995).

Carnegie Unit: Measure of a students' credit toward graduation based on the amount of time spent in class.

Copernican Plan: classes are taught in longer periods (90 minutes, two hours, or four hours per day), meeting for only part of the school year (Carroll, 1994).

Four by Four (4 x 4) block scheduling: a block scheduling model that offers four classes daily and four classes per semester; classes meet every day for approximately 90–120 minutes.

Large-scale change: very complex school and system-wide changes requiring major changes in the roles of teachers, principals, and schools. (Van Den Berg & Vandenberghe, 1986).

Professional Development: those processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students (Guskey, 2000)

Traditional scheduling: a scheduling format in which students enroll in six, seven or eight classes every day, varying in length from 40–60 minutes; teachers teach five to seven classes per day (Rettig & Canady, 1995).

Limitations of the Study

There are several limitations of this study that are worth consideration. A specific weakness of this study was the small sample size. This study is limited to a sample of five high schools in eastern Pennsylvania. The results of this study document the process used by those five schools to plan, implement and evaluate large-scale change. The small number of participants (five superintendents, five principals and 20 teachers) makes it difficult to generalize this data to any other population.

A further limitation is the fact that participants in this study had an average of 31.75 years of experience in education. This fact make it impossible to generalize the results of this study to educators with varying levels of experience. Another limitation of this study is the fact that all of the participating superintendents are retired. This may have limited their knowledge of the current climate within the schools related to the change under study.

Although participants were asked to share whether or not data were collected to show the results of the change, no such data were collected by the researcher nor did the participants offer evidence of the actual data they said was collected. The use of a document review process may have yielded additional data concerning the outcome of the change.

The difficulty participants may have had in accurately recalling specific details pertaining to the change to block scheduling is a further limitation of this study. The schools included in this study underwent the change to block scheduling between 1995 and 1999. This substantial time lapse may have limited the ability of participants to recall specific facts during the interview process.

Chapter Summary

This qualitative study investigated the process of large-scale change used in educational settings. Large-scale change is a very complex school and system wide change, which requires major changes in the roles of teachers, principals, and schools. When studying the process used by schools to plan, implement and sustain large-scale change, it is important to understand models of change, which have proven to be successful guides.

There are four models of change which identify important elements of the change process. The C-R-E-A-T-O-R model (Havelock & Zlotolow, 1995) is a circular model of change which contains seven stages. The Systematic Change model (Reigeluth & Garfinkle, 1994) is a comprehensive change model with four components. The Conditions of Change model (Ely, 1990) emphasized the role of environmental conditions on change. Finally, the Concerns Based Adoption Model (Hall & Hord, 1987) identified four basic components of the change process. The critical commonalities of these models included the importance of collaboration/relationship building, the significance of leadership in the change process and the existence of a logical and sequential change process.

The concept of change is a constant theme in education, yet a void exists in the literature which explains why schools initiate large-scale change. One common change implemented in schools during the past twenty-five years was the move to a block scheduling pattern rather than a traditional schedule. Very little research exists that addresses impetus for large-scale change in schools.

The purpose of this study was to investigate the process used by schools to plan, implement and sustain large-scale change within a school system. This primary research

question was answered using data collected using the Three Interview Series Protocol (Seidman, 1998). Data were gathered during interviews which addressed three research sub-questions:

1. What was the impetus for change to block scheduling?
2. What process was used by the district to plan and implement the change to block scheduling?
3. How has the change to block scheduling been sustained by the district?

This study fills a void in the literature by investigating why five Pennsylvania high schools initiated the large-scale change to block scheduling.

CHAPTER 2

REVIEW OF LITERATURE

Educational change in America has a history of never-ending reforms and innovations. Fullan (1993) suggested that since the 1960s attempting to implement change has been fighting an uphill battle, and too often educational leaders have been disappointed by the lack of measurable improvement. Although change occurs so frequently in education, it fails to accomplish little more than breaking the surface and deep systemic changes that are needed have not been accomplished (Fullan, Hill, & Crevola, 2006).

The purpose of this study was to investigate how schools plan, implement and sustain large-scale change. Using the change to block scheduling as a lens, this study identified the forces that influenced the change, the process and sustainability, from traditional to block scheduling. In this chapter, literature was reviewed that related to the principles of change and block scheduling. The chapter begins with a review of literature and research-based studies that explore principles of change. The research on principles of change is divided into the following sections: (a) school change, (b) implementing change, (c) resistance to change and (d) sustaining change. The second chapter also contains a review of the literature on block scheduling. This review includes research which is presented in the following sections: (a) impact on instruction, (b) impact on school climate, (c) impact on student achievement and (d) impact on student-teacher interaction. Finally, the second chapter concludes with a chapter summary.

Principles of Change

Research on educational change clearly defines change as a process, not an event (Fullan, 1982; Hall & Hord, 1987; Hall, Wallace, & Dosset, 1973). In their report on site-based decision making (SBDM), Hall and Galluzzo (1991) stated that both policymakers and educators continually ignore this point. This leads to increased frustration for both groups and the failure of change initiatives. Betts (1992) suggested that one reason for this lack of substantial change is that public education has developed "pattern maintenance" (p. 38). He described schools as stable institutions where change goes against what is known and valued. In essence, the inability to affect change is due to the successes of the past.

Two significant research studies related to the topic of change were the development of the Concerns Based Adoption Model (CBAM) in the 1970s (Hall & Rutherford, 1975) and the Rand Change Agent study (Berman & McLaughlin, 1977). The CBAM model was the product of ten-year study conducted at the Research Center for Teacher Education at the University of Texas at Austin. The goal of this federally funded study was to gather data about the school improvement process. The CBAM research team developed tools for measuring different aspects of the change process. One research instrument developed through this research is the Stages of Concern Questionnaire (SoCQ) (Hall, George & Rutherford, 1998). The researchers piloted a questionnaire consisting of 195 items with teachers and college faculty members in 1974. They then used the data collected from the 359 returned questionnaires to develop the final, 35 item SoCQ. This instrument measured a subject's reactions, feelings and attitudes toward a change. The most significant concept in the CBAM model is the contention that in order to affect successful change, the attitudes and perceptions of those impacted by the change must be considered (Hall & Hord, 2001).

Based on longitudinal data gathered over a period of more than 30 years of research, Hall and Hord (2001) identified 12 principles of change. These change principles provide predictable patterns that can be anticipated when change is attempted in an organizational setting. The principles identified by Hall and Hord are:

1. Change is a process, not an event.
2. There are significant differences in what is entailed in development and implementation of an innovation.
3. An organization does not change until the individuals within it change.
4. Innovations come in different sizes.
5. Interventions are the actions and events that are key to the success of the change process.
6. Although both top-down and bottom-up change can work, a horizontal perspective is best.
7. Administrator leadership is essential to long-term change success.
8. Mandates can work.
9. The school is the primary unit for change.
10. Facilitating change is a team effort.
11. Appropriate interventions reduce the challenges of change.
12. The context of the school influences the process of change.

These principles formed the foundation for the research questions and interview questions that guided this study.

The second systematic study of educational change was the Rand Change Agent Study (1975). The study, conducted by the Rand Corporation, was a national study of four federally

funded programs intended to introduce and support innovation in schools. The four programs studied were: Elementary and Secondary Education Act Title III, Innovative Projects; Elementary and Secondary Education Act Title VII, Bilingual Projects; Vocational Education Act, 1968 Amendments, Part D, Exemplary Programs; and the Right-to-Read Program. Though the four programs were substantially different, they each sought to stimulate and spread educational innovation. The four-year, two-phase study looked at 293 local projects funded by these four programs in 18 states. Each of these projects was in its last or next to last year of federal funding. The survey, conducted for Rand by the National Opinion Research Center, included personal interviews with 1,735 school personnel. The first phase of the research examined four federal change agent programs and addressed issues related to initiation and implementation of these projects. The second phase of the research examined what happened to local projects when the federal funding stopped. The projects included resulted from federal policies developed in the late 60s and early 70s. These projects represented the first significant federal attempts to stimulate change in local educational practices. The Rand study found that while federal policies prompted local change, successful implementation was not guaranteed, especially when federal funding stopped. A receptive local institutional setting was also necessary for effective implementation. One finding of this study was that it is exceedingly difficult for policy to change practice (Berman & McLaughlin,1977).

The CBAM study and the Rand Agent Study are significant in that they laid the groundwork for future research on change. Though they studied different elements of the change process, each concluded that change is a process, not an event. Successful change involves active participation and the support of effective leadership. In addition, the organization must be

in a state of readiness in order for successful change to occur. The Rand study, in particular, stressed the importance of continued support to insure that the change will be sustained.

School Change

According to scholarly work by Fullan and Stiegelbauer (1991), educational change can be categorized into first-order change and second-order change. First-order changes seek to improve the efficiency, effectiveness, and quality of existing practices, while second-order change seeks to alter the fundamental structure of the organization. They contend that, prior to initiating change, consideration must be given to how the prospective change will be viewed by administrators, teachers, students and parents. If they are to "comprehend the big picture," they must first understand their views in conjunction with the organizational and institutional factors that govern change within schools.

Hargreaves and Goodson (2006) conducted a longitudinal study on the subject of educational change over time. The researchers retrospectively reviewed data from eight secondary schools in the United States and Canada over a three-decade time period. This intensive qualitative methodology relied heavily on interviews with teachers and administrators who had worked in the schools. Researchers interviewed three cohorts of teachers who had worked in the schools in the 1970s, 1980s and 1990s. There was a deliberate overlap of membership to establish historical continuity and depth in the samples. The total number of teachers included was 26. Principals and at least one assistant principal were also interviewed. The interviews were semi-structured around a core of eight questions, which were designed to allow for maximum rapport and authentic response. Each interview lasted one to two hours. Questions focused on working relationships with colleagues, practices of teaching and experiences with externally imposed change. The researchers triangulated their data with

observations and document reviews which included minutes of meetings, mission statements, evaluation reports, memo and proposals for change. They concluded that educational change is shaped by large-scale economic and demographic shifts that produce five change forces. These forces are identified as waves of reform, changing student demographics, teacher generations, leadership succession, and school inter-relations. The concept of teacher generations refers to the demographic forces that influence and shape teachers. The idea of school inter-relations suggests that schools affect one another across space and time. Schools in the same geographic regions or with similar demographics are constantly being compared to each other, often in a competitive manner.

In summary, the research on school change indicates that schools seem to be constantly changing, yet have difficulty sustaining change. Fullan and Stiegelbauer (1991), categorized educational change as either first-order or second-order. First-order change focuses on improving the existing infrastructure while second-order change seeks to alter the fundamental structure of the organization. When considering large-scale change, schools officials need to be cognizant of potential roadblocks. According to Bolman & Deal (1997) organizational change generates four categories of concern, which impact an individual's ability to perform effectively. Finally, Hargreaves & Goodson (2006) concluded that educational change is shaped by large-scale economic and demographic shifts that produce five change forces. These change forces include waves of reform, changing student demographics, teacher generations, leadership succession, and school inter-relations.

Implementing Change

Studies have documented that change often fails due to problems during implementation as opposed to the context of the proposed change (Berman & McLaughlin, 1977; Fullan &

Stiegelbauer, 1991; Louis & Miles, 1990; Sarason, 1971). Huberman and Miles (1984) identified several factors that were likely to contribute to achieving successful implementation. Among these were degree of preparedness for change, provision of resources, user commitment, ongoing in-service training, team meetings, administrative support and access to external consultants. Louis and Miles (1990) labeled communication problems, lack of staff skills, disagreement over activities, ambitious project plans, resources, staff development, and time constraints as major reasons innovations fail during the implementation phase.

One example of successful implementation of change was studied by Holland (2002). Researchers gathered ethnographic data from eight Chicago schools over an 18-month period. They then used a multi-methodological approach, which included both qualitative and quantitative components. To be included in the study a school had to have been purposefully created in response to the reform movement and: 1) be intentionally small (100-350 in elementary schools and 500 in secondary schools); 2) have a vision; 3) have contiguous space; 4) have a stable teaching staff; and 5) have students who attended the school over multiple years. Researchers conducted 76 interviews with principals, directors, lead teachers, teachers and external partners. Additionally, they conducted 36 focus groups of staff and students, and conducted approximately 137 observations. The purpose of the study was to demonstrate how intentionally small schools create a positive learning environment for academically disadvantaged students. The data were analyzed to evaluate the level of school improvement. The researcher concluded that collegial trust and collaboration were important factors in the implementation of change. This collaboration included creating a partnership in education with parents. This was accomplished, in part, by establishing meeting times outside of the regularly

scheduled school day. School visits by the researchers also revealed that faculty members in small schools believed they had a voice in school wide decisions.

Another study that looked at change over time related to a transition to block scheduling took place in 1994. The faculty of Louisa May Alcott High School instituted block scheduling as a major reform. Fisher (2000) conducted interviews with teachers at Alcott over a five-year period during implementation (1995-1999). School leaders clearly emphasized teacher participation in the reform process and professional development was connected directly to the reform. Fisher indicated that in a school of 1,920 students, discipline referrals dropped, suspensions decreased and math scores improved. He concluded, based on an analysis of the interviews, that lasting school change required attention to four factors: a shared vision, effective leadership, professional development and critical friends. The move to block scheduling was based on the vision of the school and the initiative was collaboratively developed. Fisher's final factor, critical friends, referred to individuals outside of the school who could be trusted to provide honest feedback concerning the reforms. In this case, teachers at Alcott developed partnerships with faculty members at San Diego State University in order to gain feedback.

Hall and Galluzzo (1991) conducted another early study of the implementation process. This study explored the change process through the lens of school-based decision-making. The researchers looked at four major areas of research on change: perceptions, participant concerns, principals and patterns of change. The researchers concluded that people's perceptions about an innovation often determine how quickly the change is adopted. If they see the change as compatible with their present practices, the transition becomes less complex. Likewise, the implementation process must take into account the concerns of those being affected by the change. For the change to be successful, ongoing support and training is necessary. Although

the principal will also experience concerns about the innovation, how well he/she addresses the concerns of the teachers is critical to successful change. In discussing patterns of change it is pointed out that it is often difficult to conceptualize someone else's ideas and implement them as originally planned (Hall & Galluzzo, 1991).

In a more recent study, one funded by the Rockafeller Foundation, Jennings, et al (2007) looked at the implementation of changes prompted by accountability. The researchers used an embedded case study to look at how four school districts responded to accountability policies. Two of the four school districts selected were among the largest in the nation, and the other two were moderate in size. The schools were located in different geographic regions of the country. Data collection took place during 16 days using a series of three interviews. Subjects included superintendents, school board members, and district administrative personnel. The study concluded that school districts have been abdicating their responsibility for systematic reform. The researchers suggested that the ubiquity of change, frequent changes in superintendents and the desire for short-term gains have stymied systemic changes in urban schools.

Many research studies have documented that change often fails due to problems during implementation (Berman & McLaughlin, 1977; Fullan & Stiegelbauer, 1991; Louis & Miles, 1990; Sarason, 1971). Three studies point to the need for collaboration with stakeholders as an important component in the successful implementation of large-scale change (Fisher, 2000; Hall& Galluzzo, 1991; Holland, 2002). Two studies concluded that leadership plays a key role in implementation (Fisher, 2000; Jennings, et al, 2007). One study indicated that change initiatives fail if leadership changes (Jennings, et al, 2007). Two studies also pointed out the value of ongoing professional development as a factor in successful implementation of change initiatives (Fisher, 2000; Huberman & Miles, 1984). Taken together, the literature suggests that

multiple factors may contribute to the successful implementation of large scale-changes.

Resistance to Change

Once a prospective change has been announced, a fair amount of resistance can be anticipated. This resistance can and will come from many groups including teachers, students and parents. Some people will never support change, but most can be swayed in favor of the change if they understand that it is needed. Williamson and Blackburn (2010) reported that people resist change for two reasons: they do not see the value of the change, or they question whether or not they will be personally successful with the change. They contend that leaders can overcome resistance to change by identifying clear objectives and constantly focusing conversation on the desired outcomes.

According to Zimmerman (2006), principals need to understand that although resistance to change may make them uncomfortable, it is not always a bad thing. Teachers may, due to experiences or frames of reference, have logical reasons to resist change. One important characteristic for educational leaders to develop if they wish to gain support for systemic changes is trust (Duke, 2004; Kotter, 1996). Collins (2001) suggested that in building trust, leaders hold themselves accountable for problems and share the credit with others for success.

Olsen and Sexton (2009) conducted a qualitative study of the reform climate of Hawthorne High School located in Southern California. During the time of the study, Hawthorne was engaged in a myriad of reforms including adoption of professional learning communities, implementing curricular maps and the adoption of block scheduling. The school was also going through an accreditation review by the Western Association for Schools and Colleges. They conducted their research through the lens of threat rigidity. The threat rigidity hypothesis suggests that an external threat leads to restriction in information processing and

constriction of control that leads to rigidity in response. A series of three interviews was conducted with six selected teachers during the fall, winter and spring of 2005-2006. These hour-long semi-structured interviews were audio taped by the researchers. Interview protocols focused on uncovering teachers' personal and professional backgrounds; past and present education practice; perspectives on teaching, policy reforms and career goals. A document review of federal, state, district and school reports was also conducted. The principal of the school twice declined requests to be interviewed as a part of the study. The research questions guiding the study were twofold: (1) How does the school's reform climate affect teachers? and, (2) How do these teachers, in turn, affect the school's reform climate? Discussion during the interviews demonstrated teacher frustration and resistance to change, largely due to threat rigidity. While the study was being conducted, a group of 20 teachers not connected to the study led a revolt against the building principal. The researchers concluded that the top-down pressure to change created resistance and created a dysfunctional climate at Hawthorne.

Hall and Hord (2001) took another approach in explaining resistance to change. Their research focused on the stages of concern that an individual passes through during the change process. This concern begins with an awareness of the impending change and gradually builds as the change becomes more and more imminent. They suggested that school leaders should monitor stages of concern of all participants throughout the change process so that these concerns can be addressed.

Hashimoto and Abbott (1996) conducted a case study at Timberline High School in northeastern Washington State. The school is located in an urban, low to middle income working class neighborhood. The high school had 90 faculty members whose average age was 40 at the time of the study. The student population consisted of 1,553, 60% of whom qualified

for free and reduced lunch. The population of Timberline was highly transient and less than 20% of the students went on to college. The purpose of the study was to observe the conflict which developed during a school restructuring effort. Researchers collected data from observations and interviews with five foreign language teachers and two English-Second-Language (ESL) teachers. The faculty members reported resentment about the division of responsibility among faculty, conflict between factions within the faculty and fear of unemployment. The researchers made two general conclusions based on the data. First, despite initial resistance, faculty supported restructuring once they viewed it as necessary. Second, some behavior viewed as resistance may actually have been false perceptions by participants in the change.

In summary, resistance to change can be overcome through effective leadership (Williamson & Blackburn, 2010; Zimmerman, 2006; Collins, 2001). Studies also pointed out the value of ongoing professional development as a factor in successful implementation of change initiatives. Research also demonstrates that ongoing professional development is necessary for the change to be successful (Hall& Galluzzo, 1991; Fisher, 2000).

Sustaining Change

Perhaps the most significant weakness in the educational change processes is the failure of schools to sustain changes once they have been implemented. Studies on educational change indicate that schools which are successful in implementing and sustaining change build a capacity for leadership within their organizations (Lambert, 2003). In many cases, if the leadership responsible for the change initiative leaves, the change that they championed can quickly disappear. In essence, the effectiveness of leaders can be judged by their ability to implement policies and changes that endure after they leave their position of influence. Hargreaves and Fink (2003) stated that leadership is the key to reform. They described

sustainable improvement as contributing to the growth and good of everyone, instead of fostering the fortunes of a few at the expense of the rest.

Moffett (2000) summarized 20 years of educational research on managing change and the role of professional development. She noted that instructional leaders must develop a school culture that supports change and strengthens communication, builds relationships and enhances long-term professional development programs. Schools must provide continued guidance and support throughout the implementation process. Generally it takes about six years for data to emerge that can serve as evidence as to whether or not a change in instructional practices, curriculum, or student learning has been successful.

leadership. The significance of leadership in the change process is a common topic of research studies on change. One conclusion of the Rand Change Agent study (1975) previously discussed was that the principal was the key to both implementing and sustaining new changes. Berman and McLaughlin (1977) cite principal turnover as a major reason for the failure of innovations in schools.

Leadership style is another factor which can determine the success or failure of a change initiative. Hall, Rutherford, Hord and Huling (1984) identified three specific change facilitator styles: initiators, managers, and responder. Initiators are defined as those with clear long-range policies and goals. Decisions are made based on these goals and initiators convey their expectations through frequent interactions with their teachers. Managers provide basic support to facilitate an innovation. Managers support central office initiatives, but do little more to help an innovation succeed. Responders are those leaders who maintain their focus on running the school and afford others the opportunity to take leadership roles in connection with the prospective change. Responders typically solicit feedback from stakeholders when making

decisions and tend not to make decisions based on long-term goals. The researchers concluded that successful implementation of innovations occurred in schools where the principal fit the initiator model.

While Hall, et al., (1984) focused on the importance of leadership style in affecting successful change, additional researchers attempted to delineate a process through which successful change could occur. Kotter (1996) stated that major changes often do not happen easily for a number of reasons. He developed an eight-step process for initiating top-down transformation. The eight steps are:

1. Establishing a Sense of Urgency
2. Creating a Guiding Coalition
3. Developing a Vision and Strategy
4. Communicating the Change Vision
5. Empowering Broad-Based Action
6. Generating Short-Term Wins
7. Consolidating Gains and Producing More Change
8. Anchoring New Approaches in the Culture

(Kotter, 1996, p. 21)

The use of collaboration during the change process has been a highly effective technique in promoting educational change. Kanter (1983) stated that innovations were much more successful in collaborative, cooperative, team-oriented environments. Attempts at change that were forced upon the existing culture tended to meet with failure. Changing the school culture to one of collaboration among professional educators was essential to effective school change and educational improvement (Fullan, Bennett, & Rolheiser-Senneft, 1990; Joyce & Murphy, 1990).

The principal of a school is certainly its most visible leader. He/she is the most important individual in determining whether the culture of the school will be receptive to educational change. When principals pay attention to particular initiatives, there will be a greater degree of implementation in the classroom (Fullan & Miles, 1992). Elmore (2002) emphasized the role of the principal in creating unity within the school community with regard to change. He suggested that principals move toward a goal of distributed leadership whereby they share reform responsibilities with teachers and other stakeholders within the school community. The use of distributed leadership during the reform process empowers members of the school community, including teachers and other stakeholders. This methodology serves to capitalize on the strengths of many individuals within the school community and fosters a sense of trust. Thus, the possibility that complex change will be sustained is enhanced (Gronn, 2002).

Williams (2009) studied the role of leadership capacity in sustaining lasting school improvement. This study began in the fall of 2007 and included a sample of 12 teachers who had just enrolled in school administrative programs along with 11 principal interns. All participants worked in different schools within the Washington State Public Schools system. The survey instrument used was adapted from the Building Leadership Capacity in Schools (Lambert, 1998). The instrument was emailed to the participants for completion. Eleven teachers in the graduate program and nine principal interns completed and returned the surveys. The survey instrument contains five broad factors, each of which has statements relating to it. The factors include: 1) broad-based, skillful participation in the work of leadership, 2) inquiry-based use of information to inform shared decisions and practice, 30 roles and responsibilities that reflect broad involvement and collaboration, 4) reflective practice and innovation as a norm, and 5) high student achievement. Data received from the survey were recorded as raw score data

from individuals. Responses were grouped based on the five factors listed above to obtain a score for each factor. Scores were then entered into the Statistical Package for Social Science (SPSS) for analysis. The researcher concluded that to sustain meaningful and lasting change, perceptions of what leadership means must be broadened.

Finnigan and Stewart (2009) used case study methodology to study the impact of leadership on the change process in 10 low-performing elementary schools in Chicago. The researchers conducted 331 semi-structured interviews and focus groups with teachers, administrators and external partners over a two-year period. Researchers used document reviews and observations to triangulate the findings. Using transformational leadership as a lens, this study specifically focused on how principals responded to accountability policies in order to bring about successful change. One critical finding uncovered by this study was that transformational leadership was extremely rare in the low-performing schools included in the study. They noted that more effective principals provided support for teachers and established collaborative environments within their schools. Their success was linked to the establishment of trust between the faculty and the administration. The previous studies all supported the need for strong transformational leadership during the change process. Another finding of this study was that meaningful professional development is a significant factor in sustaining educational change.

Educational leadership is the key to successful, sustained change in schools. In order for educational organizations to weather the storm that is created when change is proposed, a visionary leader must emerge to guide the process. Fullan and Stiegelbauer (1991) identified a successful leader as one with vision, passion and the necessary communications skills to convince people that a change is warranted.

professional development. There is a consensus among experts in the field of education that the purpose of professional development is to better equip teachers to meet the needs of students and thereby increase student achievement (Calabrese, Sheppard, Hummel, Laramore, & Nance, 2006; Darling-Hammond & Sykes, 1999; Peixotto & Fager, 1998; Spring, 2002). According to the National Staff Development Council (NSCD) (1995) professional development is defined as "high quality ongoing training programs with intensive follow up and support, as well as growth-promoting processes" (p.1).

Guskey (2000) defined professional development as activities designed to enhance professional knowledge, skills and attitudes so that they might, in turn, improve the learning of students (p.16). He identified four principles that appear as common threads in successful professional development programs. These principles included: 1) clear focus on learning and learners; 2) an emphasis on individual and organizational change; 3) small changes guided by a grand vision; and 4) ongoing professional development that is procedurally embedded. Traditional professional development often fails to meet the standards set forth in these definitions.

Kelleher (2003) defined traditional professional development as, "…activities such as teacher workshops and faculty meetings with guest speakers; often a series of disjointed experiences that do not necessarily have any observable effect on education" (p. 751). Such professional development was isolated; the teachers often gained little insight as to how to implement the knowledge into the classroom. Hargreaves and Fullan (1996) suggest that much professional development is fragmentary in nature, rushed in its implications and top down in its imposition. This model ignores the specific needs of individuals and conveys a one size fits all approach.

Similarly, Sparks (2004) described traditional professional development as "built on mandates, scripted teaching, and careful monitoring for compliance (p. 304). He suggests that this type of professional development may be effective for novice teachers, but it should not be the standard for all teachers. Sparks recommends professional development which encourages teachers to use data to drive decision making, engage in discussions on educational issues and instructional practices, and develop collegiality. Speck and Knipe (2001) suggested that traditional professional development was not an effective means of improving instruction. They contend that professional development should involve sustained research, reflection, analysis of data, and collaborative planning.

While there appears to be a consensus that traditional professional development is not effective in the change process, there is no one clear prescription for what model of professional develop will help to sustain change (Fullan, 1991; Lieberman & Wood, 2001; Schmoker, 2006; Tallerico, 2005). However, some experts (Darling-Hammond & Sykes, 1999; Gordon, 2004; Guskey, 2004; Spring, 2002) argue that some common threads can be found in good professional development which promotes sustained change. These experts agree that teachers should be involved in planning, reflecting and modeling best practices. They contend that good professional development uses a model of implementation which is easily put into practice and can be evaluated for its effectiveness. Such a model will become embedded or institutionalized over time.

Murphy (2005) suggests that professional development is most effective when it is long-term in nature and employs frequent learning sessions for teachers. He identifies three other important considerations which help to enhance the effectiveness of professional development. These points of emphasis include a trusting context for learning where teachers are free to try

new ideas, a tendency for the organization to focus on growth rather than on deficiencies, and reflective practices among teachers. Tallerico (2005) stated that good professional development focuses on content knowledge, collective participation [collaboration] use of active learning strategies, coherence and duration. This reference to the duration of professional development has particular relevance to this study.

Teachers involved in implementing any innovation tend to struggle with how to manage new responsibilities in their already busy schedules. Participants need to be accompanied by detailed planning to prepare teachers for their new roles (Brown, 1990). In order for change in schools to be successful, ample professional development needs to be provided as a part of the overall plan. Too often innovations fail because they are not supported beyond the implementation stage. The growing consensus among educators is that professional development for teachers and administrators lies at the center of educational reform (Falk, 2001).

Glickman (1993) suggests that in order to successfully implement a large-scale change, a three-phase plan for professional development should be employed. The first phase involves explaining and modeling the expected behavior. He contends that the faculty must understand the new practice and how instruction will be impacted. The second phase of Glickman's plan involves providing the necessary time for faculty to apply the change, receive feedback and collaborate with each other. This might occur during a pilot study, which would be conducted prior to full implementation. The final phase is full implementation. During this phase the faculty should have time to collaborate and modify their practices based on the feedback they receive.

Fullan (2001) stated that "It is one of life's great ironies: schools are in the business of teaching and learning, yet they are terrible at learning from each other. If they ever discover how

to do this, their future is assured" (p. 92). Raemer (2000) stated that, for innovations to last, teachers must have current data and professional development for new skills accompanying changed roles and teaching practice. Fullan (1993) further suggests that it is logical to conclude that the culture of a school will dictate whether the climate is open or resistant to change. This being the case, he suggests that the climate of the school should be a factor in planning professonal development which is associated with an impending change. Tallerico (2005) refers to this concept when discussing the need for a nurturing environment for change. He contends that such environments are characterized by shared understanding, clearly defined school improvement targets, and clear communication of the goals and objectives by school leaders. In creating a positive climate for change, it is important for leaders to understand the emotional impact of change on those who will be affected by the change.

People generally go through five stages when considering a new idea or change. These stages include awareness, interest, evaluation, trial and adoption. One common reason that change is not sustained is that staff development ends at the awareness or interest stage. When teachers are provided with the opportunity to interact and discuss the initiatives, change is more likely to be successful and sustainable (Carr, 2009). In essence, leaders must come to the realization that they cannot rely on traditional professional development practices to further change. Merely sending teachers to workshops and conferences is not enough. True instructional leaders must be inspired to change the environment to which trained teachers will return. A climate that is conducive to sharing and learning is essential to the change process. According to Hargreaves and Fullan (1998) there are several key components which are necessary if professional development is to be effective during the change process. They contend that teachers must have a voice in both the change process and the planning of

professional development. Teachers should also have the opportunity to provide feedback during the change process and should receive continued support following the implementation of a change.

Sparks (1994) identified three significant themes that seem to guide professional development. Though this work is over twenty-five years old, the themes of results-driven education, systems thinking and constructivism are remarkably relevant today. Results-driven educational initiatives determine success or failure based on student performance on standardized tests. In light of *No Child Left Behind* (2002), all educators must recognize the need for results-driven professional development. Systems-thinking implies the ability to understand how all parts of a system influence each other. Professional development in this area teaches professionals to see the whole picture when it comes to change. The constructivist theme of professional development suggests that knowledge is obtained by building a base rather than through a trickle-down process. Constructivism encourages a collaborative approach to the change process (Sparks, 1994).

Two of the major components of the primary research questions guiding this study are to understand how schools implement and sustain large-scale change. One area investigated by the researcher was how professional development was used throughout the change process. This included inquiries about how and when professional development was used. During the interview process, participants were asked questions relating to professional development. These included:

1) What is effective professional development for you?
2) What ways has professional development impacted you?
3) What supports are in place to ensure that teachers are trained to teach on the block?

The researcher was interested to know whether professional development was an important factor during the implementation of the large-scale change to block scheduling and whether or not professional development helped to sustain the change. Two studies reviewed by the researcher address these issues.

Supovitz, et al (2000), conducted a longitudinal study of professional development in the context of Ohio's systematic reform of mathematics and science. The goals of this systematic reform initiative, called Discovery, were to enhance teacher's knowledge of science and mathematics and improve their use of inquiry methods of instruction. Discovery's professional development institutes consisted of intensive six week summer sessions which equated to 160 contact hours. Following the summer institutes, Discovery teachers continued to receive professional development in the form of electronic chats, periodic newsletters and annual two day conferences in the years following their intensive summer experience.

Discovery teachers were surveyed between 1992 and 1995. Surveys asked teachers about their attitudes, beliefs, and inquiry-based teaching practices. The survey was designed to determine whether or not classroom instructional practices had changed over time. The sample used in this study consisted of 1,475 Ohio teachers who participated in Discovery professional development activities between 1993 and 1995. Participants were surveyed again each spring for up to three years. The researchers found that the attitudes, preparation, and practice of participants showed statistically significant gains from before their summer professional development to the following spring. These gains were sustained in the three year period following the intensive professional development.

In another study focusing on the impact of professional development, Wade (1984) conducted a meta-analysis of research on teacher in-service programs in the early 1980's. This

analysis drew data from 91 journal articles all of which were qualitative. One of the research questions guiding this meta-analysis was: Do the effects of training vary as a function of duration of training? Wade identified 28 variables which were grouped into eight categories to describe the studies. One of these eight categories was duration. Findings indicated that in-service teacher education programs reported in the literature were moderately effective. Wade also concluded that there was no significant effect of the length of the in-service programs, which ranged from a few hours to more than 30 hours (Wade, 1984).

In a series of case studies conducted by Little (2001) information was gathered specifically related to professional development and school reform. She used a variety of methods to collect data including observations, interviews surveys, document reviews and audio and videotaped records of teacher interactions. Little concluded that teachers had three main areas of concern about professional development, which often determined whether they had a positive or negative attitude toward change. These areas of concern were identified as: 1) the potential to enhance or threaten the intellectual, moral and emotional satisfactions of the classroom; 2) the potential to unite or divide colleagues; and 3) the potential to consume teachers' private lives and strain family relationships. Little concluded that a link must exist between the proposed change and professional development designed to satisfy the individual needs of teachers.

In summary, sustaining change is a difficult problem which has been explored and discussed on many levels. The inability to sustain change is a significant problem in the field of education. The research and theoretical constructs included in this chapter contain several common themes. The studies and literature reviewed here suggest that effective leadership and ongoing professional development are essential elements in the change process. They further

suggest that traditional professional development does not work (Guskey, 2000; Kelleher, 2003; Sparks, 2004). Some experts (Darling-Hammond & Sykes, 1999; Gordon, 2004; Guskey, 2004; Spring, 2002) argue that some common threads can be found in good professional development which promotes sustained change. They contend that good professional development uses a model of implementation which is easily put into practice and can be evaluated for its effectiveness.

Schools which are successful in implementing and sustaining change are able to build a capacity for leadership within their organizations (Lambert, 2003). Results of the Rand Change Act study indicate that the school principal was the key to both implementing and sustaining educational change (Rand Corporation, 1975). The significance of leadership in the educational change process is further supported by the work of Moffett (2000). In order to successfully navigate the change process, leaders need to develop collaborative environments within their schools (Elmore, 2002; Finnigan & Stewart, 2009). These leaders must also develop characteristics such as passion, communications skills and vision, which enable them to convince stakeholders that change is warranted (Fullan& Stiegelbauer, 1991).

A second key component which helps schools successfully implement and sustain change is ongoing professional development. Research suggests that current methods of linking professional development to implemented changes remain ineffective (Fullan, 2001). Raemer (2000) stated that, for innovations to last, teachers must have professional development. It is clear from the research that effective leadership and ongoing professional development are important features of successful change.

Block Scheduling

Block scheduling is the most significant change in education to emerge since 1980. According to the National Center for Educational Statistics, 34.5% of American public high schools used block scheduling in the 2003–2004 school year (U.S. Department of Education, National Center for Educational Statistics, 2004). The percentage of schools in Pennsylvania using the block was just slightly higher at 36.7%. The highest incidence of block scheduling was found in the District of Columbia schools (65.8%) and the lowest incidence was in North Dakota (11.7%). This section of the literature review includes research related to (a) impact on instruction, (b) impact on school climate, (c) impact on student achievement and (d) impact on student-teacher interaction.

The issue of how schools allocate time has been a popular topic for educational researchers in recent years. The Report of the National Education Commission on Time and Learning (1994) suggested that schools are more or less controlled by clocks and calendars. This report was the product of a nine member commission created by Congress to study the relationship between time and learning in the nation's schools. Data were gathered through site visits to 19 schools and interviews with over 150 teachers, administrators, parents and students. The report concluded that five major points concerning time must be addressed. Among these points are the intrusion of non-academic activities, the fixed clock/calendar issue, and the fact that educators report that they do not have enough time to do their jobs properly. According to Rossmiller, (1983) a typical school year of 1,080 hours may result in as few as 364 hours of time on task, after deducting time for non-instructional activities, procedural activities and absenteeism.

Although the fundamental concepts found in block scheduling can be traced to the modular scheduling movement of the 1960s and 70s, the genesis of the contemporary model is found in Carroll's Copernican Plan (1990). Carroll, a former superintendent, contended that his plan could change secondary schools as fundamentally as Copernicus's discoveries altered the perception of the universe. He claimed that, following successful implementation of the plan in the Masconomet Regional School District in Massachusetts, dramatic improvements in teaching and learning were evident. He therefore concluded that the Copernican plan was much more effective than traditional approaches to scheduling. Carroll (1990) also found that using a "Copernican Plan," which lengthened classes to 90, 110 and sometimes 200 minutes enabled schools to reduce class size and increase course offerings. He concluded that in the eight schools he studied, teacher workload decreased and student performance improved. Teachers taught three rather than five classes and cut the number of students they were responsible for in half. The number of credits or Carnegie units that a student could conceivably earn rose from 24 to 32. Additionally, Carroll noted improved student attendance, a decrease in suspensions and dropout rates, and an increase in the number of credits generally earned on average. He pointed out that study halls were eliminated and passing time between classes declined. Boarman and Kirkpatrick (1995) reported that traffic in school buildings was reduced by 40% when changing to block scheduling, thus reducing the number of disciplinary infractions encountered by the administration.

The goal of block scheduling is to provide extended time for classroom instruction. As schools began to move toward block scheduling throughout the 1990s, two popular formats emerged. The 4 x 4 block schedule entails classes that meet for 90 minutes each day for one semester. This format allows students to take four classes each semester and up to eight classes

per year. This results in an increase of two Carnegie units over the traditional layout. Teachers in the 4 x 4 block teach three classes per day and have about 90 students at any given time. In this model, balancing students' schedules must be considered so that all of the difficult courses are not offered during the same semester (Queen & Isenhour, 1998).

Research on block scheduling identifies an impressive list of perceived advantages. In general studies demonstrate that students spend more time on task and that the time is spent more meaningfully. The amount of instructional time naturally increases on the block pattern because less time is spent on procedures, routines, and directions (Rettig & Canady, 1995). Due to the fact that student-teacher ratios are reduced, a better rapport develops between them. Active learning is encouraged, and teachers significantly vary their methods of instruction. Teachers inevitably gain more preparation time on the block schedule, and students tend to focus on only three or four subjects during any given semester. Finally, the opportunity to vary methods of instruction and provide hands-on/interactive learning has an impact on student achievement.

Impact on Instruction

Significant research suggests that time is not efficiently utilized in American high schools. In 1984 the National Commission on Excellence in Education published *A Nation At Risk.* This report questioned how time was allocated, used and accounted for in schools. Educators opposed attempts to lengthen the school day or the school year. The point of the research was to determine if school time was, in fact, used inefficiently. Rossmiller (1983) reported that only about 60% of the school day was actually available for instruction. Gilman and Knoll (1983) were even more pessimistic: they suggested that less than 30% of an average day was devoted to instruction. Justiz (1984) reported that one hour of instructional time was lost each day in each classroom due to administrative functions and routine tasks associated with

initiating a class period. Karweit (1985) reported that students engaged in productive academic activities only 38% of the school day. The study of instructional strategies used by classroom teachers is often linked to the rationale for changing scheduling formats. The researcher's study analyzed whether instructional strategies impacted the decision to adopt block scheduling.

One of the primary measurements for the success of block scheduling is the degree to which teachers vary their instructional strategies. Block scheduling is designed to provide the opportunity to engage students in a myriad of activities and techniques that would otherwise be limited by instructional time. The thought of simply expanding classroom lectures to 90 minutes is not appealing to any of the interested parties. Given the limited attention spans of students, teachers are encouraged to provide a wide variety of activities in the 90-minute block. (Hackmann, 1995). Cunningham and Nogle (1996) identified warm-up games, cooperative learning groups, large group discussions, interactive lectures/discussions, peer teaching, guided practice, discovery methods, creative projects and the use of games and puzzles as appropriate instructional strategies for block scheduling.

One of the most rational arguments for block scheduling is that students will have more time on task and that teachers will be essentially forced to vary instructional methodology, given such a large block of time. Extensive research discussed below supports these claims.

Bryant and Bryant (2000) studied lesson designs in social studies classes using the block schedule. They agreed with Rettig and Canady (1996) that the time afforded in block scheduling was conducive to interactive teaching strategies, student projects and the like. The contention was that, unless methodology did, in fact, change, block scheduling was nothing more than an alternative way to manage time. The researchers' goal was to develop a model for social studies educators working on the block that incorporated the overall instructional goals developed by the

National Council for the Social Studies in 1994. This model is a scholarly attempt to connect content goals with instructional strategies during expanded periods of time. Among the recommendations are that teachers limit lecture sessions to twenty minutes and that they employ meaningful activities to facilitate student learning throughout the lesson. Block scheduling clearly permits social studies teachers to expand on traditional methods of instruction within their classrooms.

Jenkins, Queen, and Algozzine (2002) surveyed 2,000 teachers working in both block schedule systems or traditional systems. The goal of their study was to determine whether teachers on the block schedule use instructional techniques that differ from teachers on traditional schedules. North Carolina educators responded to the survey on a five-point Likert scale. Their results contradicted the contention that teachers using block scheduling reduce their reliance on the lecture method. Results indicated that the opinions of block scheduling teachers, with regard to the appropriateness and use of instructional strategies, differed little from their traditional counterparts.

Additional studies also bring into question whether instructional time is used more efficiently in block scheduling. Seifert and Beck (1984) conducted a study of first-year Algebra students in five Texas high schools. They used classroom observations of 60 students to study the relationship between time on task and learning. They concluded that instructional activities accounted for only 28 minutes (54.2%) of each 55-minute class period in a traditional model. While conceding that instructional time is lost due to procedures, routines and interruptions on a traditional plan, quality instructional time is cut in half when using a block schedule.

According to Rettig and Canady (1995), traditional scheduling patterns engender a situation in which time is wasted and teachers are limited in terms of their instructional

possibilities. Teachers initially report apprehension at the thought of teaching for 90 minutes because the traditional lecture method does not work well when overused in block scheduling. However, the added time afforded by block scheduling allows teachers to differentiate their instruction and employ diverse instructional strategies to meet the needs of their students. Carroll (1994) suggested that a more efficient time structure would easily yield better results in less time.

Veal and Flinders (2001) conducted a study of block scheduling at South Springfield High School, a large 9-12 high school located in the Midwest. The student population consisted of 1,800, most of whom were white. A plan was adopted for a modified block schedule which was to be implemented over a three year period. The student body was divided into three groups. One group was assigned to a traditional schedule, one to a 4X4 block schedule and one to a hybrid of both block and traditional. Qualitative data were collected using a five-point Likert scale. Parents, teachers and students responded to surveys. Researchers used teacher interviews, classroom observations and document reviews to gather data. They then entered the data into spreadsheets for analysis using SPSS statistical software. According to data collected from teachers, changes in four areas emerged: 1) methods of teaching, 2) opportunities for reflection, 3) student-teacher rapport, and 4) levels of anxiety. Of the students who had block schedules, 45% claimed that their teachers changed teaching methods, while only 24% of those students operating on a traditional model within the same school felt that way. Student surveys indicated that methodologies varied and included a wide array of activities. Students in this study also noted improved student/teacher rapport. This was attributed to increased daily contacts for extended periods of time.

Research conducted at three high schools in Lincoln County, North Carolina by Queen, Algozzine, and Eaddy (1997) used direct observation, surveys and teacher interviews to compile a list of the top five positive and negative components of the 4x4 block. The major purpose of this research was to evaluate the effects of the implementation of block scheduling. Researchers collected data over a two-year period. Seventy to eighty percent of the respondents reported that block scheduling was successful and indicated a desire to have the program continue. The positive list included greater flexibility in classroom instruction, longer planning periods for teachers, greater variety of course offerings for students, one or two class preparations per semester and more time each day for in-depth study. The negative perceptions of this study were loss of retention from one level of a course to the next, too much independent study needed outside of class, difficulty with student transfers from schools not using the 4x4 model, limited numbers of new electives offered and too much lecturing still occurring in the classroom.

One in-depth study of instructional strategies conducted by Benton-Kupper (1999) collected data from three high school English teachers during their second year of teaching in a block format. The subjects were purposely selected due to their experience with both block and traditional scheduling. This qualitative multiple case study used personal interviews and classroom observations to gather data. The researcher gathered documents such as syllabi, lesson plans and assignment handouts from each participant, and reviewed them to help validate the interview data. The findings suggested that, on a block schedule, greater opportunities existed to employ instructional strategies that actively engaged students in the learning process. Teachers claimed that they achieved greater depth in presenting their content. Additionally, more time existed for discussions and project-oriented activities. Benton-Kupper (1999)

reported that the lecture method was used "sparingly," and that much more time was dedicated to small group activities that allowed students the opportunity to think critically and independently.

Adams and Salvaterra (1998) conducted in-depth personal interviews with 67 teachers in four block-scheduled high schools in Pennsylvania. The schools were a public rural junior high school, an urban parochial senior high school, a public suburban high school and a public small town high school. Interview questions investigated the curricular and pedagogical effects created by block scheduling as well as the effect of block scheduling on students of varying ability levels. Interviewers asked teachers specifically how they altered their instructional practices as a result of the change to block scheduling. The researchers concluded that in spite of the broad organizational change, individuals did not necessarily alter their instructional practices. They also concluded that a key to success was staff development that was ongoing.

In Summary, proponents of block scheduling often point to changes in instructional strategies as a positive outcome. However, the aforementioned research studies contradict that assertion. Only one of the six research-based studies included in this study supports the claim that teachers vary their instructional strategies when teaching in a block. Most teachers in the other five studies reported that they did not substantially alter their instructional strategies when they changed from traditional scheduling to block scheduling.

The study of instructional strategies used by teachers is often linked to the rationale for changing scheduling format. This research provides some insight into why schools look to change their scheduling format. Some researchers (Bryant & Bryant, 2000; Jenkins et. al, 2002; Rettig & Canady, 1996) determined that teachers vary their methodology significantly when provided with extended blocks of time. Findings also suggest that the diversity of instructional strategies leads to more active engagement among students (Benton-Kupper, 1999). Though the

desire to change instructional practices is often cited as a catalyst for change, the studies reviewed here do not indicate that teachers substantially alter their instruction when they switch to block scheduling.

Impact on School Climate

School climate issues are also a major concern when schools switch to block scheduling. Initially, stress levels increase for teachers until they learn how to effectively plan for larger blocks of time. Over time, the school environment under a block-scheduling model is less stressful for both teachers and students (Canady & Rettig, 1996; Kramer, 1997; Sessoms, 1995). The most compelling arguments to date for switching to block scheduling relate to the improvement in school climate. If the goals of implementation are to reduce students' and teachers' workloads and decrease disciplinary issues, the evidence is clear. Rettig and Canady (1995) claimed that administrators often favor the block design because disciplinary issues diminish and the scheduling process is more flexible. It is also clear, however, that, unless appropriate and continual staff development programs are implemented, the shift to block scheduling will not be very successful (Rettig & Canady, 1996).

Rettig and Canady (1999) contended that the majority of teachers, parents, students and administrators favor block scheduling. Following an initial learning curve, all parties appear to adjust well to the format. They also pointed out that in nearly every instance where block scheduling was implemented, discipline referrals declined by 25–50% on average. As one would expect, the number of class tardies also dropped off substantially in block scheduling due to the fact that students switched between classes less times each day.

In summary, school climate issues are often cited as a reason why schools initiate the change to block scheduling. Studies indicate that school climate concerns, such as disciplinary

infractions, improve significantly once block scheduling is implemented (Canady& Rettig, 1996; Kramer, 1997; Sessoms, 1995).

Impact on Student Achievement

The preponderance of research on the effectiveness of block scheduling deals with the topic of student achievement. If one of the major purposes for the existence of schools is for students to achieve their academic potential, then the issue of how various scheduling models impact achievement is important. Research in this area is inconclusive. According to some studies, student achievement does not improve when schools implement any form of block scheduling. According to other studies, student achievement does improve when schools implement block scheduling.

As a means of measuring the impact of block scheduling on achievement, Arnold (2002) compared the scores of eleventh-grade students in both scheduling models using the Riverside Publishing Company's (1986) Tests of Achievement and Proficiency (TAP). The populations selected were 155 Virginia high schools. Analysis of the data indicated that during the implementation year of block scheduling scores increased slightly. This gain, however, was negated by a predictable decline in (TAP) scores during the second year. Arnold's conclusion stated that using block scheduling does not increase overall student achievement as measured by (TAP) mean scale scores.

Information related to student achievement is often clouded by what is actually reported in the research. Thomas (2001) cited numerous studies that indicated no measurable improvement in achievement when moving to block scheduling. She also pointed out that some results are misleading. One Florida study (Buckman, King & Ryan, 1995) indicated that 54% of Florida students earned higher grade point averages under block scheduling. Thomas

emphasized that, while that may indicate success, one must look deeper. The same study also pointed out that 45% of students had a decline in their GPAs when moving to the block model.

Queen and Isenhour (1998) contended that a 4 x 4 block is advantageous to students with lower achievement records. They stated that this model provides students with the opportunity to repeat a failed course during the second semester. In essence, the students can receive remediation or take the course over without losing a year.

Evidence supports the claim that students on the block schedule perform better academically than those on traditional patterns. Knight, De Leon & Smith (1999) compared the academic performance of students on the block schedule with that of students on traditional schedules. This study collected data using surveys, focus groups and document reviews. Participants included 400 students, 10 teachers and 14 parents in a suburban high school located in the southwestern part of the United States. The researchers concluded that students on the block schedule performed better on semester exams and in terms of overall grades. Adjustments were made for prior academic performance. Researchers employed a quasi-experimental comparison of groups and collected quantitative and qualitative data. Students and teachers participated in a pilot program of block scheduling.

Deuel provided further evidence to support the contention that students achieve at a higher level on the block system (1999). Her study dealt with urban schools in Broward County, Florida. In Broward, ten schools used block scheduling while thirteen used a traditional seven-period day. Deuel found that students in the block-scheduled schools received more A's and fewer C's, D's, and F's and achieved higher grades in advanced mathematics courses. This study also validated the claim that teachers and counselors perceive block scheduling models as more successful than their counterparts in traditionally run schools. Additionally, Deuel found

that student behavior greatly improved in block scheduling. About one-third of the teachers noticed improvements in student attendance, promptness, and general behavior in their classrooms as well as throughout the school.

Gruber and Onwuegbuzie (2001) conducted a study on student achievement in Georgia. They speculated that there was a difference in academic performance of students on 4x4 block versus traditional patterns as measured by grade point average and the Georgia High School Graduation Test (GHSGT). Participants included 115 high school students on the block schedule and 146 students on traditional schedules. Though their sample is admittedly small, the data showed that no positive advantage existed for students receiving block instruction. In some areas, block scheduling had a slightly negative impact on academic performance as measured by the (GHSGT).

Researchers Pliska, Harmston and Hackman (2001) at Iowa State University also conducted research on the relationship between block scheduling and academic achievement. The study explored the relationship between scheduling formats and ACT composite scores. This study is noteworthy not only for the conclusions garnered, but also for the size of the population included in the study: 38,089 seniors in 568 public high schools in Illinois and Iowa were included. The schools included 351 on traditional schedules, 161 on an alternating block schedule, and 56 on a 4x4 model. The researchers concluded that scheduling type does not accurately predict ACT composite scores at the high school level (Pliska, Harmston, & Hackman, 2001).

York (1997) found no significant difference between tenth-grade reading, mathematics and writing scores of Texas students on block scheduling and the scores of tenth-grade students with traditional schedules. He studied the performance of students in 1,186 public high schools

on the Texas Assessment of Academic Skills. In a similar study, the North Carolina Department of Public Instruction (1998) compared student performance in the context of the state's end-of-year testing program. Again, no significant difference in scores could be attributed to a particular scheduling model.

In summary, research on whether or not student achievement is positively impacted by block scheduling is inconclusive. The research-based studies reviewed in this section are evenly split on the topic. Some studies showed moderate improvement in measures such as GPA and standardized test scores, while others showed little or no change.

Impact on Student-Teacher Interaction

Traditional scheduling methods require teachers and students to work at a hectic pace, creating an impersonal atmosphere (Rettig & Canady, 1995). O'Neil (1995) supported this, arguing that teaching more than 125 students in five to seven periods each day did not afford teachers the opportunity to identify the respective strengths and weaknesses of their students. Furthermore, such a schedule reduced the opportunity for teachers to provide individual attention to their students.

Skrobarcek (1997) reported that students received more individual attention in a block scheduling format. He stated that 75% of students reported that teachers were able to effectively vary instructional strategies in extended blocks of time. Queen, Algozzine and Eaddy (1997) asserted that teachers in block scheduling spent 70% of their classroom time engaging students in interactive instruction. They based their data on surveys completed by teachers, students and parents from three high schools in Lincoln County, North Carolina. The major purpose of the research was to evaluate the overall effects of implementing a 4x4 block scheduling plan. The surveys included questions concerning the use of time, ability to complete the expected course of

study, academic achievement of students and classroom management. They also established that 84% of teachers said they were better able to vary instruction on the block system than on traditional schedules.

Bryant & Bryant (2000) discussed lesson designs in social studies classes using the block model. They agreed with Rettig and Canady (1996) that the time afforded in block scheduling was conducive to interactive teaching strategies and student projects. The contention was that unless methodology did in fact change, block scheduling was nothing more than an alternative way to manage time. Their goal was to develop a model for social studies educators that incorporated the overall instructional goals advocated by the National Council for the Social Studies in 1994. This model was a scholarly attempt to connect content goals with instructional strategies in expanded periods of time. Among the recommendations were that teachers limit lecture sessions to twenty minutes and that they employ meaningful activities to facilitate student learning throughout the lesson. Block scheduling clearly permits teachers to expand on traditional methods of instruction within their classrooms.

In summary, studies which compare teacher-student interaction on traditional versus block scheduling suggest that students receive more individual attention in block scheduled classes. Block scheduling reduces the number of students each teacher is responsible for and allows them greater opportunity to interact on a personal level.

Chapter Summary

A review of the literature on school change suggests that schools seem to be constantly changing, yet are unable to sustain change. Resistance to change is viewed as a major obstacle that needs to be overcome if schools are to successfully change instructional practices,

curriculum and improve student achievement. Educational reform needs to be systemic and must have the support of the stakeholders who will be affected by any significant change.

Educational leadership is considered the key ingredient in the successful change process. Visionary leaders must use their communications skills to convince teachers, parents and other stakeholders that change is warranted. They must seek the input of these individuals to ensure that everyone is on board with the prospective change and develop relationships that foster a climate of trust. This collaborative approach will provide the best recipe for success.

Once change has been implemented, appropriate professional development is required to provide the best opportunity for the change to endure. This professional development should strive to promote systemic thinking among professional staff members so that they are able to demonstrate success in a results-driven environment.

The most critical question to address when studying change is how it will be sustained. Leaders must create an environment that ensures that, if they exit their position, changes they initiated will continue. This can be accomplished through the creation of a collaborative climate that emphasizes good communication and is anchored by a strong system of professional development.

A review of the literature on block scheduling revealed that it has become an increasingly popular alternative to the traditional scheduling format used in secondary schools. This movement became especially popular in the 1990s, but traces its roots to the concept of modular scheduling found in the 1960s and 70s. The increased block of time is typically implemented in one of two formats: the 4x4 block, or the A/B plan. In the 4x4 students take three or four courses per semester for 90 minutes each day. The A/B block allows courses to run all year and meet every other day. These options can allow students to increase the number of credits they can

earn while reducing their daily workload. Additionally, teachers can interact with half as many students and thus get to know them on a more personal level.

Research also suggests that the move to block scheduling can relieve the typically hectic pace of education. Teachers, students and administrators all report that instructional time is lost due to routine tasks and transitioning from period to period. The number of transitions is reduced by 50% when shifting to the block.

In addition to providing more time on task, block scheduling has many other stated advantages. Research shows that teachers in block scheduling reduce their reliance on lecture in favor of more hands-on instructional strategies. The increased use of cooperative learning, student projects and other strategies allows teachers to more actively engage their students in the learning process. Teachers also have the added advantages of fewer students per semester and additional preparation time during the school day.

Critics of block scheduling contend that no substantial difference between student achievement in a block schedule can be proven when compared to achievement within the traditional scheduling system. Studies show that, while a slight increase in achievement usually appears in the implementation year, that effect is not perpetuated. Evidence also clearly shows that student performance on standardized tests such as the ACT, or state-sanctioned "high stakes testing," shows no noticeable difference contingent upon the student's scheduling model.

The transition from traditional scheduling to block scheduling is another research topic of interest. Studies focus on the need for strong leadership as well as input from all stakeholder groups. In order to successfully traverse from one scheduling model to another, at least two years of study and training are usually recommended. Staff development is critical to ensure that teachers are well versed in how to productively use the expanded time for instruction. This staff

development needs to continue following implementation so that feedback can be gathered and adjustments made where necessary.

CHAPTER 3

METHODOLOGY

The purpose of this study was to investigate how schools plan, implement and sustain large-scale changes. Using the change to block scheduling as a lens, this study identified the forces that influenced the large-scale change, the process and sustainability, from traditional to block scheduling. This research study explored the factors involved in planning, implementing and sustaining large-scale change in schools and specifically, what factors led schools to change from traditional to block scheduling and how the success of that change is evaluated by the districts. In this chapter the methodology for conducting the study is described. The chapter is divided into the following sections: (a) general perspective, (b) research questions, (c) research design, (d) setting, (e) population, (f) interview protocol, (g) data analysis, (h) trustworthiness, (i) limitations of the study, (j) protection of human subjects, and (k) chapter summary.

General Perspective

Though much research exists on the topics of both change and block scheduling, very little addresses the impetus for the change to this scheduling method. A void regarding this issue exists in the currently extant research, which the researcher attempted to fill.

The purpose of this study was to ascertain why schools decided to adopt block scheduling, how they implemented the change and how they sustained the change. Most current literature on block scheduling addresses one of two main topics: the advantages of block scheduling over traditional scheduling and the effect of block scheduling on academic performance. This study scrutinized the change process used by five block-scheduled high schools located in Pennsylvania. Sub-questions were used to collect data related to the perceived goals that led to the change as well as perceptions regarding the success of the implementation process. Using the change to block scheduling as an example, this research study generated

insight regarding how schools implemented large-scale change and how they sustained the change.

In order to gain a global perspective on the issues that led to the adoption of block scheduling, the researcher viewed the topic through a number of different participants. Using the transition to block scheduling as an example, this qualitative study collected data from teachers, principals and superintendents to determine how participants perceived the change process within their district.

Research Questions

This study utilized the Three Interview Series Protocol (Seidman, 1998), (Appendix C). The primary research question which guided the study was:

> What is the process used by high schools to plan, implement and sustain large-scale change?

The three research sub-questions used to guide this study were:

1. What was the impetus for change to block scheduling?
2. What process was used by the district to plan and implement the change to block scheduling?
3. How has the change to block scheduling been sustained by the district?

Research Design

The researcher conducted this study using a qualitative case study methodology. The researcher gathered data from personal interviews, which were conducted on site, audio-taped and transcribed. Initially, the researcher created interview questions, which a panel of experts approved. Leedy and Ormrod (2001) described qualitative research as a way of answering questions about the complex nature of a phenomenon in order to understand it from the

participants' point of view. Creswell (2003) stated that qualitative research is exploratory and that it is used in instances when the variables and theory are unknown. Given the lack of previous inquiry about schools' reasons for changing to block scheduling, this method of research seemed most appropriate.

Interviews

An interview is a method of collecting data in which the researcher asks an interviewee to respond to a series of open-ended questions. This method may be employed in a face-to-face setting, over the telephone, or through e-mail. Interviews are not designed to glean the responses "yes" or "no," but rather to gain narrative descriptions or explanations of an episode based on personal experience (Stake, 1995). Advantages of using interviews include the researcher's ability to control the line of questioning and ask follow-up questions for the purpose of clarification (Creswell, 2001). The interview questions provided a framework for discussion, but the researcher encouraged participants to interject their own thoughts and ideas regarding the change process as well.

A notable disadvantage of conducting interviews is the tendency toward researcher bias. Leedy and Ormrod (2001) indicated that good researchers must be good listeners. Respondents must be allowed to choose their own words to express their thoughts and ideas. The interviewer must also refrain from displaying any emotions that might influence the interview. This can be accomplished by making a conscious effort not to indicate agreement or discord with the responses provided.

Setting

This study took place in five block-scheduled high schools in eastern Pennsylvania. The researcher selected schools based on similar demographic characteristics, accessibility, and their ability to sustain the change to block scheduling for a minimum of ten years. All five schools selected are 9–12 public high schools located in eastern Pennsylvania. None of the schools included are classified as urban schools.

- School A is a high school which has a student population of 1,157. They have a graduation rate of 85%. The student ethnicity is 95% white, and 17% are eligible for free or reduced lunch.
- School B is a high school which has a student population of 687. They have a graduation rate of 94%. The student ethnicity is 98% white and 18% of the students are eligible for free or reduced lunch.
- School C is a high school which has a student population of 1,514. They have a graduation rate of 93%. The student ethnicity is 79% white, and 15% of the student body are eligible for free or reduced lunch.
- School D is a high school which has a student population of 615. They have a graduation rate of 96%. The student ethnicity is 96% white, and 6% of the students are eligible for free or reduced lunch.
- School E is a high school which has a student population of 843. They have a graduation rate of 92%. The student ethnicity is 96% white, and 20% of the students are eligible for free or reduced lunch. (National Center for Education Statistics).

The researcher was able to gain access through personal contact with individuals currently employed within the school districts. The researcher initially contacted the superintendent (Appendix A) of each school district to obtain permission to conduct the study.
Then, the researcher obtained permission to include each school in the study through telephone and e-mail correspondence with the principals and superintendents of each school.

Population

The researcher utilized the purposeful sampling technique when selecting participants for this study. The principal of each participating school was asked to provide a list of all English, mathematics, science and social studies teachers who worked at the school when the change to block scheduling took place. The researcher emailed an invitation to participate in the study to all qualifying teachers after securing an email address list from the building principal. The researcher then randomly selected three to five teachers from each school to participate in the study. The researcher also interviewed individuals who served as principal and superintendent at the time of the change in order to gain an administrative perspective of the change. If the principal and/or superintendent currently in office were not involved in the implementation process from the beginning, the researcher made every attempt to contact and interview the predecessor who attended that process. Each participant responded to the same set of interview questions. (Appendix C)

Interview Protocol

The research design included involving each participant in three in-depth interviews. Each interview lasted 25 to 50 minutes. All participants received a consent form (Appendix B) that outlined the purpose of the study and delineated how the interview information would be used (Creswell, 1998). The researcher asked participants for permission to have their interviews

audio- taped and informed them that the tapes would be secured in a locked cabinet to which only the researcher would have access. All interviews took place face-to-face and on a one-to-one basis. The goal of this in-depth, phenomenologically-based interview structure was to have the participants reconstruct their experiences within the topic under study (Seidman, 1998, p. 15). During the first interview, the researcher obtained demographic information about the individual and his or her role within the school. This interview helped to develop a rapport with the subject and put him/her at ease. The questions in the first interview did not relate to the research questions but rather to the life experiences of the individual subject. These questions placed the participant's experience in context (p. 17) and developed a level of trust in the interview relationship. The following questions were used during the first interview:

1. Please summarize your educational background.
2. What types of educational changes have you been part of during your teaching career?
3. What is you personal view concerning major educational change and the process that is most effective?
4. Do you believe good communication prevails within your school? How do you perceive the role of leadership in a high school setting?
5. What is effective professional development for you? What ways has professional development impacted you??
6. How would you describe the level of collaboration between teachers and administrators within your school?

The second interview focused on specific details of the person's experience related to the topic of study. This time the researcher asked the participant to provide details about the topic under investigation. The researcher utilized the following questions during the second interview

in order to gather data concerning the research sub-questions: What was the impetus for the change to block scheduling? What process was used by the school district to plan and implement the change to block scheduling?

1. What criteria, research, learning theory, were used to determine the need for a schedule change?
2. What input did teachers have in the decision to change to block scheduling? Was the change to block scheduling designed to address particular needs?
3. Describe the steps or process in the change to block scheduling?
4. What problems were encountered during the change process and how were they addressed?
5. How would you describe the climate at your school toward the concept of change and how professional development impacts the school climate?
6. Who prompted the change to block scheduling and what stakeholders were involved in the decision making process?

The final interview provided the participants with an opportunity to reflect on their respective roles in the change process and provided insight into how successful they perceived the change to have been. The focus of this round of interviews was to put the two previous interviews in context and provide meaning to the data. The researcher used the following questions during the third interview to gather data concerning the research sub-question: How has the change to block scheduling been sustained?

1. How did block scheduling change students as learners?
2. Describe how teachers use block scheduling today. Is it different than the original model? How?

3. Do you feel that block scheduling has been successful? In what ways?
4. What information has been collected to measure the success of block scheduling? How is block scheduling sustained at your school?
5. What supports are in place to ensure that teachers are trained to teach on the block?
6. How has the climate of the school changed since the implementation of block scheduling?

These interview questions were developed by the researcher and were approved members of the dissertation committee based on the format dictated by Seidman's three interview series. The development of the questions was driven by themes connected to change, which emerged during the literature review. These themes identified common threads which needed to be explored through the development of specific interview questions. Strands of questions were developed to address these themes which included professional development and collegiality and the importance of leadership in implementing and sustaining change. Each question is directly linked to one of the three research sub-questions, which are themselves linked to the main research question guiding this study. The questions were submitted to a national expert in the field of block scheduling and the change to block scheduling. This expert spent 15 years as a professor in the College of Education at James Madison University. Following his retirement as Professor Emeritus in 2006, he founded School Scheduling Associates, LLC. He has worked as a consultant for scheduling with over 750 school districts. The questions were reviewed by this expert to determine whether they will yield data which will help the researcher draw conclusions as to why schools changed from traditional to block schedules, how the change is implemented and how the change is sustained. The ability to gather relevant data using these questions will

help the researcher fill the void in the research with regards to why schools initiate large-scale change.

Data Analysis

After having the interviews transcribed verbatim from audio recordings, the researcher validated the data by providing each participant with a copy of the transcription for his/her review. Feedback obtained from the participants guaranteed the accuracy of the data. At the conclusion of the interview process, the researcher coded the transcripts according to the experience categories identified in the three-interview protocol. This researcher conducted a content analysis of key words and phrases as well as other concepts that emerged that were considered relevant to the research questions. The key words and phrases categorize data and identify common themes that appear throughout the interview process. Common themes emerged in the interpretation of the change process within each school.

Trustworthiness

Validity of the responses improved by using the three-interview protocol. Seidman (1998) stated that validity is achieved in this process by establishing the context of participants' experience during the first interview, allowing the participants to reconstruct details of their experience during the second interview and encouraging reflection during the third interview. If a participant's responses appeared substantially different within or across levels on similar topics throughout the three interviews, those responses were declared invalid and were not included in the study. Through the use of the three interview series, the interviewer got to know the participants on a deeper level than if there had been only one interaction. This enabled the researcher to derive greater meaning from the responses provided during each sequential interview.

The researcher triangulated the data in the form of interview responses in order to validate the results. Triangulation refers to the use of multiple sources of data collection to support a hypothesis or theory (Leedy & Ormrod, 2001). The use of triangulation helps to ensure accurate conclusions. This triangulation involved a comparison of responses as provided by the teachers, principals and superintendents, allowing the researcher to more completely understand the change process in each school. Each of these three groups provided a different perspective on the change process due to experience and position.

Limitations of the Study

This study focused on a sample of five high schools in northeastern Pennsylvania. The results of this study documented the process for changing to block scheduling as well as perceptions regarding the success or failure of the scheduling design. No attempt was made to explore the impact of years of experience or other external factors on the results.

A further limitation included the potential inability of participants to accurately recollect details pertaining to the change. This limitation resulted from the amount of time that has passed since the advent of block scheduling in the selected schools.

Protection of Human Subjects

The use of interviews to gather data for this study necessitated the use of human subjects. Prior to the beginning of the study, the researcher obtained approval from the Institutional Review Board of East Stroudsburg University. Then, the researcher sent letters to the superintendents of each of the participating districts (Appendix A) to obtain permission to conduct the study within their districts. Each individual participating in an interview also signed a letter of informed consent (Appendix B). This form outlined the purpose of the research, explained any risks, and ensured confidentiality. The researcher used no personally identifying

information during the interviews so as to ensure the confidentiality of the subjects. Also, no personal relationship or connection existed between the researcher and any of the participants involved in the study.

Chapter Summary

This chapter outlines the methodology that the researcher used to collect data for this qualitative research study. This was a qualitative case study that incorporated a series of personal interviews with teachers, principals, and superintendents who worked at each of the five included schools during the change to block scheduling. Demographic information appeared with regard to the five schools selected for study. Individuals selected for inclusion in the study were those with a specific connection to the change process. Each participant participated in a series of three interviews. The first interview attempted to obtain personal demographic information as well as gain some insight into the climate of the school system in which the individual works. The second interview addressed the first research sub-question, "Why was the change to block scheduling initiated?" The final interview gathered information related to the second research sub-question, "How is the success of block scheduling evaluated by the district?" Information concerning the protection of human subjects also appeared within this chapter.

CHAPTER 4

DATA AND ANALYSIS

This study examined the change process in five Pennsylvania high schools through the lens of block scheduling. Data were collected from interviews that were conducted in the fall of 2010. The researcher focused on the experiences of teachers, building administrators and central office administrators throughout the process. The purpose of this study was to investigate the process used by schools to plan, implement and sustain large-scale changes. This was accomplished by investigating what factors led schools to change to block scheduling and how is the impact of that change evaluated by the districts.

Chapter four presents the results of the analysis of data collected through the interview process. The researcher developed an interview guide based on the research question and sub-questions which guided the study. This guide was used to gather data from twenty teachers, five building administrators and five central office administrators.

This study utilized the Three Interview Series Protocol (Seidman, 1998) (Appendix C). Results in this chapter are reported by research sub-question. The primary research question used to guide this study was:

> What is the process used by high schools to plan, implement and sustain large-scale change?

Three sub-questions were used to gather data related to the research question. The sub-questions used in this study were:

1. What was the impetus for change to block scheduling?

2. What process was used by the district to plan and implement the change to block scheduling?
3. How has the change to block scheduling been sustained by the district?

A stenographer was employed to transcribe the interviews from digital recordings. Participants were asked to check their individual transcripts for accuracy. The researcher then categorized responses by research question and triangulated the data. The results of this analysis appear in this chapter. Chapter four is divided into the following sections: (a) participants, (b) participant schools, (c) interview environment, (d) discussion format, (e) sub-question 1, (f) sub-question 2, (g) sub-question 3, and (h) chapter summary.

Participants

The participants in this study included teachers, building administrators and central office administrators from five high schools located in northeastern Pennsylvania. All participants worked in one of the five school districts during the transition from traditional to block scheduling. All teachers included in this study are presently employed by the same district in the same capacity. Only one of the principals included in this study is still in his/her position. One principal included in this study is currently a superintendent and the other three principals have retired from public education. All five of the superintendents interviewed for this study have retired from public education. All participation in this study was voluntary, and each participant signed an informed consent document (Appendix B) prior to being interviewed by the researcher.

Participating Schools

The schools included in this study were:

- School A is a high school which has a student population of 1,157. They have a graduation rate of 85%. The student ethnicity is 95% white, and 17% are eligible for free or reduced lunch.
- School B is a high school which has a student population of 687. They have a graduation rate of 94%. The student ethnicity is 98% white and 18% of the students are eligible for free or reduced lunch.
- School C is a high school which has a student population of 1,514. They have a graduation rate of 93%. The student ethnicity is 79% white, and 15% of the student body are eligible for free or reduced lunch.
- School D is a high school which has a student population of 615. They have a graduation rate of 96%. The student ethnicity is 96% white, and 6% of the students are eligible for free or reduced lunch.
- School E is a high school which has a student population is 843. They have a graduation rate of 92%. The student ethnicity is 96% white, and 20% of the students are eligible for free or reduced lunch. (National Center for Education Statistics, 2009).

The researcher made initial contact with the current building principal at each school through telephone and email correspondence. During each of these conversations, the researcher determined whether there were a minimum of 3-5 subjects available to include the school in the study. Once verbal consent was granted by each of the five principals, only one of whom was the principal of that school during the transition to block scheduling, the researcher telephoned each district superintendent to ask for verbal consent to conduct the study. Once verbal consent

was granted by all five superintendents, a formal letter of consent was mailed to each superintendent. These consent letters were signed and returned to the researcher (Appendix A).

These five schools were selected on the basis of similar demographics and the fact that each has operated using block scheduling for at least ten years. Permission to include each school in the study was then obtained in writing by the researcher through correspondence with the superintendents of each school district (Appendix A). In order to protect the anonymity of the subjects, each school was randomly assigned a letter (A through E) by the researcher. Specific subjects are referenced throughout this chapter using a coded system. The identity of individual subjects is known only to the researcher. Each teacher will be identified by a number and the school designated letter (e.g. Teacher A-1, Teacher C-3, Teacher E-4) while each principal and superintendent will be identified only by the designated school letter (e.g. Principal A, Superintendent D).

Following the transcription of the data the researcher identified common themes for each research question. The format used to report this data lists the research question, the identified themes and a discussion of the interview responses provided by individual participants.

Interview Environment

Interviews were scheduled at each school with the help of the building principals and their secretaries. Teacher interviews took place in a private room in order to ensure confidentiality. Building principals scheduled teacher interviews in order to prevent substantial disruption to the educational process within the school. These were typically held just prior to the start of the school day or during preparation periods. Interviews with administrators were conducted in their private offices at their convenience. The length of the interviews ranged from 25 to 40 minutes.

Denzin and Lincoln (2000) emphasized the importance of developing trust and rapport between the researcher and the participants. The researcher went to great lengths to establish a rapport and alleviate any anxiety felt by the participants. For example, interviews were conducted at the schools or in private offices in order to create a non-threatening environment. Every attempt was made by the researcher to ensure the comfort of the participants. Prior to initiating each interview, the researcher reviewed the purpose of the interview and assured the participants that only the researcher and paid stenographer would listen to the recorded dialogue. Participants were informed that following transcription the digital recordings of each interview would be erased. The researcher further explained that no findings would be shared with any administrative personnel within the participating districts and that no identifying terminology would be used within the text of the dissertation.

Discussion Format

For each of the three research questions a discussion follows. This discussion includes specific participants' responses as well as analysis by the researcher. Data were collected for each research question using two sub questions in each of the three interviews. These are reported sequentially. All data gathered for sub-question #1 are reported from interview one, followed by data gathered from interview two and interview three. This format is used for each subsequent research question. Responses are also organized by school to make them easier to track. The basic pattern used is to provide the response of the superintendent, followed by the principal's response and then concluding with teacher responses. In some instances the

responses of the superintendent and principal are identical and are reported as such. Specific quotations are used throughout chapter four to provide critical insight.

Sub-Question 1

What was the impetus for the change to block scheduling?

Sub-question 1, Interview 1

The following section contains data gathered during the first interview with each participant. The researchers asked two specific questions related to sub-question 1 during this interview. Participant responses to the first question are summarized in Table1, which is followed by a brief discussion of responses to the second question

The first interview with each participant began with the inquiry, “Please summarize your educational background.” This question was designed to put the interviewee at ease and to gather demographic information about the participants. Table 1 indicates the participant codes used throughout this study, the position held by each participant at the time of the transition to block scheduling and the number of years each worked in the field of education. The superintendents included in this study had an average of 35.6 years of experience, the principals had an average of 35.4 years of experience and the teachers had an average of 28 years of experience.

Table 1

Participant Codes, Position and Years of Experience

Participant Code	Position	Years Experience
S-A	Superintendent	35
P-A	Principal	34
A-1	Math teacher	33
A-2	Social Studies teacher	33
A-3	Chemistry teacher	38
A-4	Earth Science teacher	15
A-5	Earth Science teacher	12
S-B	Superintendent	35
P-B	Principal	36
B-1	Math teacher	26
B-2	Biology teacher	23
B-3	English teacher	29
B-4	English teacher	33
S-C	Superintendent	35
P-C	Principal	35
C-1	Social Studies teacher	40
C-2	Math teacher	33
C-3	Math teacher	24
S-D	Superintendent	35
P-D	Principal	34
D-1	Social Studies teacher	29
D-2	Social Studies teacher	32
D-3	Special Education teacher	26
D-4	Guidance Counselor	29
S-E	Superintendent	38
P-E	Principal	34
E-1	English teacher	19
E-2	Social Studies teacher	18
E-3	Science teacher	34
E-4	Social Studies teacher	34

The participant codes identified in column 1 of Table 1 were developed by the researcher to protect the anonymity of the participants. Each school included in the study was randomly assigned a letter designation from A-E. The prefix "S" is used to identify superintendents, the prefix "P" is used to identify principals and a letter followed by a number indicates a teacher participant. For example S-E refers to the superintendent of School E, P-A refers to the principal of School A and C-1, C-2 and C-3 would refer to teachers from School C.

The second topic in each initial interview was, "What types of educational changes have you been a part of during your teaching career?" The purpose of this question was to get the participants thinking about the concept of change and to uncover their personal feelings toward the change process. This foundation establishes a foundation which can be used later in the interview process to gather specific data related to the change to block scheduling. Given the average years of experience of the participants, the responses to this question were extremely varied. Principals and superintendents referenced such things as TELLS math, Madeline Hunter, Charlotte Danielson, outcomes based education, state standards, cooperative learning and No Child Left Behind. Teachers also recalled each of the items cited by the administrators. In addition they mentioned such things as the open concept, humanistic change, middle schools, reading apprenticeship, modern math and teaming. Teacher D-2 stated:

> I'm in my 33rd year. I have seen everything that has come down the pike. The whole process has come full circle. It has been recycled and we have done it again. It seems like we are always changing something, but at least they keep staff apprised of what we are doing. (personal communication, December 16, 2010)

Sub-question 1, Interview 2

During the second interview participants were asked more specific questions about the details of the change process. Having established a rapport with the participants, it was possible to rely on their experiences to uncover details about the change process. Participants were asked: "What criteria, research, learning theory, were used to determine a need for a schedule change?" Participants were also asked: What input did teachers have in the decision to change to block scheduling?"

When asked about the level of input teachers had in the decision to change from a traditional to a block schedule, Teacher C-2 responded "We were told it was coming; there was no discussion." Teacher C-2 could not recall any research or learning theory that was used to determine the need for a change. Superintendent C reported that the change was initiated for several reasons. The most significant reason was the goal of increasing instructional time or time on task. Another advantage the superintendent cited was the fact that students would only be required to study for four classes rather than six or seven. The superintendent stated that:

> It made more sense. Kids only had to study for four classes. Students told me that would better prepare them for the longer classes they would have in college. In the 37 minute periods we had, I think we had eight of them, teachers spent several minutes taking attendance and getting started and there is always down time at the end. We were probably lucky if we were getting 25-28 minutes of instruction. It also worked out better for vo-tech, transporting them and such. (personal communication, February 2, 2011)

The concept of using a block or intensive schedule was first introduced by the Assistant Superintendent of School District C who was responsible for the implementation of curriculum.

That individual brought the idea from an out-of-state school district where he/she had previously worked. Superintendent C did concede that the decision to move to block scheduling was a top-down decision. The superintendent stated, "In some ways it was top-down. I don't recall that we had a committee per se. I did talk to teachers. It was a small place. I was on a first name basis with most of the teachers."

School D seems to have employed the most comprehensive change process as compared to the other schools included in this study. According to Principal D a yearly needs assessment is conducted to determine what issues need to be addressed within the building. All four teachers interviewed from School D verified the practice of completing an annual needs assessment. The topic of scheduling emerged as a major concern on one of those surveys. Principal D recalled "There was a club period that most kids, faculty, family felt was a waste of time. Second thing is we felt we wanted to increase instructional time." The principal also recalled that they hoped to eliminate study halls and reduce disciplinary referrals as a result of the change to block scheduling. Principal D stated:

> Another issue was we felt that kids were leaving us with about 24 courses in an eight-period day on average with study halls. We said we think we should increase that. So we went to 32, all kids leave here with 32 classes. We want more instructional time between teachers and kids. I know there is some research that says study halls are not a bad thing. The reality is our grip on it was it was wasting a lot of time. (personal communication, December 12, 2010)

All teachers in School D confirmed that a needs assessment was conducted and that the reasons for the intended change were clearly enumerated prior to the change. Teacher D-2 recalled that the biggest reason the change was initiated was to reduce study halls, which were

perceived as a "Big negative in the schedule." Teachers D-3 and D-4 recalled that the building principal led the change process. Both indicated that the primary reason for the change was to increase instructional time for students.

Superintendent E advocated the change in order to increase instructional time and eliminate study halls from the schedule. All four teachers at School E confirmed that the decision to change to block scheduling was made by the superintendent.

Participants were also asked during the second interview whether teachers had input into the decision to change to block scheduling and whether the change to block scheduling was designed to address particular needs. At School A, four of the five teachers stated that they had some input in the decision. Both the superintendent and principal of School A stated that teachers were consulted about the prospective change, but the decision was ultimately made by the administration. Teacher A-1 stated "Yes, we had input in the decision. We actually voted to do it." In contrast, Teacher A-3 stated that "I felt the faculty was pretty much ignored. We actually voted not to do it." Due to the obvious discrepancy in these responses follow-up questions were asked during the final interview to obtain clarification concerning the vote. Teachers A-2, A-4 and Principal A all recall that the faculty voted in favor of the change. The only reference to a negative vote came from Teacher A-3. Teacher A-2 stated that "We took a faculty vote which sometimes doesn't mean a whole lot. We took a faculty vote because they wanted to sell it that way."

At School B, all participants stated that teachers had input in the decision to change to block scheduling. Principal B stated that "It was important that the teachers felt part of the decision making process. We tried to involve them in all aspects of the process." Teacher B-1 stated that:

> I think ultimately we voted. We voted to do it. He/she spent a hard time building consensus. He/she really did what he/she had to do. He/she wanted to do it a year sooner than we actually did it, but understood that we needed another year. (personal communication, December 15, 2010)

Teacher B-2 also recalled a faculty vote on the proposed change. He/she stated:

> Yeah we did have a vote. We talked about it. There were people who were not real happy about the change, there were people who wanted the change, and there were people kind of in between. Every department was really thinking about how their process of teaching was going to change and different departments are different. I know for science we were pretty happy with the change. It kind of fit right into our way of teaching. It really made things easier. I know for other departments it was a bit more difficult. (personal communication, December 15, 2010)

Participants from School C reported that teachers did not have input into the decision to change to block scheduling. Superintendent C stated "I spoke with teachers, but there was no formal input into the decision. They did not vote on it." Principal C affirmed that teachers did not have input in the decision making process. He/she stated that "the decision was basically top-down. There were some casual conversations, but nothing more than that." When asked if teachers had input into the decision to change Teacher C-1 stated, "We had very little input in that decision; it was a done deal. We were made to think we did, but in reality we did not. That was a very large opinion held by most of the faculty." Teachers C-2 and C-3 both stated that teachers were told about the change and we in no way involved in the actual decision to change.

At School D the principal stated that there was a great deal of teacher input in the actual decision to change to block scheduling. He/she stated:

> In this district when you mess around with programs people get pretty excited. We tried to involve people. We had guidance counselors, special educators, a music educator, and a secretary. We also had kid input and, obviously, parent input. Once we thought we could satisfy most of the concerns is when we moved forward. (personal communication, December 16, 2010)

Superintendent D said that teachers were encouraged to get involved throughout the process. "They were invited to be on committees and their input was valued." Teacher D-1 stated:

> We had a huge amount of input in the decision. We are the ones who are in the trenches, the ones that work with kids. We need the input. They [administrators] actually drive it. I mean they decide we're going to start looking at change, but we're the ones who have to implement it and mold it so it fits what we want to do. More importantly, we need to make sure it fits the needs of our kids and our community. (personal communication, December 16, 2010)

Teacher D-3 said that teachers had a lot of input in the decision at the time. Teacher D-4 also recalled teachers having substantial input in the decision to change to block scheduling. He/she said:

> I think quite a bit [of input]. We really had many meetings on many different levels. Certainly department chairs, also interdepartmental. The principal was very good. He/she really worked with each individual group to troubleshoot and anticipate what our concerns were. We then had larger group interaction to hear what other people had to say. Actually, that support carried into the beginning chunk of the inauguration of block scheduling. (personal communication, December 16, 2010)

According to the superintendent of School E, the decision to change to block scheduling involved substantial teacher input. He/she described the decision making process as collaborative. The principal of School E remembered surveying the faculty to determine whether they were in favor of a change to block scheduling. While he/she does not recall the exact results of that survey, he/she did say that the math department was opposed to the change. Teachers from School E confirmed that the decision to change to block scheduling was a top down initiative prompted by the superintendent. All four teachers interviewed recalled that the faculty was surveyed about the prospect of changing to block scheduling, yet they were never informed about the results of the survey. Though none of the teachers interviewed from School E was a math teacher, it was clear that the greatest opposition to block scheduling came from that department. Teacher E-2 stated:

> My department was in favor of the change, but obviously the math people really stuck out. They were really opposed to it. They had a lot of concerns about course sequencing and things like that. The science people loved it because they could do labs on any day. It actually made it easier for them to plan. (personal communication, January 19, 2011)

Teachers at School E remembered having a great deal of input in the process of change, but not necessarily in the decision to change. Teacher E-2 said there was no teacher input as far as whether we will make the change. He/she said it was "More like what do you think, how is it going? We provided more feedback after implementation." Teachers E-1, E-3 and E-4 all reflected upon the role of the committee once the decision to change was made, but no teacher remembered being a part of the actual decision to change to block scheduling. Teacher E-2 stated:

> Teachers did not get involved in the decision to make the change. These major reforms seem to be dictated by the administration. They need to establish goals and then meet those goals. Each time you have a new regime, you get change. That is basically what happened. (personal communication, February 28, 2011)

Superintendent E remembered that a substantial amount of research was conducted to demonstrate a need for a scheduling change. Part of this data gathering process involved a staff survey. Based on this survey and other research gathered by administrators, the need for a scheduling change was identified as necessary. Superintendent E summarized the reasons for changing in the following manner:

> First of all to get into subject matter more in depth and to give kids a chance to assimilate. The longer time period also gives teachers a better opportunity to teach content in depth. As a teacher you were able to get kids into more different activities and use more modalities. It fit more into the pattern of the way we know kids learn. The longer time enabled teachers to be much more flexible in how they delivered their instruction. (personal communication, December 22, 2010)

Sub-question 1, Interview 3

During the third interview session participants were asked to reflect upon the meaning of their experiences with this change. They were asked: "How did block scheduling change students as learners?" and "Describe how teachers use block scheduling differently today as compared with the original model?" These questions generated very reflective responses. Participants discussed the emotional impact of the change on themselves and their students.

Superintendents and principals all agreed that student learning was impacted in a positive manner. Fifteen of the twenty teacher participants made positive comments with regard to how

block scheduling changed students as learners. Superintendent C lauded the benefits of the longer period of time for instruction afforded by block scheduling. He/she stated:

> I think student learning changed substantially. You had the benefit of longer blocks of instructional time combined with the fact that students only had four classes to focus on. The depth of learning improved almost overnight. It made more sense from an educational standpoint to do this. When I spoke to graduates who returned, many said block scheduling helped prepare them for college. (personal communication, February 1, 2011)

Four of the five teachers who felt student learning was negatively impacted by block scheduling were mathematics teachers. Teacher A-2, a mathematics teacher, indicated that the change had a positive impact. He/she stated:

> I think block scheduling allowed a couple of things to occur. It allows you some creativity, some critical thinking. As a teacher you can work more with creativity and critical thinking in the block because you have more time. I think it changes learners in that respect. As opposed to the old school method of 44 minutes, where, let's face it, by the time you take attendance and wrap up at the end, what are you getting done? Maybe you have 30-35 minutes. You can challenge your students more in a longer time period. There is a greater depth of understanding. (personal communication, December 22, 2010)

Teacher D-2 emphasized the resiliency of students when discussing the impact of change on their learning process. He/she stated:

> Kids are kids no matter what. They don't like carrying books for eight periods and studying for eight finals. The research said if you were to concentrate instructional

> time, students learn better. The problem was if you are going to take math courses that are sequenced, you have to make sure they are sequenced the right way. (personal communication, December 16, 2010)

Teacher C-2 stated that students seemed to like block scheduling, but he/she believed that was because course content was watered down. Teacher E-1 discussed the fact that in a longer block of time, teachers could get to know their students better. He/she described the learning process as more personal. Teacher B-2 stated that there was more hands on learning which took place in block scheduling. He/she said that the longer time period allowed for much more cooperative learning.

Sub-question 1, Summary.

In summary, responses to the first research sub-question, "What was the impetus for the change to block scheduling?", indicated that participants in this study had substantial experience in the field of education. The superintendents included in this study had an average of 35.6 years of experience, the principals had an average of 35.4 years of experience and the teachers had an average of 28 years of experience. During their years in education all participants experienced several major changes.

In each of the five schools all superintendents and principals stated that significant research was done to determine the need for a scheduling change. This research involved reading articles, speaking with experts and doing staff surveys. Teacher participants were not generally aware of the research that went into the final decision to change scheduling models. Only seven of the twenty teachers interviewed had any recollection of research done prior to the decision to change to block scheduling. Sixteen of the teachers stated that research was a part of the implementation process.

Four Superintendents and four principals stated that teachers had input into the decision to change to block scheduling and 16 of the 20 teachers in the study confirmed this during their interviews. Teacher input was noticeably absent in School C where all five participants stated that teachers did not have input into the decision to change scheduling formats.

When reflecting upon the intellectual and emotional meaning of the change, there was a great deal of consensus among the participants. Participants were asked two questions designed to generate reflection on their part. The first questions asked, "How did block scheduling change students as learners?" The second question asked participants to, "Describe how teachers use the block schedule today. Is it different than the original model? How?" All superintendents and principals said that the change to block scheduling had a positive impact on students as learners. Fifteen of the teacher participants also stated that they perceived the impact of the change on students as a positive one. One noticeable theme was that mathematics teachers stated that the change caused a negative impact on students as learners. This theme was common among all four math teachers included in the study, who represented Schools A, B and D.

Sub-Question 2

What was the process used by the school district to plan and implement the change to block scheduling?

Sub-question 2, Interview 1

During the first interview session participants were asked to share their personal views toward educational change and the process that is most effective. The data collected relevant to this research question indicate several common themes among the five school districts. While the process employed by the districts was different, many common practices were identified. Among these commonalities was the desire to involve stakeholders in the process, the use of site

visits to gather data, the use of experts to deliver professional development and the use of a pilot study prior to full implementation. Interestingly, because these schools went through the change at approximately the same time, there is substantial evidence that they created an informal support network among themselves. Many participants referenced speaking with individuals from other schools included in this study, visiting those schools, or using staff members from those schools to deliver professional development.

The second topic during the first interview had two parts. Participants were asked whether they believe good communication existed in their school and how they perceived the role of leadership in the high school setting. Superintendents in all five schools stated that they believed good communication was prevalent in the high schools. Superintendent E recalled that there was some negativity at the high school prior to the change to block scheduling, but a new principal was appointed and the situation improved. Each of the five principals interviewed also stated that good communication existed within their buildings. Principal B said, "You always have some people who are resistant and negative no matter what you do." He/she went on to say that the overall system of communication within the school was very good.

Teacher responses concerning communication within each school had a great deal of internal consistency. At School A four of the five teachers stated that good communication existed within the high school. Teacher A-5 stated, "There really was a lot of communication back and forth once the process began." Teacher A-2 stated, "There was a great deal of dialogue between the principal and the committee members." Only Teacher A-3 said communication was bad. He/she said that the faculty was basically ignored by the administration. The teachers at School B all agreed that good communication existed with their school. They had a very positive view of the leadership of their building and their district at the time of the change to

block scheduling. Teacher B-4 said, "I think the greatest thing about the whole process was we went through it together. I thought the way we went about it was very collaborative." Teachers in School C were also united in their view about communication within their building, but in a negative way. Teacher C-1 said, "There was never good communication during that time period; we were told how it was going to be." Teacher C-2 also felt there was poor communication. He/she said, "The administrators generally had their minds made up. There was not much collaboration back then." Teachers at School D had a very positive perspective on communication within their building. All four teachers interviewed had positive comments. Teacher D-4 said that both the superintendent and the principal were good communicators. He/she stated that the communications skills of the administrators helped to reduce anxiety amongst the faculty with regard to the change. Teacher D-1 stated:

> The communication that existed at that time was tremendous. We never felt like we were in the dark. It was definitely collaborative and collegial. Not only did we have open channels of communication, but we actually felt like our opinions were considered. The superintendent was careful to consider the opinions of everyone as we went through the change. I think that helped to reduce the stress we were all feeling about making such a big change. (personal communication, December 16, 2010)

The teachers at School E all indicated that good communication existed at their school during the change to block scheduling. All four teacher participants indicated that communication had been a problem, but the change in leadership at the high school had solved the problem. Teacher E-4 stated:

> I really have two separate answers to that. Things were not very good under the old principal. We got new leadership that corresponded with our change to block scheduling. His/her leadership style was tremendous. Talk about good communication, we knew everything about everything. (personal communication, December 22, 2010)

In summary, teacher participants in this study generally agreed that good communication existed within their schools. Sixteen of the 20 teachers included concurred with this statement. Three of the teachers who felt their was not good communication within their school came from the same school, School C.

Sub-question 2, Interview 2

During the second interview participants were asked two questions which related to sub-question 2. Participants were asked to: Describe the steps in the process in the change to block scheduling" and "What problems were encountered during the change process? and How were they addressed?"

School A began the process of change by forming a committee to study the value of a scheduling change. The principal of School A stated, "I formed a committee to explore the possibility of changing scheduling formats." The principal and superintendent of School District A both recalled that the principal was responsible for directing this committee. Principal A stated, "There were several other schools in the area doing it. I was in contact with many other principals to get ideas." Teachers were included on the committee, but some felt that their input was largely ignored. Teacher A-3 stated that there was a committee, but said, "It was spearheaded by the band director."

Teacher A-5 remembered the significance of site visits and professional development on the process. The teacher stated:

> We had a few small teams of teachers and administrators that visited other schools. I don't remember how many, but it wasn't always the same group going to each school. A lot of people had the chance to go on a visit, ask questions and bring back ideas. It was really helpful to be able to talk to teachers who were actually using block and get their perspective. We also had some professional development opportunities before we actually started (on block scheduling). Teachers from other schools came and talked about how to divide the time and so on. (personal communication, December 1, 2010)

Teacher A-2 recalled, "They brought in some people at the time, I remember, on more cooperative learning stuff. I think that's what they needed to do." Teacher A-1 stated:

> The whole thing took over a year. We had a committee; we went on visits to other schools and there were faculty meetings here to discuss it. I think the majority of teachers were for it. We didn't come up with the idea but I feel like our concerns were heard. It's not like we jumped right into it or anything, but the principal definitely wanted this. (personal communication, December 22, 2010)

The process used to initiate and implement the change to block scheduling at School B took almost three years. The principal recalled that a substantial amount of time and effort went into studying the need for change before anything was actually done and said, "Anytime you propose a change, you're going to have some opposition. We wanted to make sure that if we did it, we did it right." All subjects interviewed from School District B confirmed that they used a collaborative process to study and implement the change. Principal B recalled:

> It was important to get buy-in from the staff. We went to great lengths to ensure that they were prepared. We sent groups of teachers to many different schools in the area that were using block. We wanted them to be prepared with the strategies they needed to be successful in the classroom. We also brought in some individuals who were considered to be experts. This was to provide as much professional development as we felt was necessary. (personal communication, December 17, 2010)

Principal B stated that there was a great deal of collaboration among principals in the nearby districts that were either using block scheduling or in the process of changing to block. "It always helps when you can compare ideas with others who are undergoing the same thing."

All four teachers interviewed from School B made statements supporting the thorough nature of the change process used to implement block scheduling. Teacher B-2 said, "The greatest thing about the whole process was we went through it together." Teacher B-4 recalled:

> I was actually on the committee. I think we were three years in the planning of this. We visited schools. We had little groups and went to talk to the departments. Overall I think that the visiting, the meetings that we had, the committees that we set up, it was the right way to do it. Nothing felt rushed. One of the things that sold us on it was the 86 minute block of prep time. We were told that the administration would fight for that and they did. We had no cafe duty or study halls either; that was all done with aides back then. (personal communication, December 15, 2010)

Teacher B-4 remembered that the principal was very much concerned with the impact that the change would have on the faculty and the students and noted, "There was pressure from the

board to do certain things, but the principal always stuck up for us." Teacher B-3 remembers that peer observation was also part of the implementation process:

> One of the things we did that first year was we had to be in a classroom with another teacher for half our prep. We didn't have to do it all the time, I don't remember how often. It was good to see how other teachers were using the time. I didn't just sit there in the back of the room, but some teachers did. It didn't always work. Sometimes you had a Home Ec. Teacher in with a Chemistry teacher. That's just the way the schedule worked so what could that person really do? (personal communication, December 15, 2010)

In School District C the process used to initiate and implement change was the least structured of the five schools included in this study. The superintendent, in conjunction with other central office administrators, led the change initiative. No committee was formed to study the need for change; however, research was used to substantiate whether the change would accomplish the desired goals. Principal C stated, "It was a district-level initiative. I had some input, but the decisions were made at a higher level." Superintendent C justified the lack of a formal committee to guide that change process by stating:

> We gathered a lot of data from other schools and felt that intensive scheduling would help us meet our needs. It just made sense. We wanted to increase instructional time and reduce the number of classes kids were taking at any one time. It was a relatively small district so it was easy to get input and keep everyone informed. I was on a first-name basis with the teachers. I would talk to them and to the board. As I said before, in some ways it was top-down. (personal communication, February 1, 2011)

Though a committee was never formed, teachers in School C did recall utilizing the same components used to implement change in the other districts. Teacher C-1 stated:

> We went on visits to other schools to learn how to use the extended time. That was really helpful. They also brought in an expert, but we didn't get much out of that. Probably the best thing was when teachers from other schools were brought in. They helped more than the experts. There was talk of doing a pilot study, but the whole thing just seemed too rushed. I think it was in about March, we were told next year we were doing this. (personal communication, January 20, 2011)

Teacher C-2 was unaware of any formal research or process used to bring about the change and stated, "I remember an expert from New York came in to talk about cooperative learning." This teacher also remembered going to visit a school in suburban Philadelphia that was using block scheduling. "We were told we were going to be doing this. There was some professional development done, but not enough." Teacher C-2 further stated, "I know some teachers were asked to give their opinions, but I wasn't one of them."

The process used to plan and implement block scheduling at School D was extremely comprehensive. Each year the principal at School D conducts a needs assessment survey. Staff members are asked to identify strengths and weaknesses of the current programs and practices by completing a simple checklist. This needs assessment first alerted the administration to major concerns about the scheduling practices within the school. According to Superintendent D, "The needs assessment told us what we were doing was not working for us." Superintendent D went on to say:

> The change process is the key to being successful, you must do that well. It must be very comprehensive. We had a rather large committee which included

> administrators, teachers, aides, cafeteria workers and others. We involved the stakeholders and not just in a superficial way. Everyone had input and that input was valuable. I can't tell you how many times we went back and reassessed what we were doing. (personal communication, February 1, 2011)

The principal of School D also lauded the process used to make changes in the district and said, "What we've done here most importantly is involve the stakeholders. That includes our students, our parent groups and our community groups." Principal D described the process as proactive, recalling:

> We take a lot more time on the front end of making a change, but it saves us a hell of a lot more time on the back end making things happen. We involve those stakeholders; the faculty, the parents, and of course, our school board. We have seen every time there's at least a level of involvement of all those entities, the change goes pretty smooth. When we have missed those steps, we spend a hell of a lot more time on the back end making things happen. (personal communication, December 16, 2010)

Both the principal and superintendent of School D related that the process of gathering research to determine that change was in order took over two years. During that time many staff members showed a reluctance to change. This anxiety existed because they did not know how to teach for eighty minutes at a time. Principal D remembered "We did staff development in terms of what happens in creating successful teaching and delivery within eighty minutes." The size of the building was also a factor that the principal believed contributed to the success of the change process. Principal D stated, "The information flows pretty easy here. We're small enough; I

think there is a high level of collaboration." Superintendent D stated, "Staff development was critical. This change would have been deadly if teachers simply taught the same way."

As a part of the process, teachers and administrators went on site visits to other schools that were using block scheduling. Teacher D-2 and Principal D both stated that they were among the faculty members who made such visits. Superintendent D also stated that faculty members and administrators visited other schools using block scheduling to conduct observations. Small groups were sent to a number of other schools and teachers from those schools were invited to provide professional development for the teachers in School D. The final component of the process was a year-long pilot program which was conducted in the year prior to full implementation. According to Principal D, the pilot study involved all ninth grade students and their teachers. Superintendent D, Principal D and Teacher D-2 all stated that the pilot study identified problems, yielded valuable data, and allowed administrators to adjust certain aspects of the schedule prior to full implementation.

Teacher D-2 was the co-chairman of the restructuring committee. According to this teacher, the committee consisted of teachers from various content areas, administrators, and many other interest groups. Teacher D-2 stated:

> At the time, I was in the middle of my career and they made me co-chairman of the committee. What I liked about it was the fact that the input was actually received. It wasn't mandated by administrators. It wasn't like a dog and pony show either. Like we're going to bring in teachers and form a committee; we're going to change our schedule and make it look like teachers had an active part. We actually did play an active role in creating the change. In fact, we wrote it. We did the research for a year. We did a pilot program. All along the way we had a priority list. We would

> send out a checklist to the staff members and say are you in favor of this thing or that thing. We kept them apprised all along the way. (personal communication, December 16, 2010)

Teacher D-4 remembered that the committee on restructuring provided a great deal of research to members of the staff and noted, "We were given articles from professional journals to read. They talked about different methods of teaching in the block." Teacher D-4 remembered that the professional development associated with the change all dealt with teaching strategies. This teacher also recalled that there was some opposition to the process, particularly among veteran teachers. Teacher D-4 stated:

> The roadblocks came from within. Some people said they had been teaching the same way for 30 years and there is no way they were going to change. It was almost like, you know, we circled the wagons and pointed the arrows inward. We were shooting at ourselves. What we had to do was show through the research and through this step-by-step process that this wasn't a bad thing. We decided to use a pilot program to help convince them. I remember the line the principal used. He said, "the train is leaving the station and people are going to have to get on board." If you call that a mandate, so be it. (personal communication, December 16, 2010)

Evidence gathered throughout the interview process indicated that the committee system used to research and implement change in School D was very successful. All participants indicated that the process was collaborative. The administration was open to suggestions by stakeholders throughout the process. An excellent system of professional development was used to alleviate the major concern teachers had about the change, specifically, about how they would effectively use the eighty minute block of time. There was also significant evidence of support

from the superintendent. All teacher participants remembered that the superintendent used the promise of an eighty minute preparation period as a selling point for block scheduling. The teachers recalled that the superintendent made good on that promise in spite of some opposition by members of the school board.

At School E the process of change met with a great deal of resistance, especially from teachers in the mathematics department. Principal E stated, "We had a lot of resistance from the math teachers." Teachers E-1, E-2, E-3 and E-4 all stated that the most vocal resistance to the prospective change to block scheduling emanated from the math department. All participants indicated that the change was top-down, initiated by the superintendent. The principal of School E described the community as small and conservative. Interestingly, this principal was charged with implementing the change, but was not the principal when the decision to change was made. One theme which definitely emerged in this district was the fact that change among the leadership often led to rapid change within the school. In the case of block scheduling, the superintendent made the decision and the building administration was charged with working out the logistics of the change. In spite of this top down approach, many of the common themes which appeared in the other schools were present in School E. Teachers were surveyed prior to the decision to change, site visits were used to gather data on instructional strategies, experts were brought in to deliver professional development and a pilot study was used prior to full implementation.

The principal of School E took a number of proactive steps to both involve stakeholders and identify problems with the schedule during the implementation year. Principal E remembered establishing a committee which met each week. This committee consisted of

teachers and administrators. The purpose of the committee was to address the concerns identified by the practitioners. Principal E stated:

> There were a number of things that were not well thought out. Teachers needed to learn better time management. They had gone on visits to other schools, but we were not doing enough to ensure their success in the classroom. Many were really struggling with the extended time. Another major problem was that we didn't have enough courses to fill schedules. Kids were sitting in 82 minute study halls. That was a waste of time. We needed more courses, more electives, but you can't do that overnight. (personal communication, December 22, 2010)

According to Principal E, professional development was the key to improving instruction and reducing anxiety among the teaching staff. During the second year of implementation, administrators continued to meet with each academic department on a weekly basis. Teachers remembered being exposed to a great deal of research on emotional intelligence and short and long term memory. Principal E stated, "We focused on how teachers could relate to students on a more personal level if they were with them for 82 minutes rather than 42." All participants from School E recalled that after block scheduling was in place, a great deal of time and effort was spent to address the problems and improve the process.

All teachers interviewed from School E remembered that site visitations and the use of experts were important components of professional development. Two of the teachers interviewed, E-2 and E-3, went to other local schools to observe other teachers at schools using block scheduling. All four teachers remembered a national expert on block scheduling coming to the school to conduct professional development sessions.

The final common theme present at School E was the use of a pilot study prior to full implementation. Teachers E-2, E-3 and E-4 were directly involved in the pilot study. In the pilot year, teachers of science and social studies were on a block schedule while the rest of the school was on a nine period traditional schedule. Teacher E-4 stated:

> The pilot year really didn't work out too well. I think we decided to do the pilot because of some of the resistance from other teachers and the community. We ran into a lot of problems trying to do two things at once. It was pretty clear that we didn't have enough courses available to do this. (personal communication, November 22, 2010)

Teachers recalled that a change in building leadership occurred following the pilot year. When the new principal came in, they believe the process improved significantly. Teacher E-2 stated:

> When the change in leadership occurred, which was right in the middle of implementation, things began to change for the better. We got the professional development that we needed and it was ongoing. One of the things we really worked hard on were the transitions from one activity to another within the block. (personal communication, February 28, 2011)

Teacher E-1 had similar comments regarding the change in leadership. He/she said, "When the new principal came in there was an entirely different philosophy. Things improved significantly."

Though School E incorporated many of the common themes used by the other schools, the lack of an organized committee made the change process very difficult. Opposition developed among teachers and community members, yet no formal body existed to research and respond to concerns.

Each school included in this study encountered some problems during the change process. At School A the superintendent and principal both stated that there was some opposition among a small faction of the faculty. Both remembered that the group consisted of veteran teachers, who did not appear to be comfortable with the idea of change. Principal A also stated that there were some scheduling problems. These were related to course sequencing in areas such as mathematics and foreign languages.

The teachers at School A identified a significant number of problems that were encountered throughout the change process. Teachers mentioned larger class sizes, the elimination of elective classes, teacher resistance, and problems with planning, student attention spans and the inability to cover all the material as significant problems that they faced. Teacher A-3 was the most vocal opponent to the change at this school. He/she stated:

> The problem we ran into rather immediately is you can't cover what you used to cover. There was never a time when you were able to cover everything because you have to take the time to cover things in-depth. Now we were shortened down to one semester and we had to cut even more out. So we were not able to cover the standards set by the state. When the standards came into place we were not meeting them. There is no physical way to do that. (personal communication, December 22, 2010)

Teacher A-2 described some of the problems connected to teacher planning. He/she stated:

> I think one of the initial problems was lesson planning. I think teachers had to get ready to plan lessons more effectively. You can't just take two 45 minute lessons and put them together. You have to revamp your lesson plans. Just getting used to a 90 minute block versus a 45 minute period was another problem. I liked it from the

> standpoint of less class changes. There were fewer disruptions in the halls and you could teach more effectively. It took a while for most of us to get comfortable with planning for that length of time. (personal communication, December 22, 2010)

Teacher A-4 focused his/her response on the students. He/she said that the attention span of the students was a difficult problem that needed to be addressed. This problem was substantially mitigated when teachers learned to differentiate their instruction within the 90 minute block of time.

The superintendent and principal at School B identified scheduling concerns and teacher skepticism as the major problems faced during the implementation process. Principal B said that there was initial concern among the faculty, but it did not amount to anything that he/she would call resistance. The superintendent perceived teacher apprehension as a natural part of any major change.

The teachers at School B did not report many problems with the change to block scheduling. Teacher B-1 stated that there were no problems and Teacher B-2 said he/she was sure that there were problems, but could not remember anything specific. Teacher B-3 recalled some general problems that emerged. He/she stated:

> I think the faculty was skeptical at first. An 86 minute block is certainly intimidating.. I think that what most of us feared the most was perhaps losing staff. I remember that was an issue because block scheduling could have reduced staff. Fortunately, that did not happen. When I traveled to another school for a site visit the number one concern for block scheduling was that it is a nightmare for makeup work. That was initially a problem here. (personal communication, December 15, 2010)

Teacher B-4 remembered teachers having a difficult time adjusting their teaching to the extended period of time. He/she stated:

> One of the things I didn't like that my colleagues were doing was that they were still teaching the traditional way in the block. We had teachers, who have since retired, who used half of the block for homework. That really bothered me. I remember the principal saying that just because you have 86 minutes that does not mean you should give an 86 minute test. (personal communication, December 15, 2010)

The teachers in School B all agreed that any problems that did develop were addressed by the administration. Teacher B-4 provided an illustration of how the administration dealt with problems when he/she related a story about student tardiness. Teacher B-4 said:

> One minor problem that developed was that teachers would keep students on their rooms to finish tests or assignments. When people like me complained, the issue was addressed. I remember the principal saying something to the effect that if you could get kids to finish a test in 40 minutes, then they should be able to finish in 86 minutes. The problem quickly went away. (personal communication, December 15, 2010)

At School C the superintendent stated that there was some minimal opposition to changing scheduling formats, but nothing reached his/her level, yet the principal remembered that there was significant opposition among the faculty. This difference of opinion is illustrated by Principal C when he/she said:

> The biggest problem we faced was resistance to change. I think that happens every time you try to make a significant change. People like the status quo. The faculty definitely did not support our decision to change to block scheduling, at least not initially. (personal communication, February 2, 2011)

All three teacher participants from School C reinforced the statements made by the principal with regard to teacher anxiety or resistance. Additionally, they cited other problems such as pacing, loss of content, lack of retention from year to year and problems with student attention spans. Teacher C-1 stated:

> The first problem was getting rid of Grover Cleveland. I mean what do you cut out? The first time any teacher taught in the block it was like you were a first year teacher again. You had to learn how to pace yourself all over again. I think the second problem for some teachers was deciding what to do to keep student interest for 90 minutes. (personal communication, January 20, 2011)

Teachers C-2 and C-3 had similar recollections about problems that emerged during the change process. Both remembered the resistance and anxiety when they were informed of the change. Teacher C-2 summarized the problems when he/she said:

> Speaking for myself and in general for the math teachers, the number one problem was that we lost content. There was also a problem with the retention of content from year to year. The last big problem I remember was dealing with the attention spans of teenagers. They don't have a 90 minute attention span, it is more like 30 minutes. (personal communication, January 20, 2011)

According to Superintendent D, problems encountered at School D during the change process included issues with Advanced Placement courses, course sequencing and how to deliver professional development. He/she recalled being very concerned that teachers were properly trained to teach in a 90 minute block. Superintendent D stated that if teachers taught the same way in the block as they had in a traditional schedule, the results would have been deadly. The

principal of School D identified anxiety as the biggest problem that emerged during the change process. Principal D said:

> Probably the scariest part when you talk about change is that change always brings anxiety. You give people the belief that they are supported and can be successful in the new model. We used staff development to help with that. I think for staff, when people feel comfortable with what they are doing, they don't resist. (personal communication, December 16, 2010)

Teachers at School D identified resistance to change, scheduling issues and fear of change as major problems faced during the change to block scheduling. Teacher D-4 stated:

> I think it was mostly fear of the unknown; the whole fear of the change process. That wasn't limited to just our staff. That concern also existed among our students and our parents. Parents needed to be reassured that somebody was not going to be standing in front of their child for an extended period of time just lecturing. Teachers got some reassurance through the professional development process. After about the first semester they were able to teak certain things and settle in to a pattern. (personal communication, December 16, 2010)

Teacher D-1 also spoke at length about the issue of resistance. He/she said:

> Some teachers were very resistant, I mean very resistant. They would go through the motions, but they had no real intention of implementing any instructional changes in the classroom. Other stumbling blocks included time and money. We never had the time to get together as a department. That would have been very helpful. (personal communication, December 16, 2010)

Teachers D-1, D-2 and D-3 all mentioned scheduling issues as a major problem faced during the implementation of block scheduling. Teacher D-3 noted that there was a significant problem with how to deliver special education service to vocational students. Teacher D-1 mentioned that the scheduling sequence for advanced placement courses also caused problems.

According to Superintendent E, there were no major problems during the implementation process. He/she attributed this opinion to the fact that stakeholders had substantial input throughout the change process. The Superintendent stated that the change to block scheduling was a part of a larger political shift within the district. He/she stated that the board became more progressive and the public welcomed the changes that were made. Principal E agreed with the perspective of the superintendent, but cautioned that he/she was not the principal during the decision making process. He/she stated that there may have been problems that he/she was not aware of because they had been resolved by the time he/she was appointed to the principalship.

The teachers at School E identified teacher resistance, budgetary concerns and scheduling conflicts as the major problems encountered during the transition to block scheduling. Teacher E-2 said that switching to block scheduling had an impact on the budget due to the need for additional instructional materials. All four teacher participants mentioned some level of resistance among members of the faculty. Teachers E-1 and E-4 stated that the resistance emanated from the mathematics department. Teachers E-1, E-2 and E-3 mentioned that veteran teachers were particularly opposed to the idea of changing the schedule. Teacher E-3 said that the older teachers were set in their ways and preferred a 42 minute period.

In summary, four of the five schools included in this study had a logical, sequential process in place when they initiated the large-scale change to block scheduling. Only at School C was there no evidence of a structured process. In three schools, A, B and D, a committee was

formed to guide the process. All schools did research and used professional development to prepare teachers for the impending change. Other commonalities included the opportunity to conduct site visits to schools already using block scheduling and the use of experts to conduct training sessions. Some resistance to change was noted by the participants, particularly among mathematics teachers.

Sub-question 2, Interview 3

Participants were asked during the third interview: "Do you feel that block scheduling has been successful? In what ways?" The overwhelming majority of participants stated that the change was a success. All five superintendents and all five building principals indicated that they felt the change was successful. Among the teacher participants, 19 of the 20 teachers interviewed stated that the change to block scheduling had been a success.

At School A all but one of the teachers felt the change to block scheduling was successful. Teacher A-1 said, "It was successful, especially with higher level students." Teacher A- 4 stated:

> I believe the change has been a success. I don't know if everyone would say that, but I think most would. I think the kids really like the block, though they don't have anything to compare it to. In my experience, you can get much more done, provided you are organized. That's the key, knowing how to effectively plan and use the time. (personal communication, December 22, 2010)

Teacher A-3 was very critical of the impact of the change. This teacher indicated that in their subject, instructional time actually decreased. "We lost a month and a half of instruction. My advanced placement class used to meet six periods a week. You can't make up for that."

Participants from School B all indicated that the change to block scheduling was a positive and successful change. The collaborative process used to plan and implement the change at this school is still evident today in spite of several leadership changes that have subsequently occurred. Principal B recalled collecting data on test scores, grades, and discipline referrals in order to support the claim that the change met the desired goals. Teachers B-1, B-2, and B-4 stated that while they never saw any data, they believed that the principal did conduct studies. Teacher B-3 stated that the principal would definitely have data relevant to the effects of the change to block scheduling. Among the things that teachers did remember was a substantial reduction in disciplinary issues and commotion in the halls. Teacher B-1 stated, "Discipline was definitely better." Teacher B-2 recalled, "There seemed to be a lot less problems and the halls were definitely clear." Teacher B-3 stated, "There was a lot less commotion and things were generally quieter after the change."

Participants from School District C generally viewed the change to block scheduling as a positive one. The administrators who participated in this study both stated that students benefited from the change. The superintendent described the change as "sensible." The superintendent stated:

> Once it was in place, it kind of took care of itself. I did survey students, you know, recent graduates. They said they felt they were much better prepared for college. They like the longer classes and the fact that they took less subjects at one time. I would say the feedback from everyone was 98% positive. (personal communication, February 1, 2011)

One goal the superintendent felt was not reached was a dual-enrollment agreement between the school and the local community college. Superintendent C said:

> One of my goals with the extended time was to enter into an agreement under which our students could take classes through the community college. Because of some political issues with the board, that never developed. It would have been a nice partnership. It was certainly in line with what we were trying to accomplish. (personal communication, February 1, 2011)

In spite of this setback, both the superintendent and the principal agreed that the goals set forth prior to the change were accomplished.

Teachers at School C were divided when asked whether the change to block scheduling had been a success. Teacher C-2 is a mathematics teacher. This teacher related that while most teachers seemed to like the change, the math department was a notable exception. This teacher summarized the reasons for concern in the following manner:

> Students seemed to like it, but that was because it was watered down. I clearly remember that our SAT scores went down immediately following the change. It just didn't work well for math. There is just too much time between courses. If students have Algebra 1 in the fall of one year and don't get Algebra 2 until the following fall, they forget everything. (personal communication, January 20, 2011)

Other teachers at School C had a more positive opinion about the success of the change to block scheduling. Teacher C-1 remembered a peer observation program that took place during the first several years after implementation. Teachers were required to visit the classrooms of other teachers and stay for the entire 90 minutes. This teacher felt that this practice was very productive. Teacher C-1 stated:

> The change was very successful from my point of view. It was a very difficult transition, like being a first year teacher again. Everyone had to start from scratch.

> The key was learning how to use the 90 minutes. Some people never learned. We did a lot of things to train people how to differentiate their instruction and get the most out of the 90 minute block of time. (personal communication, January 20, 2011)

Teachers and administrators from School District D all agreed that the change from traditional to block scheduling was a success. The principal outlined statistics that were collected to measure the success of the change. Principal D stated:

> We collected data on student absenteeism. We've got data on grade distribution/grade shift. We've got data on faculty absence and on the number of kids going to college. Now the question is whether all of that is directly related to the schedule or is it just the natural phenomenon of societal changes occurring. Some of it is really hard to say is cause and effect. So we have a lot of data that shows certain things improved, but a skeptic could argue that those improvements aren't necessarily linked to the change. (personal communication, December 16, 2010)

Superintendent D reiterated that the major goals of the change were to increase instructional time and eliminate wasteful practices such as study halls. These goals were definitely achieved. The superintendent has been retired for a number of years and was unable to offer insight concerning the ability to sustain the change over time. The principal, however, felt that ongoing professional development was an area that needed improvement. It was noted that very little is done to ensure that new teachers are properly trained to teach using a 90 minute block of time.

All four teachers interviewed from School D indicated that in their opinion the change to block scheduling had been successful. Though none of the teachers interviewed teach mathematics, they pointed to that subject as an area of concern. Several teachers recalled data that were shared with them concerning the change. Teacher D-3 remembered that discipline

referrals decreased slightly, but that the change was barely noticeable. Teacher D-2 recalled that student attendance levels did not significantly improve with the new scheduling format and teacher D-1 remembered hearing data that suggested standardized test scores improved after the change.

When asked how the district has been able to sustain the change, the teachers from School D all stated that successful use of instructional time had become the responsibility of the various academic departments within the school. While recognizing the existence of the state mandated mentor program, the teachers stated that little if any professional development exists for new teachers which directly relate to how to teach in an extended period of time. Two teachers related that this problem is exacerbated by reduced planning time. Teacher D-1 recalled, "We used to be able to have teachers observe 90 minute periods, but now they only have 40 minutes of prep time." Teacher D-1 explained that over the years, preparation time has been reduced and replaced with other assignments such as cafeteria duty. In spite of this shortcoming, all four teachers felt the change benefited both teachers and students.

Administrators at School E believed that change to block scheduling had a positive impact. The principal, who arrived during implementation, collected data to compare standardized test scores of students on a traditional schedule to those who had been exposed to block. Though some initial increases occurred, there was no overwhelming shift in scores over time. The principal also recalled that disciplinary referrals were greatly reduced. This was attributed to the reduction in the amount of time students were in the halls changing classes. The principal conceded that collecting data was difficult due to the number of administrative changes within the district.

When asked if block scheduling has been successful the superintendent of School E stated:

> Absolutely! Our test scores shot up. We had better scores than any school in the area. It was a wealthy district, but they were at the bottom of the barrel in everything because of the way the district was run. We had a new high school principal and everybody embraced that. We had a new philosophy; I think there was more trust. Teachers started to like what they were seeing in terms of change. They began to embrace the change to block scheduling as well as other things we were doing. I think the whole process took less than three years. (personal communication, December 20, 2010)

He/she went on to say that a process of evaluation what put in place to determine whether the change was successful and to recommend modifications where necessary. While he/she did not recall the details of that plan, he/she remembered that evaluation was ongoing for at least two or three years.

All of the teachers from School E reported that the change to block scheduling was successful. While teachers were critical of the process, they pointed to changes in leadership as the primary reason that problems were resolved. It is interesting to note that none of the teachers interviewed were math teachers, yet three of the four teachers suggested that the math teachers were not happy teaching in extended time periods. For example, Teacher E-2 noted, "There was some resistance to the change, mostly from math teachers." Teacher E-1 remembered that after the initial pilot program and building-wide implementation, the amount of professional development time devoted to teaching extended blocks gradually diminished. Teacher E-4 stated:

> The first few years we had departmental sessions designed to improve our use of time. We did a lot of small group stuff and had opportunities to observe other teachers. There was a heavy emphasis on cooperative learning and teaching us how to differentiate our instruction. One of the problems with this was that our schedules didn't always match up well. As time went by and our amount of prep time was reduced, these things sort of went away. (personal communication, November 22, 2010)

In summary, the change to block scheduling was viewed as a success in all five participating schools. This opinion was shared by all five superintendents, all five principals, and 16 of the 20 teacher participants.

Sub-question 2, Summary

In summary, responses to the questions related to the second research sub-question, "What was the process used by the school district to plan and implement the change to block scheduling?", indicated that almost all of the participants mentioned that in order for major educational changes to be effective, stakeholders must be involved in the process. Four of the five superintendents and four of the five principals involved in this study stated that stakeholders were involved in the change process. All five superintendents and all five principals stated that good communication existed within their school. Sixteen of the 20 teachers included in the study stated that good communication existed within their school. Three of the teachers stated that good communication did not exist in their school were from School C.

The process of change varied from school to school, yet there were some common threads. Four of the five schools used a committee to guide the change process. These same four schools had significant input from teachers throughout the process. In each case, the

individual responsible for guiding the change was either the superintendent or the high school principal.

Throughout the change process, each school encountered problems. The most frequently mentioned problems were teacher resistance, fear of change, scheduling conflicts and loss of instructional time. In spite of the problems which occurred, all of the superintendents and principals included in this study stated that the change to block scheduling was a success. This view of success was shared by all but one teacher included in the study. After reflection, only one teacher out of the 20 interviewed described the change as a failure.

The final question related to sub-question 2 asked what information was collected to measure the success of block scheduling. Administrators mentioned things such as improved test scores and reductions in disciplinary referrals. Though some teachers stated they believed data existed, none could remember having that information shared with them by the administration.

Sub-Question 3

How has the change to block scheduling been sustained by the district?

Sub-question 3, Interview 1

This sub-question was designed to determine how the change to block scheduling was evaluated by each district. The researcher was particularly interested in any data collected to substantiate that the change had produced the desired outcomes. The five schools included in this study implemented block scheduling between 1995 and 1999. Though some modifications have occurred over the years, each school is still currently using block scheduling. Teachers and administrators from every school indicated that one of the reasons they choose to implement block scheduling was the desire to increase instructional time for students. All participants agreed that this goal was successfully met through the change to block scheduling.

At School A professional development opportunities continued for several years following the change. This professional development typically involved sessions on cooperative learning designed to help teachers efficiently utilize extended instructional time. The administration and four of the five teachers interviewed felt that the change to block scheduling was positive and met its intended goals. None of the teachers recalled being presented with any data to substantiate that the change was successful, however.

Teacher A-2 indicated some concern about the future of block scheduling at the school. This teacher stated:

> I think block was very successful when we first adopted it. Now, I think it's fading away. And the reason I say that is I think that people, to be honest with you, are not utilizing the minutes as effectively and efficiently as they could. Here's what happened, the older staff has gone out. I'm one of the few old-timers left, the old regime is out, and the new regime is in. I don't know it's necessarily their fault because they really haven't changed over. These new teachers come in, I don't think they have gotten the tools that they needed to do it, the training and so forth. (personal communication, December 22, 2010)

One major concern addressed by all four teachers interviewed at School B was the gradual erosion of teacher preparation time over the years. The teachers felt this reduction, which occurred under different leadership, has had a detrimental effect on their ability to successfully manage the extended time afforded by the block. Teacher B-4 indicated that he/she taught three different courses, making it very difficult to effectively plan. All teachers at School B also indicated that new teachers were totally unprepared to teach successfully in block scheduling. They pointed to the lack of professional development in this area as the cause of this

deficiency. Teacher B-4 stated, “They have mentors, of course, but that is not enough. They need strategies to break up the time.”

Participants from School C were consistent in their responses to the question regarding professional development. Both the superintendent and principal of School C stated that while a great deal of professional development was provided during the change process, not much was provided after the fact. Superintendent C said, “We really did not do much in the years following the change. As usual, it was on to something else.” Teachers from School C echoed the statements made by the principal and superintendent. Teacher C-2 also remembered a lack of professional development following the initial training. The teacher said, “We were given an occasional article to read, but not much else.” While Teacher C-1 lauded the professional development opportunities that occurred prior to and during the change, it was also pointed out that such opportunities do not exist for newly hired teachers. All teachers at this school indicated that learning to effectively utilize a 90 minute block of time was a function of the state mandated mentor program.

Participants from School D had very positive comments regarding professional development and the level of collaboration within both the school and the district. Superintendent D stated:

> One of the things that I always thought set us apart from some other districts was the level of collaboration between the teachers and the administration. There was a level of trust that you don’t always see. Part of that, I’m sure, was due to the fact that we were so small. Everybody knew everybody and, in a sense, that made it easier. In terms of professional development, it was very easy to identify and meet the needs of the staff. (personal communication, February 8, 2011)

The principal of School D verified that the environment within the school was and is very collaborative. He/she also had positive comments regarding the approach to professional development used by the district. Principal D stated:

> When we initiated this change we did our usual needs assessment and then developed a plan for professional development. We did staff development in terms of what happens in creating successful teaching and delivery within 80 minutes. We needed to focus on teaching styles and learning styles to help teachers and kids survive in 80 minutes. (personal communication, December 16, 2010)

All four teachers interviewed from School D made positive comments concerning collaboration within the school and the system of professional development used by both the school and the district. Teacher D-2, who served on the change committee, encapsulated the attitude of the teacher participants with regard to both collaboration and professional development. Teacher D-2 stated:

> It was interesting, the dynamics of the committee with administrators present, how it really was give and take. In fact, we as a committee told them we had to slow down, and we did. Sometimes there were a lot of arguments, but it definitely was collaborative.

In regard to professional development other teachers at School D echoed that their needs were met during and immediately after the change to block scheduling occurred. Teacher D-3 stated:

> I can't remember all of the specifics, but I do remember it [professional development] all centered on teaching strategies that we needed to utilize in an 80 minute period. We were given information on how to assess, how to use the time and on learning

> styles. Kids are different, you know. Some are visual, some are kinesthetic, and we needed to be sensitive to that. (personal communication, December 16, 2010)

Participants from School E also believed there was good collaboration during the change process, but only after the change in principals occurred. The superintendent remembered, "We really needed that change of principals. Things really headed in the right direction after that." Teachers from School E clearly indicated that collaboration improved significantly following the change in principals. All four teacher participants made comments that directly referred to that change. Teacher E-4 said:

> Collaboration was virtually non-existent under the previous principal. Because of that the change to block was not as smooth as it could have been. We were in the middle; the superintendent wanted the change, but we were not getting any leadership at the building level. When the new principal came in, the change was like night and day. We collaborated on everything. (personal communication, December 21, 2010)

As with the other schools in the study, little if any professional development is provided to newly hired teachers at School E. They rely on their assigned mentor to learn how to effectively manage their time while teaching on a block schedule.

In summary, all participants indicated that professional development was provided to teachers before and during the large-scale change to block scheduling. Participants from Schools A, D and E indicated that professional development related to block scheduling continued for several years following the change. One area of concern identified by participants from each school is the lack of professional development related to block scheduling which is provided to new teachers.

Sub-question 3, Interview 2

Upon reviewing the data collected regarding the impetus for change, theme that clearly emerged was that in each of the five school districts, one individual was responsible for initiating the change to block scheduling. Participants were asked, "Who prompted the change to block scheduling and what stakeholders were involved in the decision making process?" In schools A and B the building principal was responsible for initiating the change, while in schools C, D and E it was the superintendent who inspired the change. These individuals cited many different reasons as to why the change was perceived to be beneficial.

At School A, teachers and administrators agreed that the principal initiated the change process. Teacher A-1 recalled that the change "…definitely came from administration, but I don't remember specifically who it was." Teacher A-2 stated that the principal was responsible for initiating the change with the full support of the superintendent. Teacher A-3 stated that:

> The principal at the time wanted this. We actually voted not to do it. I know he/she probably didn't tell you that. We voted not do it. Let's wait another year and take a look at it. And instead, she went to the board and said we're on board, let's go. Next year we had it. So she essentially lied to the board. (personal communication, December 22, 2010)

Teacher A-4 confirmed that the principal was the guiding influence behind the change to block scheduling.

At School B, the principal stated that he/she was the major force in initiating the change. This statement was verified by the superintendent. All teachers interviewed from school B stated that the principal was responsible for initiating the change. Teacher B-3 speculated that the principal was hired in part to bring block scheduling to the school. The teacher stated, "I believe

it was part of his interview, one of the reasons he was hired. It was his baby. That may have been hearsay."

The motivating force behind the change to block scheduling at School C was the superintendent. According to teacher C-1, "The Director of Curriculum and Instruction brought the idea to the district. The superintendent then made the decision that we were changing to block scheduling."

Superintendent D gave the credit for initiating the change to the building principal. The superintendent identified several key issues that prompted the change. The superintendent stated:

> This was not change for the sake of change. It was not done because it was something new and we thought we would try it. Study halls were not working for us; they were a waste of time. We also had issues with disciplinary referrals and tardiness. We felt that block scheduling would enable kids to take more courses and receive more instruction. We were also moving toward a dual enrollment agreement with the community college. Longer blocks of time would make that a more realistic option. (personal communication, December 27, 2010)

While the change to block scheduling did not accomplish all of these goals, the superintendent believes that it was a positive and successful initiative.

School E changed to block scheduling as a result of a movement initiated by the superintendent. Superintendent E and Principal E both stated that change was difficult to initiate in the district. The principal described the climate for change:

> So it was a very small, conservative community. When superintendents came in and wanted to do things that were more progressive, sometimes there was resistance by the

> community as well as the board. Most of the decisions were made from the top down rather than cooperative. That later changed. (personal communication, December 22, 2010)

In summary, Participants stated that in all cases the decision to initiate the large-scale change to block scheduling was prompted by an administrator. At Schools A, B, and D, it was the building principal who initiated the change, while at Schools C and E it was the superintendent. Data from the interviews indicated that at Schools A, B and D teachers had input into the decision to change.

Sub-question 3, Interview 3

Throughout the third interview participants continued to share candid thoughts concerning the overall change process. Specific questions were asked during the third interview which related to sub-question 3. Participants were asked, "What supports are in place to ensure teachers are trained to teach on the block?" and "How has the climate of the school has changed since the implementation of block scheduling?"

Largely due to the fact that none of the superintendents included in this study are still in the role they held during the change to block scheduling, very little data was provided regarding current professional development practices. This statement is true of four of the five principals included as well. Only Principal D remains in his/her same position. Principal D made the following statement regarding training new teachers to use the block:

> As you know, in the state of Pennsylvania, every new teacher gets a mentor. A lot of the responsibility for teaching our new teachers to succeed in the block falls on the mentor. Some come to us with student teaching experience on the block, some don't.

> I think that is an area we could improve upon. (personal communication, December 16, 2010)

Principal D also indicated that interview questions relating to teaching on the block are asked during the interview process. This allows the administration to gain some insight into deficiencies in this area prior to hiring a teacher.

Responses from all other administrators were vague. All indicated that they have no first hand knowledge of how the training of new teachers is being currently handled within their former districts.

Teacher participants did provide insight in to the level of professional development provided to new teachers which is directly related to teaching on the block. None of the five schools included in this study has a specific program specifically designed to teach new teachers how to teach on the block. Like Principal D, teacher participants indicated that most training for new teachers is provided by their mentor.

At School A, all four teachers indicated that new teachers were not properly prepared to teach on the block. Teacher A-1 said, "Many new teacher leave because it is simply too much work." Teacher A-2 said:

> We don't do that very well. I think it is assumed that new teachers have had some experience with block scheduling, but many have not. We need to do a better job of that as a district. Most of what they get is from their mentor and that is not enough. Teaching is hard enough without throwing that issue into the mix. (personal communication, December 22, 2010)

Teachers at School B also indicated a lack of training for new teachers in the area of block scheduling. They also pointed to the mentor system. Teacher B-3 said, "New teachers get three

days of professional development at the start of school and then they get a mentor, that is about it."

Teachers at School C indicated that new teachers are provided with some training regarding block scheduling. All three teachers interviewed indicated that mentors help with this process. In addition, new teachers are provided the opportunity to do peer observations. Teacher C-1 stated:

> All of our new teachers have mentors and they obviously help them deal with the large block of time. One of the best things we do is that we have them actually observe other teachers in their department. That helps them tremendously. The administration has been very proactive in that area.

Teachers C-2 and C-3 also mentioned peer observations as a training tool for new teachers.

When asked how much professional development was provided to new teachers on the topic of block scheduling, the teacher participants from School D had responses similar to those from other schools. None of the four teachers indicated that they believed adequate professional development was provided in this area. Teacher D-3 said, "New teachers get mentors and departmental support, that's about it." Teacher D-2 stated:

> In my department I think we do a pretty good job of supporting new teachers, especially in how to divide up their time on the block. There is not a formal structure to this, but the support is there. They also each have a mentor and that is part of their job. This is certainly an area we can improve on. (personal communication, December 16, 2010)

The teachers at School E provided responses very similar to those gathered in the other schools. None of the teachers from School E indicated that the professional development for

new teachers related top block scheduling was adequate. Teacher E-2 described the process as "…luck of the draw." He/she said that new teachers may get a lot of assistance on how to teach in the block or very little, depending on who their mentor was. Teacher E-3 responded simply, "No." When asked to elaborate, he/she said, "There is nothing to elaborate on, they don't get that kind of training."

In summary, due to the large turnover in leadership, most participants had little knowledge of how professional development related to block scheduling is delivered in their former schools. Only Principal D is still in his/her same administrative role. He/she stated that while no formal professional development related to block scheduling is provided, prospective teachers are asked about experience with block scheduling during the interview process. Teacher participants at all five schools indicated that no structured professional development is currently in place, which is related to the topic of teaching in block scheduling classrooms.

Sub-question 3, Summary

In summary, responses to questions related to the third sub-question, "How has the change to block scheduling been sustained by the district?" demonstrated the importance of professional development in the change process. All superintendents and principals mentioned the significant role of professional develop in the change process. Though the methodology varied from school to school, all participating schools provided some opportunities for their teachers to develop strategies for teaching in a larger block of time. Responses gathered throughout the interview process suggest that new teachers are not receiving professional development in the area of block scheduling.

Administrators and teachers in four of the five schools included in this study indicated that there was a climate in their school which was receptive to change. Though natural fear and

anxiety often existed, the change process was able to succeed in all five instances. No participants indicated significant differences in the climate of their schools which they could directly attribute to the change to block scheduling. With the exception of Principal D, none of the administrators included in this study could provide information on climate because they have not been employed in those districts for many years. Fourteen teachers made comments that indicated that due to the passage of time, they could not accurately compare the climate of the school before and after the change to block scheduling occurred.

Chapter Summary

This chapter presented the results of the analysis of the qualitative data gathered through personal interviews with 30 participants including 20 teachers, 5 building administrators and 5 central office administrators. The data from these three sources were triangulated and analyzed in order to identify common themes or patterns. The interview questions were guided by the primary research question:

1. What is the process used by high schools to successfully plan, implement and sustain large-scale change?

Three research sub-questions were used to gather data related to the primary research question. The sub-questions guiding this study were:

1. What was the impetus for change to block scheduling?
2. What process was used by the district to plan and implement the change to block scheduling?
3. How has the change to block scheduling been sustained by the district?

The findings for research sub-question one indicate that in each district a single individual could be identified as the catalyst for the change to block scheduling. In three of the

districts this individual was a central office administrator, while in the other two districts, the building principal spearheaded the change. When the interview responses were triangulated, several common reasons for initiating the change to block scheduling were identified. These common themes included the desire to increase instructional time for students, the desire to reduce disciplinary referrals and the desire to make more efficient use of time by reducing study halls.

The findings for research sub-question two demonstrated that while the process used to plan and implement the change to block scheduling differed substantially from school to school, some common themes were present. Triangulated data from all five districts confirms that some degree of research was conducted prior to the decision to change. In addition, four of the five schools formed committees to study the proposed change and develop plans for implementation. These committees involved stakeholders such as teachers, community members, school board members, students, and school administrators.

Another common theme that emerged in response to research sub-question two was the existence of professional development opportunities prior to and during the switch to block scheduling. Teachers, principals and superintendents in all districts mentioned that an important professional development piece involved the use of site visitations. In each case, small groups of educators from the district were sent to observe block scheduling classes and interact with faculty members at districts already using this scheduling format. They also indicated that teachers experienced with block scheduling were brought in to provide professional development prior to implementation. In three of the five districts, at least one national expert was brought in to provide professional development as well. The final common theme identified was the use of

a pilot study. This strategy was employed by three of the five districts prior to full implementation of block scheduling.

The findings for research question three suggest that virtually all of the participants viewed the change to block scheduling as a successful one. Principals and superintendents universally supported change as did the majority of the teachers. In all districts, teachers reported having little, if any knowledge of data gathered to measure the effectiveness of the change. Administrative participants did recall collecting such data and were able to cite examples. A final common theme that emerged from the participants was the gradual decline in professional development opportunities focused on block scheduling following implementation. None of the participants could substantiate the existence of a formal professional development plan to sustain block scheduling beyond the second year of implementation.

Chapter five of this study will summarize the information presented in this study and will draw conclusions from the data analysis. These conclusions will be based upon the research presented in the literature and the data gathered from the personal interviews conducted as a part of this study. Chapter five will conclude with recommendations for further study. Chapter five will conclude with recommendations for further study.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This study examined the change process in five Pennsylvania high schools through the lens of block scheduling. Data were collected from interviews that were conducted in the fall of 2010. The researcher focused on the experiences of teachers, building principals and superintendents throughout the change process. The purpose of this study was to investigate the process used by schools to plan, implement and sustain large-scale change. By investigating what factors led schools to change to block scheduling, the researcher was able to analyze a particular large-scale change in terms of the overall change process.

This study presents an analysis of qualitative data collected through the interview process. The researcher developed an interview guide (Appendix C) based on the primary research question and sub-questions which directed the study. This guide was used to gather data from twenty teachers, five building principals and five superintendents representing five schools located in northeastern Pennsylvania. All participants worked in one of the five high schools/districts during the transition from traditional to block scheduling. All participation in this study was voluntary, and each participant signed an informed consent document (Appendix B) prior to being interviewed by the researcher.

This study utilized the Three Interview Series Protocol (Seidman, 1998). The goal of this in-depth, phenomenologically-based interview structure was to have the participants reconstruct their experiences within the topic under study (Seidman, 1998, p. 15). The primary research question which guided this study is:

> What is the process used by high schools to plan, implement and sustain large-scale change?

The three research sub-questions used to guide this study are:

1. What was the impetus for change to block scheduling?
2. What process was used by the district to plan and implement the change to block scheduling?
3. How has the change to block scheduling been sustained by the district?

Conclusions in this chapter are discussed by research sub-question. This chapter will also present implications and limitations of this study, make recommendations for future studies and will conclude with a summary.

Sub-Question 1: What was the Impetus for Change to Block Scheduling?

The investigation into the impetus for changing to block scheduling yielded important results regarding the origin of large-scale change in schools. Careful analysis of the interview responses of all participants indicates the impetus for change was always a decision by an organizational leader. In the analysis of the impetus for change, experience with change, teacher input, and impact on student learning were all considered.

During the interview process the researcher discovered that the superintendents included in this study had a mean average of 35.6 years of experience in education, the principals had an average of 35.4 years of experience in education and the teachers had an average of 28 years of experience in education. This wealth of experience among the participants enabled the researcher to gather substantial data concerning educational change. All participants included in this study reported that they participated in large-scale change multiple times throughout their career. The variety of changes cited by the participants indicates that each individual had a substantial amount of personal experience with the change process.

Data were also gathered concerning teacher input into the decision making process at the various schools and important information was also collected with regard to how this change impacted students as learners. Responses from teachers during the interview process suggest that they were often unaware of the impetus for change until the change process had begun. In speaking with the superintendents and principals, the researcher discovered that one of the most significant reasons they advocated change was to improve student learning.

Experience with Change

The individuals selected for this study had significant experience in the field of public education. Largely due to their years of experience, all had experienced several large-scale changes within their schools. Many significant educational changes/trends were mentioned. These included such things as the middle school movement, differentiated instruction and cooperative learning. No common change experience was referenced by the participants, with the exception of the change to block scheduling which is the focus of this change study. The fact that the participants had a wealth of experience in the field of education contributed significantly to the success of this study. Participants were very reflective throughout the interview process and provided rich responses based on their personal experiences.

Teacher Input in the Decision Making Process

The researcher collected significant data regarding the role of teachers in the decision making process. The interview process revealed that four superintendents and four principals believed that teachers had significant input into the actual decision to initiate large-scale change, specifically the change to block scheduling. Sixteen of the 20 teachers included in the study concurred with this finding, thus triangulating the data. The notable exception to this common thread of teacher input into the decision making process was School C. Participants from School

C all indicated that the decision to change to block scheduling was top down and that teachers had no input in that decision. The fact that 24 of the 30 participants stated that teachers had input into the decision making process lends strength to the findings. Information gathered in speaking to superintendents and principals suggests that in four of the five schools, though the decision to switch scheduling models was made at the administrative level, teachers were well informed and hence believe they actually had input into that decision. In all five schools, the desired change was implemented and endured for at least twelve years. This is even true in School C, where the change process was least structured. Using School C as an example, it can be argued that once the decision to change was made by the administration, the change was inevitable. Even had teachers resisted, as some at School C did, large-scale change could still be implemented and sustained. This is consistent with several research studies (Collins, 2001; Williamson & Blackburn, 2010; Zimmerman, 2006) which suggest resistance to change can be overcome through effective leadership. Hall and Hord (2001) noted that monitoring the concerns of teachers throughout the change process can help to alleviate concerns about the change.

Throughout the interview process, the superintendents were particularly free and reflective with their responses. It is important to note that all five superintendents interviewed are now retired from public education. Freedom from professional constraints or personal ties to the organization seems to have enabled them to provide genuine feedback with regard to the change process. Superintendent C addressed the political climate within schools when he/she said:

> We made the change because it was sensible. I always did what was best for kids. What happens is that when you do something right, someone else takes the credit. When

> something goes wrong, you take the blame. There was a lot of politics and I didn't particularly like that. (personal communication, February 14, 2011)

The literature supports the contention that although change can be implemented using a top down approach, this method is likely to increase resistance to the change. Olsen and Sexton (2009) discovered this during their study of threat rigidity at Hawthorne High School in California. While the principal of the school refused to be interviewed for the study, teachers shared their frustration with the top down approach to change. This frustration led to resistance of the change and the creation of a dysfunctional climate at Hawthorne High School.

In a related study, Carr (2009) found that people generally go through five stages when considering a major change. These stages include awareness, interest, evaluation, trial and adoption. He concluded that when teachers are provided with the opportunity to interact and discuss initiatives, change is more likely to be successful. It appears the schools in this study went through the five stages, though somewhat differently, and the change to block scheduling was viewed as successful by the participants.

Impact on Student Learning

While reflecting on the change process during the third interview, participants were asked to comment on how the large-scale change to block scheduling impacted students as learners. This topic was an important consideration mentioned by all five superintendents and all five principals as a primary reason that the large-scale change to block scheduling was initiated. All superintendents and principals stated that the change had a positive impact on student learning. Several referenced data that suggested test scores improved, climate issues improved and students were better prepared for the rigors of the longer class periods they would be exposed to in college. Fifteen of the 20 teacher participants stated that they felt the change to block

scheduling had a positive impact on students as learners. Four teachers who dissented with this opinion were mathematics teachers and the other was a chemistry teacher.

According to data gathered throughout the interview process, participants stated that the impetus for a change to block scheduling was both academic and climate based. Principals A, B, D and E pointed to the desire to increase instructional time as a major reason for the change to block scheduling. Superintendent D echoed this sentiment when he/she said:

> We had kids spending a lot of time in study halls and that was viewed as quite a waste of time. We also had a club period that most teachers, kids and families thought was a waste of time. We wanted kids to be able to take more courses and spend more time in academic settings. (personal communication, February 10, 2011)

The researcher concluded that participants in this study felt the change to block scheduling had a positive impact on student learning. These findings are consistent with multiple studies on block scheduling. Veal and Flinders (2001) concluded that following the change to block scheduling, student/teacher rapport improved significantly. Rettig and Canady (1996) contend that administrators often favor block scheduling because disciplinary issues are reduced and school climate improves. Buckman, King and Ryan (1995) conducted a study in Florida which provided mixed results. Although 54% of students in the study showed an increase in grade point average after changing to block scheduling, 45% showed a decline. Deuel (1999) conducted a study using 23 Florida high schools. She found that student attendance and behavior improved when using block scheduling.

The second major theme which emerged concerning the impetus for change was the desire of schools to improve climate issues. According to Principal D, data collected in the year following the implementation of block scheduling showed reductions in both student and teacher

absenteeism. Principal B and Principal C both noted a reduction in disciplinary referrals in the years following implementation.

Based on everything discussed throughout the three interview sequence, the following conclusion can be drawn regarding the impetus for change to block scheduling. While several reasons were cited throughout the interview process, the clear impetus for change was a decision made by an individual leader within the organization. Once this decision was made, each district developed a process which would be used to plan and implement the change. In four of the five schools included in this study, the process used was remarkably similar. This might indicate that the process of implementation is more critical to success than the impetus for change.

Sub-Question 2: What was the Process Used by the District to Plan and Implement the Change to Block Scheduling?

Examination of the process used by high schools to plan and implement large-scale change showed many common threads among the five schools included in this study. Based on data collected through the interview process, the researcher identified involvement of stakeholders, good communication and effective leadership as important characteristics of successful change processes. The significance of each characteristic will be discussed in the following sections.

Involvement of Stakeholders

In four of the five schools included in this study, a committee was formed to plan and implement the change to block scheduling. These committees included central office administrators, building administrators, teachers, parents and students. Participants interviewed stated that in order for large-scale educational changes to be successful, stakeholders need to be involved in the process. Information provided in interviews confirmed that when collaboration

occurred throughout the process, the transition from one scheduling model to another was smooth. The use of collaboration during the change process is a highly effective technique in promoting educational change. Kanter (1983) stated that innovations were much more successful in collaborative, cooperative, team oriented environments.

> In discussing the collaborative approach used in his/her district, Superintendent D stated: In any major change or new initiative, it is not the change itself, but rather the process which is the key to success. It is not so much what you do; it's how you do it. You can have a great idea and great intentions, but if you don't have a plan, you will fail every time. Change is a comprehensive process. You need to have a process and follow it in order to be successful. (personal communication, February 10, 2011)

The researcher discovered that the collaborative approach used in four schools made the transition to block scheduling relatively smooth, yet, interestingly, the lack of collaboration at the fifth school did not prohibit implementation.

Involvement of stakeholders in the change process is a critical component. The most significant concept in Hall and Hord's Concerns Based Adoption Model is the contention that in order to affect successful change, the attitudes and perceptions of those impacted by the change must be considered (Hall & Hord, 2001). Holland (2002) concluded that collegial trust and collaboration were important factors in the implementation of change. Once the stakeholders have been identified and committees formed, the focus shifts to communication within the members of an organization. As noted, four schools in this study used the committee system to plan and implement change. Those committees created a constant flow of information to classroom teachers who would be impacted by the impending change.

Communication

Good communication was another common theme cited by participants as necessary to the large-scale change process. All five superintendents and all five principals included in this study stated that good communication existed in their school at the time of the change to block scheduling. Sixteen of the twenty teachers included in this study agreed that good communication existed within their schools. Three of the teachers who indicated that there was not good communication within their schools were from School C. This is consistent with other data suggesting that the change process at School C lacked structure.

Apart from the teachers at School C, the lone teacher interviewed for this study that felt poor communication existed within their school came from School A. Based on the dialogue which occurred throughout the three interviews, the researcher concluded that Teacher A-3 was simply opposed to change. This individual consistently made statements that were inconsistent with information gathered by all other participants from School A. Examples of this include the statement that the faculty opinions were ignored and the contention that the faculty voted not to move to block scheduling. He/she made many references to the committee system and recalled visiting School E as a part of the implementation process. His/her opposition was clearly based on perceptions related to instructional time, yet they were conveyed in the interviews as failures in communication.

Louis and Miles (1990) identified communication problems as a major reason innovations fail during the implementation phase. Williamson and Blackburn (2010) indicated that leaders can overcome resistance to change by identifying and communicating clear objectives. Teachers at School C, as well as Teacher A-3, clearly resisted change within their schools. One difference between these two schools was the fact that the building principal at

School C did not actively promote the change, while the principal of School A was a clear proponent of the change.

Effective Leadership and Resistance to Change

A factor identified in this study as essential to the process of large-scale change was effective leadership. In Schools A, B and D, the principal initiated the change to block scheduling. In Schools C and E, it was the superintendent who initiated the change. Regardless of who initiated the change, it was the building principal who was responsible for the successful implementation. All but one of the 30 participants interviewed in this study stated that the change to block scheduling was an example of successful large-scale change. Responses consistently pointed toward effective leadership as a reason for that success.

Teacher D-2 reflected upon the leadership style of his/her principal during the second interview. He/she stated:

> I think our building principal had a lot to do with the success of the change. He/she did it in conjunction with our superintendent at the time, but the principal really had carte blanche. We were a relatively small operation back then; we still are. You sort of get to know his/her style, not convincing, but rather directing. He/she has his/her way of subtle arm twisting and some teachers are intimidated by that. Those that have been around a while and have become good friends with him/her like I have know the drill. Back then he/she kind of eased everybody into it, but you knew he/she was steering the boat. (personal communication, December 20, 2010)

Based on these and similar remarks, the researcher concluded that the teachers in School D clearly identified the leadership provided by the building principal as a critical reason why the large-scale change to block scheduling was successful. This is consistent with the findings of the

Rand Change Agent study (Rand Corporation, 1975) which determined that the principal was the key to both implementing and sustaining new changes.

One of the major obstacles to successful large-scale change in schools is the mere resistance to change itself. According to Hall and Hord (2001) individuals faced with impending change pass through several stages of concern. They suggest that school leaders need to monitor these stages and address concerns to help alleviate anxiety and resistance. Hashimoto and Abbott (1996) concluded that despite initial resistance to change, faculty members supported it once it became viewed as necessary. The responsibility for creating this climate of acceptance falls on the educational leader within the building.

Elmore (2002) emphasized the role of the principal in creating unity within the school community with regard to change. He suggested that principals move toward a goal of distributed leadership whereby they share reform responsibilities with teachers and other stakeholders. The researcher discovered that distributed leadership was a common trait shared by four of the principals included in this study. This conclusion was reached based on responses provided by teachers, superintendents and by the principals themselves. As previously reported, the building principals were the guiding force behind the change process. In four schools, however, the principals empowered teachers throughout the change process. This willingness to share leadership responsibilities with stakeholders enabled the principals of Schools A, B, D and E to gain support for their change initiative, thus enabling a smooth transition. Principal D stated, “Every time there is at least a level of involvement, the change goes pretty smooth.” Teacher B-4 echoed this theme when he/she said, “The greatest thing about the whole process was we went through it together.” While the principals of Schools A, B, D and E were all able to

successfully guide their buildings through a change process, their leadership styles varied significantly.

Leadership style is an important consideration in evaluating the success of large-scale school change. Hall, Rutherford, Hord and Huling (1984) identified three specific change facilitator styles: initiators, managers, and responders. Initiators are defined as those with clear long-range policies and goals. Decisions are made based on these goals and initiators convey their expectations through frequent interactions with their teachers. In this study, Principals B, D and E would clearly be identified as initiators. Data gathered from teacher interviews define these individuals as collaborative, transformational leaders who involved stakeholders throughout the change process. Managers are described as leaders who provide basic support to facilitate an innovation, but do little else to help the innovation succeed. In this study, Principal C fits the definition of a manager. The superintendent clearly initiated the change, and the principal seemed to have little invested in the process. The final facilitator style, the responder, fits Principal A. Though he/she initiated the change to block scheduling, other leaders within the district provided the guidance necessary for successful implementation.

The process used by school districts to plan and implement change had three common characteristics: involvement of stakeholders, communication of ideas and effective leadership. The researcher discovered that a similar process was used in four of the five schools in this study. School C did not adhere to the process identified herein and is thus excluded from discussion.

As previously reported, the decision to initiate large-scale change was made at the administrative level. Once that decision was made, the process of planning and implementing the change began. The process began in each school with the organization of a committee.

These committees involved important stakeholders who would be impacted by the change. In each school the committees contained the building principal, classroom teachers and guidance counselors. Some committees also included central office administrators, parents, students and support personnel. Once the committee was formed, the process of researching the proposed change to block scheduling began. The focus of committee research was clearly on aspects of block scheduling and not on change itself. Teacher A-2 served on the restructuring committee at his/her school. He/she stated:

> We had a real mixture on our committee. Some were veterans and some were younger teachers. We read a lot of articles, held meetings and then reported out to the whole faculty. It was important to keep everyone informed because we wanted to have everyone on board. (personal communication, December 22, 2010)

Another common feature in the process was the use of experts to educate staff members about the advantages of block scheduling and to provide professional development. These experts consisted of teachers who worked using block scheduling, university professors and noted educational consultants. All five schools used experts to one degree or another during the planning and implementation of the change. Once teachers had received exposure to the fundamental ideology behind the change, site visits were arranged so that small groups could visit schools currently using block scheduling. Teachers and administrators from Schools A, B, D and E traveled to other schools to meet with teachers using block scheduling and conduct classroom observations. These small groups then reported back to larger groups, typically in a faculty meeting setting. Interestingly, School A conducted a site visit to School E and Schools B and E conducted site visits to School D. Throughout the research and planning stages, members of the committee regularly communicated with the building principal and other members of the faculty.

Finally, three of the five schools (B, D and E) used a pilot study prior to full implementation of the change.

As previously noted, effective leadership was the lynchpin to the successful planning and implementation of the large-scale change studied by the researcher. The importance of leadership, especially at the building level cannot be overstated. In this study it was evident that the leadership exhibited by principals B, D and E contributed greatly to the success of the change initiative. These three leaders clearly motivated their teachers and created a climate within their organization which was conducive to change. They were actively involved in every aspect of the change process and demonstrated the ability to effectively address the needs of many conflicting interest groups.

Sub-Question 3: How has the Change to Block Scheduling been Sustained by the District?

Examination of the data gathered during this study indicates that little or no attempt was made by the schools to ensure that the change would be sustained over time. Participants repeatedly referenced the importance of professional development to the success of the change process, yet following the implementation of block scheduling, professional development is noticeably absent. As referenced in sub-question 1, the decision to initiate large-scale change came from the administration in all participating schools. Teachers in three of the schools (A, B and D) felt they had actual input into the decision making process. Once the decision to change was made, all schools with the exception of School C developed a collaborative approach to implementation. This collaboration helped to produce a positive climate in each of those four schools following the change to block scheduling. One glaring weakness in the change process was the failure of any of the schools to continue structured professional development related to

the change beyond one year. This lack of professional development is a particular concern when dealing with inexperienced teachers and recent graduates from college.

Sustaining Change

The researcher concluded that based on the data gathered in this study, none of the included schools developed a clearly defined plan to sustain large-scale change. In spite of this concern, administrators and teachers in four of the five schools indicated that the climate in their school was open and receptive to change. Despite the lack of a plan to sustain large-scale change, each of the five schools included in this study currently remain on a block scheduling model, suggesting that the change has become institutionalized.

The connection between the positive climate in these schools and the successful implementation of change is an important topic to explore. Moffett (2000) noted that instructional leaders must develop a school culture that supports change and strengthens communication. Scholarly works on educational change indicate that schools which are successful in implementing and sustaining change build a capacity for leadership within their organizations (Lambert, 2003). Hall and Hord (2001) identified 12 principles of change based on longitudinal data gathered over a 30 year period. One of these principles which is consistent with the findings of this study, states that administrator leadership is essential to long-term change success. Hargreaves and Goodson (2006) noted that one of the primary forces which produce large-scale change in schools is leadership succession.

Falk (2001) stated that innovations often fail because they are not supported beyond the implementation phase. The growing consensus among educators is that professional development is essential to successful educational reform. This study noted the absence of a formal professional development plan specifically tied to the large-scale change in the years

following implementation, yet the change was sustained in all five schools. Leaders, specifically building principals, were able to sustain the change by other means. One clear example of this is the role of principals in the selection of new teachers. Questions can be asked during interviews which help the leader determine the willingness of the candidates to embrace change in the future.

Professional Development and Change

Throughout this study the researcher collected important information concerning the impact of professional development on the change process. All superintendents and principals included in this study noted the significant role of professional development in the change process. Most teachers included in this study also indicated that they received appropriate professional development prior to and during the implementation of the change to block scheduling. Very little data were collected to indicate that schools used ongoing professional development as a means of sustaining this large-scale change.

Research suggests that adequate professional development is an important factor in the success of large-scale change within schools. Fisher (2000) concluded that lasting school change required attention to four factors: a shared vision, effective leadership, professional development, and critical friends. Hall and Galluzzo (1991) conducted a study on school-based decision making and concluded that for change to be successful, ongoing support and training is necessary. Finnigan and Stewart (2009) conducted a case study on the impact of leadership on the change process. They determined that meaningful professional development was an important factor in sustaining educational change. Huberman and Miles (1984) identified several factors that were likely to help achieve successful implementation of large-scale change. Among these factors was ongoing in-service training.

The literature clearly suggests there is a link between ongoing professional development to successful school change, yet the schools included in the present study have managed to sustain change without the benefit of structured professional development. Although formal professional development sessions are no longer provided, all five schools do have some supports in place which indirectly help to sustain the change to block scheduling, which has become institutionalized. All five schools provide mentors for new teachers. These mentors are charged with the responsibility of helping new teachers become acclimated to the teaching profession and assimilate into the culture of the school.

Primary Research Question: What is the Process used by High Schools to Plan, Implement and Sustain Large-Scale Change?

Looking at the analysis of the research sub-questions enables the researcher to answer the primary research question of how schools plan, implement and sustain large-scale change. This study suggests that high schools engage in large-scale change by: 1) having an organizational leader who initiates the change; 2) creative a collaborative environment conducive to change; 3) form committees to research the implications of the change; 4) provide professional development at the initial stages; 5) conduct pilot studies to determine the impact of the change; and 6) modify aspects of the change throughout the implementation process.

A clear thread within the literature suggests that a collaborative approach to the change process is most desirable. All four models of change discussed in chapter one referenced collaboration as an essential component of large-scale change. Havelock and Zlotolow (1995) touched on this concept during the initial stage of their C-R-E-A-T-O-R model. The care stage, which is a prerequisite for change, focuses squarely on building collaborative relationships in an organization prior to change. Reigeluth and Garfinkle's (1994) model of systematic change

references a common vision and obtaining support from all stakeholders as essential components to sustaining change. Ely (1990) suggested that one factor which enhances the ability to change is the fact that participation is both encouraged and expected. Finally, Hall and Hord (1987) deal with the collaboration theme in the stages of concern component of their Concerns Based Adoption Model.

This process used by four of the schools in this study to plan, implement and sustain large-scale change is parallel to the seven stages of Havelock and Zlotolow's C-R-E-A-T-O-R model (1995). Stage zero, referred to as care, essentially provides the impetus for change. During this stage, someone generally perceives that something is either wrong or could be better. In this study, Superintendent's C D, and E were functioning at this stage when they referenced the need to increase instructional time for students. This perceived need led them to explore avenues of change which would improve or solve the problem.

The first stage of this process, acquire, refers to the period when the change agent focuses on building relationships and creating a collaborative environment within the organization. In essence, the groundwork for change is being laid at this critical juncture. Teacher B-4 illustrated the impact and significance of this stage when he/she stated, "The greatest thing about the whole process was we went through it together." Teacher A-2 recalled, "We had meetings and discussed it because we had to get everybody on board." These comments suggest that relationship building and collaboration were present throughout the change process.

Stage two of the model, referred to as examine, challenges the change agent to identify the problem which needs to be changed and inform the stakeholders of this need. An example of this stage from this study would be the involvement of teachers at School D in the decision making process. The principal of School D began his/her dialogue about the change to block

scheduling in response to the results of a needs assessment completed by the faculty. The faculty identified the need to increase instructional time as a major concern which needed to be addressed.

Stage three, referred to as acquire, focuses on finding the relevant resources necessary to provide the rationale for a large-scale change. Throughout this study participants in four of the schools commented about the research done by committees to gather information related to the prospective change to block scheduling. Teacher D-2 stated:

> We sub-divided in the committee and we went out. We actually found articles; we found journals and different educational methods. We basically came up with our own pile of research, analyzed it, took the data and shared it with the faculty. (personal communication, December 16, 2010)

Participants from all five schools recalled bringing in experts in the field of block scheduling to provide professional development during this stage. Superintendent E said, "We brought experts in to train our faculty." Teacher C-3 stated, "We visited various schools and then we had people come in and prep us on teaching in 80 minute blocks."

The fourth stage of the model, referred to as try, is essentially the implementation stage. This involves using the information gathered during the previous stages to facilitate the change. One important component of this stage referenced by Havelock and Zlotolow was the use of pilot studies. Participants from Schools B, D, and E noted that pilot studies were used at their schools prior to full implementation. According to Principal D, ninth grade students and faculty were used in the pilot. He/she said important data were collected which helped iron out problems prior to full implementation. At School E teachers E-2, E-3 and E-4 were involved in the pilot. Teacher E-4 stated: We found out through the pilot that we needed more courses."

Though a pilot was not conducted at School C, the superintendent remembers talking about the possibility of doing one.

The final stage of this model, stage five, is referred to as extend. During this stage the goal is to provide deeper and wider acceptance for the change. One important feature of this stage is the need for stakeholders to evaluate the change. Throughout this study several administrators referenced the collection of data to measure the effectiveness of the change, but none was provided to the researcher. Many teacher participants made vague comments about such data, but none could recall having seen any hard facts.

Analyzing data gathered through the interviews, the researcher determined that four of the schools included in this study followed a similar pattern of change. Though variations could be identified from school to school, fundamental steps in the process identified above were consistent.

Implications of this Study

This study was designed to identify the process used by high schools to successfully plan, implement and sustain large-scale change. Findings from this study expand on the existing literature related to both school change and block scheduling.

This study found a high level of collaboration in four of the five schools, yet all five succeeded in implementing and sustaining the intended change. In two of the four schools described as collaborative, that collaboration did not extend to the actual decision to implement change. One question that emerges from these results is whether or not teacher input into the decision making process is a necessary component for successful change to occur in schools.

Important data were collected regarding the process of change used by each of the five schools included in this study. In analyzing this data, the researcher was able to identify several

common characteristics that were present during the successful implementation of a large-scale change initiative. In all but one school, committees of administrators, teachers, parents, students and other stakeholders were formed. These committees performed such tasks as gathering and disseminating research, arranging site visits to other schools and conducting staff needs assessments. Though the fifth school did not develop a committee dedicated to this specific change, it did employ many of the same implementation strategies such as site visits and the use of experts to deliver professional development to the teaching staff.

This study was conducted an average of 15 years after the implementation of this change occurred. This time lapse is significant in many ways. In all five cases, administrators and teachers generally viewed the change to block scheduling as a success as stated in their interviews. This conclusion might have been significantly different if the study were conducted in closer proximity to the actual change. Upon reflection, most of the participants tended to focus on the positive impact of the change, and dismissed the problems faced during the change process as trivial.

A major implication of this study is the identification of the importance of effective leadership in the change process. Schools B, D, and E had leaders that Hall, et al. (1984) would identify as initiators. In those three schools, the change process was viewed as virtually seamless. All participants from those schools consistently referred to the change process as a collaborative endeavor that they went through together. Teachers and superintendents from each of those schools indicated that it was the charismatic leadership of the building principal which guided the change process. At School E teachers indicated that the change in principals prior to the implementation year was critical to the success of the change initiative.

Contrary to the research in the literature, this study found that ongoing structured professional development is not essential to sustaining large-scale change. Each school included in this study provided a significant amount of professional development prior to and during the implementation of the change to block scheduling. This professional development appeared to greatly reduce resistance to the change and teacher anxiety regarding the change. Teachers were exposed to new methodologies and strategies designed specifically to address their apprehension about teaching in an extended block of time. Once the implementation year concluded, the amount of professional development designed specifically to support this change began to diminish, and this pattern continued at a rapid pace. Currently none of the schools included in this study have any formal professional development which addresses teaching in block scheduling. This is particularly troubling in that teachers who are new to the field are often ill prepared to teach in an 80-90 minute period. This absence of formal professional development can be attributed to the fact that the change has become normalized and is therefore a part of the culture of the school.

Although the sample of participants was prohibitively small, data gathered during this study indicate teachers of mathematics are not proponents of block scheduling. All four mathematics teachers included in this study had valid concerns about how block scheduling impacted student learning. Participants throughout the interview process continually pointed to mathematics departments as havens of resistance to this change. This was true in all of the five participating schools. The inherent cause of this discontent is the lack of continuity from year to year in sequential courses. Although no world language teachers were interviewed for this study, the same argument would likely ring true in that discipline. This suggests that there may be a small segment of an organization that does not benefit from large-scale change no matter what

process is used to plan and implement that change. Given that large-scale change by its very nature includes multiple elements, this study suggests that leaders need to look at each element separately. They should not assume that change will affect all aspects of the organization equally.

The change to block scheduling in each of these five schools appears to have become institutionalized. The question then becomes whether anything needs to be done to further sustain the change? Following the conclusion of this study in the fall of 2010, four of the five schools began exploring whether or not block scheduling was the best scheduling model to meet their needs. These schools have, in a sense, come full circle. They planned, implemented and managed to sustain a major change for at least 12 years. Now, each is beginning the process of determining whether or not another large-scale revision to their schedule is necessary.

Limitations of this Study

There are several limitations of this study that are worth consideration. A specific weakness of this study was the small sample size. This study is limited to a sample of five high schools in eastern Pennsylvania. The results of this study document the process used by those five schools to plan, implement and evaluate large-scale change. The small number of participants (five superintendents, five principals and 20 teachers) makes it difficult to generalize this data to any other population.

A further limitation is the fact that participants in this study had an average of 31.75 years of experience in education. This fact makes it impossible to generalize the results of this study to educators with varying levels of experience. Another limitation of this study is the fact that all of the participating superintendents are retired. This may have limited their knowledge of the current climate within the schools related to the change under study.

Although participants were asked to share whether or not data were collected to show the results of the change, no such data were collected by the researcher nor did the participants offer evidence of the actual data they said was collected. The use of a document review process may have yielded additional data concerning the outcome of the change.

The difficulty participants may have had in accurately recalling specific details pertaining to the change to block scheduling are a further limitation of this study. The schools included in this study underwent the change to block scheduling between 1995 and 1999. This substantial time lapse may have limited the ability of participants to recall specific facts during the interview process. This limitation may have been slightly mitigated through the use of the three interview process. Participants had time to reflect between interviews and could clarify previous responses during subsequent interviews.

Recommendations for Future Studies

The findings of this study related to the process used by schools to successfully plan, implement and sustain large-scale change, raises many other questions. This study reviewed research related to principles of change and block scheduling. One major sub-question within this study remains unanswered. Though all five schools included in this study still use some form of block scheduling, no clear data emerged as to how or why the schools were able to sustain the change, other than through institutionalization, because they were all equally effective. While similarities did emerge in the change process used by four of the schools in this study, further investigation would help solidify which, if any, were critical to change.

The following list of suggestions should be used by researchers to guide further investigation into the educational change process:

1. This study was limited to five high schools of similar demographic characteristics located in eastern Pennsylvania. This study should be replicated in other geographic regions so that the results may be more generalized.
2. The methodology used in this study could be modified to include the use of focus groups and document review. This could provide excellent data not available to the researcher in this study.
3. A study should be developed to study teacher education programs and determine whether teacher candidates are properly prepared to instruct using a block scheduling model.
4. A study should be developed which looks specifically at the relationship between professional development programs and the success of change initiatives in schools.
5. A study should be developed to determine the effect of leadership changes on non-institutionalized changes.

Chapter Summary

The purpose of this study was to analyze the process used by schools to plan, implement and sustain large-scale change. Analysis of data gathered in this study yielded important results concerning the change process.

This study determined that in order to successfully plan, implement and sustain large-scale changes, schools should employ a collaborative approach. The change under consideration was viewed as a success in each of the five schools included in this study. It is important to note that while the level of collaboration varied from school to school, it was present to some degree in each. Three schools involved stakeholders in the entire change process, including the decision to initiate the change. In these schools there were reduced levels of anxiety and resistance toward the change initiative.

Additionally, the role of effective leadership was determined to be critical to the successful implementation of large-scale change in schools. As stated previously, the change to block scheduling was viewed as successful by participants in all five schools. Participants, especially teachers, from Schools B, D and E indicated that the initiator style employed by their building principal was a very important reason for the successful transition to block scheduling. Though all schools succeeded in implementing the change, the principals in Schools B, D and E were able to create a collaborative environment in which stakeholders felt their input was a valuable component of the change process.

Finally, this study yielded results that were contrary to those found in the literature regarding the importance of ongoing professional development in sustaining large-scale change. Each school included in this study provided a significant amount of professional development prior to and during the implementation of the change to block scheduling. This professional development significantly reduced resistance to the change and teacher anxiety regarding the change. Once the implementation year concluded, the amount of professional development designed specifically to support this change began to diminish. This pattern continued at a rapid pace. Currently none of the schools included in this study have any formal professional development which addresses teaching in block scheduling. Studies clearly link ongoing professional development to successful school change, yet the schools included in the present study have managed to sustain change without the benefit of structured professional development. This indicates that block scheduling is an institutionalized component of the school culture which is sustained through indirect forms of professional development.

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Appendix A

SUPERINTENDENT/DISTRICT LETTER OF APPROVAL

The Change Process: A Study of the Move to Block Scheduling in Five Pennsylvania High Schools

An East Stroudsburg University of Pennsylvania and Indiana University of Pennsylvania
Doctoral Dissertation
Howard S. Lessel, Principal Parkland High School, Parkland School District

Dear Superintendent:

I currently serve as the Principal of Parkland High School in the Parkland School District. Educationally, I have been working to obtain my doctoral degree at East Stroudsburg University of Pennsylvania and Indiana University of Pennsylvania. The purpose of this study is to examine how large-scale change occurs in schools through the lens of block scheduling. Results of the study may be beneficial to school districts in their efforts to develop an effective process for making large-scale changes. I am currently seeking permission to gather data in reference to my study and would greatly appreciate it if you could set aside a few minutes of your valuable time to review this document. I am hoping that you will support my research by approving the request to have your school district's staff members participate in this study. If so, please sign the bottom of this approval form and return it to my attention in the self-addressed, stamped envelope.

Sincerely,

Howard S. Lessel
Principal, Parkland High School
Parkland School District
Educational Leadership Doctoral Student
East Stroudsburg University of Pennsylvania
Indiana University of Pennsylvania

This project will be submitted to the East Stroudsburg University of Pennsylvania Institutional Review Board for the Protection of Human Subjects, Dr. Shala B. Davis, IRB Administrator, (570) 422-3536 x3336

Appendix B

Individual Consent Form

The Change Process: A Study of the Move to Block Scheduling in Five Pennsylvania High Schools

I, _____, hereby agree to participate in this research project on the change process. The purpose of this study is to examine how large-scale change occurs in schools through the lens of block scheduling. Results of the study may be beneficial to school districts in their efforts to develop an effective process for making large-scale changes.

My participation in this study will involve discussing factors that are related to the change from traditional to block scheduling. It is estimated that the time involved will be 1 ½ to 2 ½ hours.

I understand that there will be little or no risk to me and that all of my responses will remain confidential. Data will be combined so that individual responses will not be able to be identified

I understand that I may not receive any direct benefits from participating in this study, but involvement may help increase knowledge of the effective career decision-making programs.

I understand that my participation in this study is completely voluntary and that I may withdraw at any time without penalty.

If I have any questions at any time about this study I may ask or e-mail directly:
Howard Lessel 610.351.5650 lesselh@parklandsd.org
Dr. Patricia Smeaton 570.422.3363 psmeaton@po-box.esu.edu
Dr. George Bieger 724.357.3285 grbieger@iup.edu
Concerns or questions that may result from my participation in this study may be reported to:
Dr. Shala Davis, Administrator, Institutional Review Board, East Stroudsburg University at 570.422.3336, sdavis@po-box.esu.edu

I have read and understand the information in this letter and have had the opportunity to ask questions related to the study and my participation. I agree to participate in this study.

Signature_____Date_____

Witness_____Date_____
(You will receive a copy of this document for your records)

Appendix C

Three Interview Series Protocol

Guiding Questions	**Experience**	**Interview #1 – Put participant experience in Context – past life to now**	**Interview #2 – Details of the Change Experience – Stories reconstruct details of the experience**	**Interview #3 – Reflect on the meaning of the experience – Intellectual and emotional connection**
What was the impetus for the change to block scheduling?	Education Background	Please Summarize your educational background.	What criteria, research, learning theory, were used to determine the need for a schedule change?	How did block scheduling change students as learners?
	Teaching	What types of educational changes have you been a part of during your teaching career?	What input did teachers have in the decision to change to block scheduling? Was the change to block scheduling designed to address particular needs?	Describe how teachers use block scheduling today. Is it different than the original model? How?
What was the process used by the school district to plan and implement the change to block scheduling?	Change Process	What is your personal view concerning major educational change and the process that is most effective?	Describe the steps or process in the change to block scheduling.	Do you feel that block scheduling has been successful? In what ways?
	Leadership	Do you believe good communication prevails within your school? How do you perceive the role of leadership in a high school setting?	What problems were encountered during the change process and how were they addressed?	What information has been collected to measure the success of block scheduling? How is block scheduling sustained in your school?
How has the change to block scheduling been sustained by the district?	Learning: Professional Development	What is effective professional development for you? What ways has professional development impacted you?	How would you describe the climate at your school toward the concept of change and how professional development impacts the school climate?	What supports are in place to ensure that teachers are trained to teach on the block?
	Collegiality	How would you describe the level of collaboration between teachers and administrators within your school?	Who prompted the change to block scheduling and what stakeholders were involved in the decision making process?	How has the climate of the school changed since the implementation of block scheduling?