AN INVESTIGATION INTO THE CHANGE FROM BLOCK TO TRADITIONAL SCHEDULING IN SELECTED ALABAMA HIGH SCHOOLS

by

MATTHEW GARGIS

STEPHEN TOMLINSON, COMMITTEE CHAIR
NATALIE G. ADAMS
C. J. DAANE
JOHN A. DANTZLER
CALLI HOLAWAY

A DISSERTATION

Submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Secondary Education in the Graduate School of The University of Alabama

TUSCALOOSA, ALABAMA

2013
ABSTRACT

The traditional seven-period day has been the dominate type of class scheduling for high schools since its conception in the early 1900s. The only current alternative is the block schedule, which was adopted by high schools to offer more progressive pedagogic practices tailored to college preparation. Block scheduling allows teachers extra time during class periods and lowers the number of courses students must prepare for each day. Many schools in northwest Alabama adopted this timetable in the early 1990s. However, many are now reverting to traditional scheduling. There is no research on the reasons for this revision and no studies on its mode of implementation. Accordingly, this study investigates why particular school systems in the region decided to return to traditional scheduling and examines the administrative process by which the change was effected.

The researcher employed a multiple case study approach involving three school systems in northwest Alabama. Data were gathered through interviews of school employees who had experience on both schedules and were employed in the system when the change of schedule occurred. Administrators, teachers, and school counselors were interviewed. The primary reason all three school systems changed schedules was to save money. In contrast to the earlier move to block scheduling, the recent change was quick with little input from teachers and no professional development.
DEDICATION

This dissertation is dedicated to my wife, Destin Gargis, whose patience and support has given me the strength to endure to the end and finish this project.
ACKNOWLEDGMENTS

I would like to thank the following people who helped in the completion of this research project. First, I would like to thank my committee members, Dr. Natalie Adams, Dr. C. J. Daane, Dr. John Dantzler, and Dr. Calli Holaway for their knowledge, support, and suggestions. Second, I would like to thank my committee chair, Dr. Stephen Tomlinson for his patience, knowledge, and continual encouragement. Without the help of these people this project would not have been completed.

I owe a great deal of appreciation to my family for their support and tolerance throughout this project. Thank you for being patient concerning how much time this dissertation kept me away from home and the many vacations this project accompanied us on.
**CONTENTS**

ABSTRACT .................................................................................................................................... ii

DEDICATION .................................................................................................................................. iii

ACKNOWLEDGMENTS ................................................................................................................ iv

LIST OF TABLES ........................................................................................................................ vii

1. INTRODUCTION .......................................................................................................................1

Statement of the Problem ............................................................................................................... 8

Purpose of the Study ...................................................................................................................... 9

Research Questions ....................................................................................................................... 9

Overview of Methodology .......................................................................................................... 10

Significance of the Study ............................................................................................................. 10

Outline of the Study .................................................................................................................... 11

2. LITERATURE REVIEW ..........................................................................................................12

History of Scheduling ................................................................................................................ 12

Types of Block Scheduling ....................................................................................................... 15

Impact on Student Achievement ............................................................................................... 18

Impact on Instructional Time and Strategies ........................................................................... 24

Impact on Attitude and Participation ......................................................................................... 28

Impact on Discipline .................................................................................................................. 29

Impact on Student–Teacher Relationships and Interaction ..................................................... 30

Impact on Attendance, Dropout, and Graduation Rates ......................................................... 31
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on Teachers’ Perceptions</td>
<td>32</td>
</tr>
<tr>
<td>Research in Alabama</td>
<td>35</td>
</tr>
<tr>
<td>3. METHODOLOGY</td>
<td>37</td>
</tr>
<tr>
<td>Qualitative Research Paradigm</td>
<td>37</td>
</tr>
<tr>
<td>Case Study</td>
<td>39</td>
</tr>
<tr>
<td>Case Selection and Sampling</td>
<td>40</td>
</tr>
<tr>
<td>Data Collection</td>
<td>42</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>44</td>
</tr>
<tr>
<td>Role of Researcher</td>
<td>45</td>
</tr>
<tr>
<td>Validity and Reliability</td>
<td>47</td>
</tr>
<tr>
<td>4. FINDINGS</td>
<td>48</td>
</tr>
<tr>
<td>Case 1</td>
<td>49</td>
</tr>
<tr>
<td>Case 2</td>
<td>62</td>
</tr>
<tr>
<td>Case 3</td>
<td>78</td>
</tr>
<tr>
<td>Cross-Case Analysis</td>
<td>90</td>
</tr>
<tr>
<td>Conclusion</td>
<td>93</td>
</tr>
<tr>
<td>5. CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS</td>
<td>99</td>
</tr>
<tr>
<td>Conclusions</td>
<td>99</td>
</tr>
<tr>
<td>Implications</td>
<td>111</td>
</tr>
<tr>
<td>Recommendations for Future Studies</td>
<td>113</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>115</td>
</tr>
<tr>
<td>APPENDIX A: INTERVIEW PROTOCOLS</td>
<td>120</td>
</tr>
<tr>
<td>APPENDIX B: IRB APPROVAL</td>
<td>123</td>
</tr>
</tbody>
</table>
LIST OF TABLES

1. Research Themes ......................................................................................................................92
CHAPTER 1

INTRODUCTION

The level of success associated with the educational system of a nation strongly affects its
economic growth, military security, as well as its technological competitiveness with the world.
The effectiveness of education in the United States has been closely examined for many years.
Hyman Rickover, a four-star navy admiral, acquired an extensive interest in the United States’
educational system and has contributed two books that discuss educational standards. During the
1950s, Rickover emphasized the importance of every American young person getting the best
education possible and stated that education reform was needed due to the U.S.’s low standards.
The Soviet Union’s launch of Sputnik 1 in 1957 began a competition between the Soviet Union
and the United States regarding space exploration. This event added more concern regarding the
competitiveness of U.S. students in math and science achievement in relation to other countries.
Since this event, international standardized testing has revealed deficiencies among students in
this country in mathematics proficiency. These deficiencies led educational leaders, business
leaders, and politicians to promote educational reform in order to make American students more
competitive academically with students from other industrialized nations (Urban & Wagoner,
2009).

Educational reform has remained a major issue over the past three decades for United
States’ presidents and legislatures. In 1983, the National Commission on Excellence in
Education released A Nation at Risk: The Imperative for Education Reform, which emphasized
the increasing gap between the achievement of foreign students and U.S. students and called for
many reforms relating mainly to high schools. These reforms included higher standards and expectations for students as well as emphasized spending more time on learning.

In 1994 the *Goals 2000: Educate America Act* was signed by President Clinton. This document outlined objectives relating to many aspects of public school including academic standards, drugs and violence, graduation rates, student achievement, professional development of teachers, and parental involvement. The goals set in this document were to be achieved by every public school in America by the year 2000; however, the paths to achieving the goals were left up to state and local school systems. None of the goals set in this document were achieved by the year 2000, although measurable progress was made concerning many of them.

In 2002, the *No Child Left Behind Act* was signed by President George W. Bush, and it emphasized measureable standards and accountability. This act required states to develop basic skill tests to be administered to all students at designated grade levels. School systems and individual schools would be held accountable if students did not perform at designated levels on the tests. The act stated that by the year 2014 all students should be at grade level concerning reading and mathematics. It also emphasized the necessity of sustaining highly qualified teachers and controlling high school dropout rates (Urban & Wagoner, 2009). The call for educational reform emphasized in these acts was addressed in various ways, including the organization of time throughout the school day.

Organization of time in secondary education became one of many concerns relating to reform in education. Goodlad (1984) asserted that time was the most important element accessible to high schools, and the use of it needed to be reevaluated. Sizer (1984) described the day of a high school student as being a frenzied race between classes in order to receive information. He also emphasized the importance of time and the use of it in secondary
education. Boyer (1983) similarly stressed the significance of time and stated that if concepts are carefully explored, time must be utilized judiciously. More time was not necessarily being promoted, but rather a high quality use of available time. In 1994, the National Education Commission on Time and Learning released *Prisoners of Time*, a report describing the current scheduling of time in schools as the “design flaw” in secondary education. This document described the traditional high school schedule as rigid and based on managerial needs.

The traditional high school schedule was developed and implemented in the early 20th century and is still used in high schools today. However, after an exhaustive search of the current literature, there is no indication of the number or percentage of high schools still on the traditional schedule. The traditional high school schedule consists of six, seven, or eight courses that meet approximately 50 minutes each day throughout an entire school year. Two main factors influenced the establishment of the traditional schedule: the Committee of Ten report and the Carnegie Unit. The Committee of Ten was appointed in 1892 by the National Education Association to form a standard curriculum for American schools. This committee encouraged high schools to focus student learning on five or six academic subjects during each of the 4 years of high school (Jeynes, 2007). The Carnegie unit was developed around 1910 by the Carnegie Foundation as a set unit to quantify high school work in terms of time. This unit of measurement became a handy, automatic process of measuring the academic progress of students that is still used in schools across the United States today. The traditional schedule received much criticism because of its frantic pace as well as the traditional lecture style of teaching it encourages. Many reformers stressed the need for alternative forms of scheduling that would relieve the pressure commonly associated with high school education, promote a variety of teaching strategies, and in turn positively affect student achievement (Canady & Rettig, 1995).
Traditional scheduling dominated the high school time structure until a brief experimentation with flexible modular scheduling was used in some high schools during the 1960s. This form of scheduling, developed by J. Lloyd Trump in 1959, was designed to end the rigidity associated with traditional scheduling and focus on the individual learning needs of students by offering classes of varying lengths. Students were given up to 40% of the day for individual study, and classes were taught in varying lengths of time depending on the need for a particular lesson. Initially, students and teachers had positive feelings concerning the effectiveness of the schedule; however, due to the lack of structure associated with this plan, teachers could not control the movement of students, and major student discipline problems occurred. Eventually all schools that had adopted flexible modular scheduling discontinued its use and returned to traditional scheduling (Canady & Rettig, 1995).

Block scheduling emerged during the late 1980s as an alternative designed to allow teachers the extra time during a single class period to employ a variety of instructional strategies and lower the number of classes students were to focus on each day. As opposed to flexible modular scheduling, each day would have a consistent schedule with no flexible time for independent study. Block scheduled classes typically last 80 to 96 minutes.

There are three basic types of block schedules: the 4 x 4 block, the alternating block, and the Copernican Plan. The 4 x 4 block schedule consists of four blocked classes that meet every day for an entire semester. Students receive a schedule of four new classes for the second semester allowing them to complete eight courses for the entire school year. The alternating block schedule also consists of four blocked classes per day, but the eight courses each student is enrolled in alternates each day for the entire school year. The Copernican Plan or the modified
block consists of a couple of blocked classes combined with traditional 50-minute classes throughout the day. There are many class schedule variations possible with this plan.

Block scheduling with these various types of organization, became a popular form of secondary school restructuring during the 1990s (Canady & Rettig, 1995). The Texas Education Agency (1999) reported that by 1995, 40% of high schools across the country were using some form of block scheduling. Queen (2009) reported that by 2008, 72% of United States high schools used some form of block scheduling. He stated that some form of block scheduling meant high schools using block throughout the entire day, schools using block scheduling for only part of the day, as well as schools using block for particular grade levels or subjects.

Proponents of block scheduling described many advantages of the new design. One advantage claimed was the reduction of the number of courses taken each day. This in turn reduces the number of teachers that students work with each day and reduces the number of sets of homework. Less movement and fewer encounters with teachers is thought to lower the anxiety level of students (Gruber & Onwuegbuzie, 2001). Another advantage of block scheduling for students is the additional time available to gain academic credit. Block schedule allows more time for students who fail a course to retake it and graduate on time. Inversely, block scheduling also allows students interested in higher education to receive more college preparation courses and gain academic credits (Wilson & Stokes, 2000).

Block scheduling also allows for longer periods of instruction in a single session than does traditional scheduling. Many times with traditional scheduling it might take two or more 50-minute sessions to entirely cover a single topic. Block scheduling allows teachers the opportunity to get deeper into the content in one sitting. Covering an entire idea in one class session is an advantage for the teacher who plans the lesson as well as for the students who are
exposed to the entire subject (Wilson & Stokes, 1999). Longer class sessions also support enhanced instructional opportunities for teachers. Teachers who teach on block schedule are encouraged to use a variety of instructional techniques, including cooperative learning and hands-on activities. Research demonstrates that students perform better in classrooms where teaching strategies other than just lecture are utilized (Lewis, Dugan, Winokur, & Cobb, 2005).

The school environment can be affected in a positive way by the implementation of block scheduling. Liu and Dye (1998) reported fewer discipline issues during class change. Students change classes six times a day on the traditional schedule. Block scheduling lowers the number of class changes to three. This halves the amount of time students are in the halls and in turn lowers the number of discipline issues during class changes. Veal and Flinders (2001) stated that block scheduling allows teachers and students to spend more time in the classroom together than those who are at schools using traditional scheduling. This produces a social advantage to block scheduling over traditional scheduling. Teachers have half the number of students in class during a day on block scheduling than on traditional scheduling. Teachers on block get to know their students better and develop closer relationships. The same principle is true for students who are in class together. As a result a stronger more positive climate is produced.

Block scheduling reorganizes the high school day into longer lessons and shorter intervals for changing classes. Although this restructuring of time produces some advantages to block scheduling, it also produces some disadvantages. Missing a 96-minute class on block scheduling is almost equivalent to missing two 50-minute classes on traditional scheduling (Gruber & Onwuegbuzie, 2001). This can cause a problem for students who miss school and, in turn, have double the amount of material and class work to make up. Indeed, Wilson and Stokes
(2000) reported that students revealed on a survey that it was difficult making up work on block scheduling.

The extended length of time in block scheduling classes can cause anxiety for students. The attention span of the average high school student is much less than 90 minutes. Even when teachers plan a variety of activities for a class period, students can still feel fatigued (Liu & Dye, 1998). Wilson and Stokes (2000) quoted students who commented that class periods on block scheduling lasted too long.

The lengthy classes on block scheduling can also cause anxiety for teachers. Discipline problems that might occur at the beginning of a class period could continue to worsen throughout the 90 minutes and end with a major confrontation. Also, students feeling fatigue from the lengthy class period would be more likely to cause discipline problems than those on the shorter 50-minute, traditional class period (Liu & Dye, 1998).

Block scheduling fosters a class period filled with a variety of instructional strategies and is needed to keep students focused during a 90-minute block. Proper professional development concerning teaching strategies is needed to properly implement block scheduling (Jenkins, Queen, & Algozzine, 2002). Biesinger, Crippen, and Muis (2008) found little instructional changes among teachers on block schedule from teachers on traditional scheduling. Teachers who felt stress concerning covering the required curriculum many times resorted to lecturing during the entire class period. Teachers who relied mostly on lecture during a block class were disregarding one of the main reasons for using block schedule.

High schools in Northwest Alabama were no exception to the implementation of block scheduling during the 1990s. Of the 24 school systems in the two regional in-service areas serviced by Athens State University and the University of North Alabama, 46% are either
currently using block scheduling or have used it, whereas 46% are currently using traditional scheduling and have never used block scheduling. This is consistent with Canady and Rettig’s (1995) findings that roughly half of the high schools in the United States were either using block scheduling or had considered using it. Two of the systems in this area used a trimester schedule, which separates the school year into three sections of time and requires students to change class schedules three times within a school year. Both of these school systems have changed back to traditional scheduling. Five of the systems used block scheduling for at least 5 years and decided to change back to traditional scheduling. One system used block scheduling one year and then returned to traditional. Currently, 75% of the high schools in the two in-service areas mentioned previously use traditional scheduling.

**Statement of the Problem**

Traditional scheduling has been the option for high schools since the beginning of the 20th century. Yet, educational reformers have consistently criticized it because of the fast pace and lecture style of instruction commonly associated with it. Reformers have consistently maintained that the use of time during the high school day is an important factor in student achievement and should be reevaluated. Block scheduling emerged as the answer to the criticisms associated with traditional scheduling. However, research conducted on block scheduling has not been conclusive concerning its impact on academic achievement or discipline. In short, there are different opinions on whether it is an effective alternative to traditional scheduling. Yet, block scheduling has been the only alternative type of scheduling implemented within the past century that has not been completely abandoned.

Roughly half of the school systems in Northwest Alabama experimented with some form of block scheduling during the 1990s. Of these, half have returned to traditional scheduling. If
block scheduling was presented as the answer to a flawed use of time in secondary schools, why are schools returning to traditional scheduling? Why are 75% of schools in Northwest Alabama still using the criticized traditional schedule?

The change from traditional to block scheduling involved numerous research studies on its effectiveness, workshops and professional development for faculty, and a general sense that everyone concerned should be involved in planning for the change. The decision to return to traditional scheduling has been made with an absence of scholarly research, and its implementation has been advanced with little fanfare. How was this choice made and how was it implemented?

**Purpose of the Study**

The purpose of this study was to investigate why particular school systems in Northwest Alabama have changed from block scheduling back to traditional scheduling and how this change was implemented, and to identify the positive and negative impacts of each type of schedule on these school systems. This study involved teachers, counselors, and administrators from school systems in Northwest Alabama who have experienced both block and traditional schedules. To this end, school professionals involved in this study were selected from school systems that were on traditional scheduling, transitioned to block scheduling, and then returned to traditional.

**Research Questions**

In schools that reverted from block to traditional scheduling,

1. What understanding do teachers and administrators have concerning the reasons school districts changed from block to traditional scheduling?
2. What views do teachers and administrators have on the process of change from block to traditional scheduling?

3. What views do teachers and administrators have about the effective and efficient use of school time?

**Overview of Methodology**

Qualitative research methods were used to address the research questions because of the study’s exploratory nature in examining why the phenomenon of interest is occurring (Creswell, 2007). The use of the qualitative case study methodology allowed a thorough investigation into why school systems were changing types of schedules. This research involved a series of interviews with administrators, counselors, and teachers who experienced the transition from block to traditional scheduling. The data gathered from the interviews were analyzed by looking for themes that could be used to answer the research questions. This permitted a discussion of the perceived merits of block and traditional scheduling and revealed information about the process of transition and policy changes in Alabama schools.

**Significance of the Study**

The use and organization of time during the high school day is a crucial factor that affects the success of education in the United States. School reformers and leaders should continually be producing new ideas concerning the organization of time during the school day in order to increase student learning and achievement. The observations and perceptions of teachers, counselors, and administrators from school systems reverting from block scheduling to traditional can reveal insights into the successes and failures of each type of schedule and contribute to the body of literature concerning each. The results of this study may uncover ideas that would be helpful for future scheduling designs. The outcomes of this study will be
beneficial to all stakeholders involved in making decisions regarding scheduling at the secondary level: administrators, board members, teachers, parents, and students.

**Outline of the Study**

The following chapters outline the process and results of the study. Chapter 2 is a review of the literature that concerns high school scheduling. Chapter 3 is a discussion of the methodology and a summary of the procedures used to gather and analyze data in order to address the research questions. Chapter 4 is a report of the dominant themes that emerged from the interviews and how they relate to the research questions. Chapter 5 is a discussion of the results of the study and implications for future research.
CHAPTER 2
LITERATURE REVIEW

In today’s high schools, American education is in need of change and reform for students to be able to perform academically, especially in comparison to other industrialized countries. In the last decades, reports have emerged about the concerns of how time is spent in America’s high schools. One of the popular reform movements in the last few years has dealt with school organization of time and scheduling. High schools across America have implemented block scheduling as a way to meet the diverse, changing needs of teachers and students. This chapter provides a review of the literature that examines the history of scheduling and the types of block schedule. The review presents the advantages and disadvantages of block and traditional schedules as related to the different aspects of school climate and teacher perceptions. Also, a review of research conducted in the state of Alabama on block scheduling is presented.

History of Scheduling

Before 1892, both grammar and high schools offered flexible schedules. In 1892, the National Education Association founded the Committee of Ten led by Charles Eliott, president of Harvard. The Committee, which was heavily influenced by college leaders, was appointed to form a standard curriculum for American schools. The Committee encouraged high schools to focus student learning on five or six academic subjects during each of the 4 years of high school (Jeynes, 2007). Around 1910, the Carnegie Foundation decided not only to promote 4 years of high school, but to assign a credit to each subject based on the amount of time spent in class. Students would have to take a total of 120 hours in each subject. This meant a student would
take a class for 40 to 60 minutes in length for at least 4 or 5 days a week, a measure that is still used in schools today (Tyack & Cuban, 1995). Thus, the traditional schedule was born.

Traditional scheduling consists of six, seven, or eight periods that meet approximately 50 minutes per day on average throughout the entire school year. Students have five to seven different teachers and textbooks. Teachers prepare for six classes with an average total of 100-180 students. The traditional schedule has received much criticism because of its frantic pace as well as the traditional lecture style of teaching that it encourages (Canady & Rettig, 1995).

Most high schools were structured using traditional scheduling until there was a brief experimentation in the 1960s in an attempt to change scheduling. This experiment was known as the Flexible Modular Schedule, designed by J. Lloyd Trump in 1959, which would also become known as “The Trump Plan.” This type of scheduling was implemented to end the rigid traditional schedule and to focus on the individual learning needs of students by offering classes of different lengths and sizes. Classes could range from 20 minutes to 140 minutes, depending on the need at that time, and students were given up to 40% of the school day for individual study (Canady & Rettig, 1995). Teachers and students had positive feelings concerning the effectiveness of this schedule; however, due to the lack of structure, teachers could not control the movements of students, which resulted in increased discipline problems. Eventually, all schools that adopted this model of scheduling returned to traditional scheduling (Queen & Isenhour, 1998).

In 1957, with the launch of Sputnik, a competition began with the Soviet Union and America in regard to space exploration. America and educational leaders began to worry about the educational system and felt that the United States was falling behind in the areas of science and math when compared to other countries. President Eisenhower began an educational reform
effort and developed the Commission of National Goals in the 1950s. This committee, along with other committees, began to develop and present reports on education (Queen & Isenhour, 1998).

Educational reform has remained a major issue over the past three decades among U.S. presidents and legislators. The National Commission on Excellence in Education in 1983 released *A Nation at Risk: The Imperative for Education Reform*. This report emphasized the increasing gap between the achievement of foreign students and American students. High in the United States needed higher standards and expectations for students as well as an emphasis on time spent in actual learning (Queen & Isenhour, 1998). By 1991, The National Education Commission on Time and Learning was established to better understand the correlation between learning in schools and time. In 1994, it released *Prisoners of Time*, a report describing the current scheduling of time in schools as the “design flaw” in secondary education. The report stated that schools were “prisoners of time,” and that “time is learning’s warden.” It reported that students must “learn what you can in the amount of time we make available” (n.p.). However, all students are not able to learn in this manner (Canady & Rettig, 1995).

The traditional high school schedule was rigid and based on managerial needs. The *Prisoners of Time* report called for high schools to be structured around learning, not time. It even recommended adding time to the school day and year. In 1996, the NASSP and Carnegie Foundation released a report called *Breaking Ranks: Changing an American Institution*. In this report, organization and time were listed as major components of reform (Queen & Isenhour, 1998). According to Canady and Rettig (1995), scheduling is a tool that can lead to improvements in schools. A productive schedule can make use of resources and time in an effective manner, improve school climate, and increase effective instructional practices.
As reform efforts began to cause a restructuring of U.S. high schools, scheduling became a reconstruction tool. Block scheduling was listed as a movement under the component of school organization. Block scheduling is when “at least part of the daily schedule is organized into larger blocks of time (more than 60 minutes) to allow flexibility for varied instructional activities” (Canady & Rettig, 1995, p. 17). Robbins, Gregory, and Herndon (2000) stated that block scheduling “creates large segments of instructional time for staff and students” (p. 1). Scheduling reform began to be employed in United States high schools to meet the changing needs of teachers and students. Block scheduling promised to reduce the number of classes teachers had to prepare for, the number of students to interact with, the number of class changes, and transition time. The fragmented learning that was prevalent with traditional scheduling could be discontinued using block scheduling. It could also increase opportunities for students to accelerate and teaching strategies to be implemented, as well as provide time for more student involvement (Canady & Rettig, 1996). Queen (2009) reported that as of 2008, 72% of high schools were implementing some form of block scheduling school wide by either grade or subject (p. 1).

**Types of Block Scheduling**

Block scheduling emerged during the late 1980s as an alternate design to allow teachers the extra time during a single class period to employ a variety of instructional strategies and lower the number of students to focus on each day (Canady & Rettig, 1995). As opposed to flexible modular scheduling, each day had a consistent schedule with no flexible time for independent study. According to Queen (2009), as of 2008, there were 52 different types of block scheduling being implemented in high schools. These can be broken down into three basic types of schedules: The 4x4 block, the alternating block, and the modified block. The two most
popular are the 4x4 and the alternating block. The modified block includes schedules such as the Copernican plan and the trimester.

In the 4x4 block or accelerated schedule, students take only four classes lasting 90 minutes each day for the entire semester. At the beginning of the second semester, students receive a schedule of four new classes, which allows them to complete eight courses over the school year. Teachers teach only three classes each semester and have a 90-minute planning period (Canady & Rettig, 1995; Canady & Rettig, 1996; Queen, 2009). Canady and Rettig (1996) listed several advantages and disadvantages to this model. One advantage is that teachers have fewer courses to prepare for and teach fewer students. The 4x4 model actually reduces the number of students by 25%. Teachers have longer planning times, as well as more class time for employing a variety of teaching strategies. Teachers and students both get a fresh start at the beginning of each semester. Students have only four classes to focus on, as well as fewer books. Students have the opportunity to receive eight credits and to retake a class if they fail the first semester. They have the opportunity to participate in acceleration and to participate in other programs such as work-study. However, there are some disadvantages: retention difficulty in courses students do not get back to back, difficulty in covering the curriculum, difficulty fitting in year-long advanced placement and elective courses, difficulties with the students’ attention span, and difficulties resulting from less time for homework.

The alternate day, also referred to as A/B, odd/even, day 1/day2, week 1/week2, changes periods or classes within a day or a week. This alternating schedule also consists of four blocked classes a day, but the eight courses students are enrolled in switch each day for the entire year. A student might have science, history, driver’s education, and Spanish one day, and then English, math, physical education, and drama the next. This alternating of classes from day to day
continues for the entire school year. Students have eight 90-minute classes a year that rotate on a daily or weekly schedule. All courses meet the same number of days over the year. Teachers teach six classes and see the same number of students every other day (Canady & Rettig, 1995; Canady & Rettig, 1996; Queen, 2009). Advantages of this type of scheduling as reported by Canady and Rettig (1996) include extra time to plan for media incorporation and a variety of instructional strategies. Also, teachers only see students every other day, so this gives a cooling off time for discipline issues. Students have fewer assignments and assessments in a given day. Disadvantages include the lack of balanced and consistent planning times, alternating daily schedules, and a complicated school-wide calendar. Also, teachers need more review time. Students have limited opportunity for acceleration, and if any students fail, they must wait to make up credit in summer school or the next school year.

Modified scheduling includes a couple of blocked classes combined with traditional-length classes. There are many examples used in schools, but the most common are the trimester and Copernican. In the trimester, the school year is split into three trimesters each lasting 12 weeks. During each trimester, students take two or three 90-minute block classes and three or four traditional length classes in split blocks for the entire school year. Traditional length or split blocks would include classes such as physical education, enrichment, or remediation (Canady & Rettig, 1995; Canady & Rettig, 1996). Advantages of the trimester schedule for teachers include 20%-25% fewer students, less grading, longer planning times, and an increase in time to implement various instructional strategies. Advantages for students include the opportunity to take more electives and to repeat a class if failed, and the opportunity for acceleration and remediation (Brower & Moran, 2009).
The Copernican model was the first type of block schedule created by Joseph Carroll (Sharan, Shachar, & Levine 1999). The goal of this model was to reduce subjects and classes that students needed to take each day. This model consists of one or two blocked classes combined with traditional 50-minute classes throughout the day. This model allows students to focus on one or two classes at a time each semester for a minimum of 200 minutes per day for one class or 90-110 minutes for two classes. Each semester, students enroll in one or two new courses. The remaining time in the day is spent on elective or enrichment courses such as music and physical education. Some advantages are fewer courses and fewer students. Students are in intense learning situations for longer periods of time and are better able to get to know their teachers (Queen & Isenhour, 1998).

Impact on Student Achievement

Research studies conducted to determine if block scheduling improves student achievement are examined in this section. These studies are quantitative studies that compare grade point averages, standardized test scores, end of course grades, or ACT scores of students on block scheduling to students on traditional scheduling. The results are not consistent and do not strongly support one schedule over the other. Many of the designs of these studies contain uncontrolled variables that may have affected the results. Moreover, limitations of these studies restrict the results and reduce the population to which they can be generalized. Typical of many, Gruber and Onwuegbuzie (2001) concluded that block scheduling works well for some schools but not for others.

Some studies comparing the achievement of students on block and traditional scheduling have concluded that neither schedule increases student achievement. In a study by Bottge, Gugerty, Serlin, and Moon (2003), achievement among students from the Midwest on block
schedule was compared to those on a traditional schedule based on GPA, state testing, and ACT. Results showed no differences in the achievement of students on the block when compared to the traditional schedules. A study conducted by Rettig and Canady (1999) concluded there was no evidence that block scheduling increases achievement on standardized tests. Lockwood (1995) conducted a study in Dothan, Alabama high schools that compared algebra and geometry achievement of students on the block to those on a traditional schedule. Lockwood noted no significant achievement differences according to math achievement based on scheduling methods. However, students were able to take eight additional courses on block as compared to traditional schedules, so the overall academic achievement was increased by graduation.

Several studies pointed to traditional scheduling as being more effective. Lawrence and McPherson (2000) compared end-of-course tests of students on block and traditional scheduling and found that students on traditional scheduling scored notably higher than those on block. The results of a study conducted by Pliska, Harmstron, and Hackman (2001) with 568 Illinois and Iowa high schools stated that block scheduling did not positively impact the scores on the ACT. Arnold (2002) conducted another study of students in high schools in Virginia that compared traditional and block schedules to achievement on the TAP. Testing results from the 11th grade TAP showed increases across all six subject areas during the year block scheduling was first implemented. However, the area of math showed the least improvement. Scores decreased during the second year. Therefore, this study concluded that block scheduling doesn’t necessarily improve achievement over many years.

Various researchers conducting studies comparing block and traditional scheduling within specific subject areas have concluded that traditional scheduling is more effective. In an experiment conducted in a Texas High School, students struggling in Algebra I were provided a
modified block schedule. In this high school, a higher average of students in the block failed Algebra 1 as compared with traditional scheduling. However, students reported that they learned more and could concentrate better on the block (Skrobarcek, Chang, Thompson, & Johnson, 1997). In a study conducted in Georgia, student achievement on the graduation exam was compared by students on traditional and block scheduling. Gruber and Onwuegbuzie (2001) reported that there were no differences in writing. However, students on the traditional schedule showed higher scores in math, language arts, science, and social studies. In this study, block scheduling appeared to have a disadvantage. Lawrence and McPhearson (2000), looking at two high schools in southeast North Carolina, reported that students on the traditional schedule received higher mean scores in Biology, Algebra 1, American History, and English 1 than they did on the block schedule. Randler, Kranich, and Eisele (2008) presented the same content to classes on traditional schedule and block scheduling. The students on the traditional schedule performed better on the posttest.

Numerous studies concluded that block scheduling was more effective than traditional scheduling. Trenta and Newman (2002) found that students’ grades improved on block scheduling with no relation found in ACT scores or attendance. In a study using the 11th-grade graduation exam in a high school in Georgia, students on the block schedule exhibited a pass rate of 78% as compared to 67% of students on traditional schedule (Payne & Jordan, 1996). Mistretta and Polansky (1997) reported an increase of 25% in honor roll students with the implementation of block scheduling. In a study by Deuel (1999) conducted in Broward County schools, 10 high schools on block scheduling were compared to 13 high schools that used a traditional schedule. Students on the block schedule received more A’s than those in traditional scheduling as well as fewer failing grades. In a study conducted by Knight, Leon, and Smith
(1999) on student achievement, block scheduling showed greater results on semester tests and grades as compared to traditional scheduling. However, students in advanced classes performed better on the traditional schedule. Lewis et al. (2005) conducted a study in northern Colorado that compared the achievement of students on block and traditional schedules based on the Levels test and ACT scores. Students on block scheduling had higher scores in reading and mathematics when compared to traditional scheduling on the Levels test and outperformed them on ACT scores.

Geismar and Pullease (1996) conducted a study at a Florida high school that had incorporated a form of block scheduling during the 1994-1995 school year. When grades taken after the implementation of block scheduling were compared with the previous year, there was a 7.6% increase in the number of students passing classes at the end of the year. The failure rate decreased 12%, which may be explained by the fact that if students failed a class they would have the opportunity to retake it during the next semester. Also, this school saw an increase in the enrollment in upper level math and science classes. However, when student scores from the SAT and ACT were compared concerning types of schedules, no significant difference was found. Yet, students that took the International Baccalaureate exam the year block scheduling was implemented did show a slight increase in scores. In a study conducted by Khazzaka (1998) of six high schools that implemented a block schedule after being on the traditional schedule, there was a 12% increase in the number of A’s among ninth graders. The majority of students experienced an increase in grades, including at-risk students. There was also a 9% increase in students with a 3.5 GPA or higher as well as an increase in the overall number of honor roll students. Average ACT scores increased from a 19 to a 22.5. There was also an increase in students taking AP classes. According to Eineder and Bishop (1997), when block scheduling
was implemented in an Ohio high school, there was a 92% increase in the number of ninth graders making honor roll on block scheduling. For 11th and 12th graders on block, the number receiving A’s increased 24% and the number of students failing declined 15%. There was also an increase in overall GPA and the number of honor roll students.

Several studies examining student achievement within specific subject areas have concluded that block scheduling is more effective than traditional. Lewis et al. (2005) reported that students on block scheduling outperformed students on traditional scheduling in math with no relation found between gender and ethnicity. According to Queen, Algozzine, and Eaddy (1997) achievement on the end-of-year testing in Lincoln County, North Carolina, improved in the area of social studies when the block was implemented and continued in the following years even when the scores of other state schools in social studies were declining. A study by Shortt and Thayer (1998) compared two types of block schedules with a traditional schedule using reading and math assessments for 11th-grade students in Virginia. Students improved on reading and math test scores with block scheduling as compared to traditional scheduling. Positive achievement was noted in math, foreign language, and AP classes, and with at-risk students. However, transfer students exhibited difficulty with this type of schedule. Hess, Wronkovich, and Robinson (1999) conducted a study at an Ohio high school using 10th graders and their scores on GPA and the Olsat on the block schedule. Students in block scheduling increased their scores in English and Biology. The other subject areas showed no differences. Nichols (2005) conducted a study using five high schools in a large urban school system in Indiana to determine if block scheduling increased achievement in the area of English and Language arts. Block scheduling had a slightly positive impact over several years.
In a study conducted by Stader (2001) results were mixed concerning the effectiveness of block scheduling as it related to subject area. English and history teachers had a decrease in lower scores and failing scores and an increase in A’s and B’s when the block schedule was implemented. However, it is important to note that math and science teachers did not see the same results. Students in block performed better on the ACT and fewer students scored in the lower portion of the test. Overall, teachers, with the exception of those in math and science, preferred the block and felt that it increased student achievement.

Several studies have also been conducted to determine if block scheduling offers academic advantages to students preparing for college. Salvaterra, Lare, and Gnall (1999) investigated whether block scheduling better prepared students for college in science, math, and foreign language as compared to traditional scheduling. This study found that students were prepared for college regardless of the type of schedule they had in high school. In another study in science, Dexter, Tai, and Sadler (2006) reported no achievement differences in college students based on schedules implemented in high school. According to Zelkowski (2010) schools on block schedule had scores that were reported being two thirds of a grade level below schools on traditional schedules. It was also reported that when students did not take math in continuous courses, lower achievement was reported and students reduced their chances of completing college by 20%. Wronkovich, Hess, and Robinson (1997) studied student performance on a college prep math test program and concluded that students who took math on block scheduling were at a disadvantage when compared to those on a traditional schedule. However, Wilson and Stokes (2000) stated that block scheduling allows students interested in going to college to receive more college preparation courses and academic credits.
Clearly the results of the quantitative studies examined in this section do not reveal data that consistently promote one type of scheduling over the other concerning student achievement. The context of each situation in a study is important because the populations of teachers and students vary from school to school. These complexities were not able to be addressed consistently using quantitative methods. Therefore, what is needed is a more detailed understanding of how the two kinds of schedules are experienced by teachers and students.

**Impact on Instructional Time and Strategies**

A school system choosing to implement block scheduling must prepare for the transition with proper professional development and training of faculty and staff. The key to making the block system work is rich and diverse instruction. A typical class on block scheduling must include at least two or three types of activities. Although lecture is appropriate in some cases for a limited amount of time, it should not be used during the entire class period on block scheduling. Group work and cooperative learning should be used along with lecture and individual work. The extended class time on block scheduling gives teachers an opportunity to use various methods of instruction that should increase learning in the classroom. However, teachers need training to know how to implement changes and plan for the extended time during a block period (Jenkins et al., 2002).

Block scheduling allows students to take eight courses in one year, whereas traditional scheduling allows seven courses. Even after considering the time saved from only changing classes three times, the total amount of time in class on block scheduling is less than on traditional scheduling. This places pressure on teachers to cover the amount of content needed to meet curriculum standards. Sustaining suitable academic pacing throughout an entire semester can be challenging for teachers, especially for those teaching core classes that have a large
number of content requirements. Veal and Flinders (2001) said that teachers reported that there was too much content to cover in a single semester on block scheduling. This pressure to thoroughly cover the required content standards can also be stressful for teachers while planning classes and units. Veal and Flinders also reported teachers saying that more preparation time was needed to completely plan for classes on block schedule. This is due to the importance of not wasting time and thoroughly covering the curriculum. This enhanced stress to cover material on block scheduling can also lead to instructional problems.

Block scheduling fosters a class period filled with a variety of instructional strategies. This variety of instruction is needed to keep students focused during a 90-minute block. Teachers who feel stress concerning covering the required curriculum will often resort to lecturing during the entire class period. They believe that lecture is the easiest and quickest way to cover material. Lessons that promote constructivist type instruction are ignored, and lecture is used to get through the material. Teachers who rely mostly on lecture during a block class are disregarding one of the main reasons for using the block schedule. Biesinger et al. (2008) found few instructional differences between teachers on block schedule and teachers on traditional scheduling. These teachers used lecture most of the time during the block. A disadvantage of block scheduling is poor instruction when teachers choose not to use a variety of instructional techniques.

Jenkins et al. (2002) conducted a study using a survey to examine teaching strategies used on block scheduling and traditional scheduling. They found that teachers’ opinions concerning teaching strategies were the same on block and traditional scheduling. Teachers were teaching the same way on block as teachers were teaching on traditional scheduling. Teachers were lecturing during the entire block period without group work or cooperative learning.
Varieties of instructional strategies were absent in the block scheduled classrooms. In the survey, teachers reported low levels of training concerning group work and cooperative learning. They also reported that professional development related to instructional techniques on block scheduling was not present. Quality professional development must be available to young teachers as well as seasoned teachers for block scheduling to be successful. A school’s success or failure on block scheduling is determined by the skill of teachers to control its possibilities and improve instruction.

Zepeda and Mayers (2001) studied a group of first-year teachers and their experiences with block scheduling. First-year teachers commonly struggle with issues like classroom management and usually learn a great deal during the first year of teaching. The problems these first-year teachers reported were specific problems with block scheduling that generally dealt with the extended class period and managing the time in the block. Teachers reported running out of material frequently. They would adjust for the lack of material by assigning students worksheets, questions at the end of the chapter, or silent reading. Another major issue these first year teachers mentioned was the inability to transition smoothly from one learning activity to another. Classroom discipline problems would occur during transitions and the teachers would try to compensate by assigning busy work and avoiding group work and cooperative learning. First-year teachers stated that student teaching did not involve block scheduling, and no professional development was offered before they began their first teaching job. This study supports the theory that well-planned transitions and varying teaching styles are necessary for successful block scheduling.

Teachers who teach on block schedule only teach three classes a day with one 90-minute planning period. This offers many advantages to teachers. Teachers still have to plan for enough
activities for the same amount of time, but have fewer class preparations. Planning time is
doubled for teachers on the block over those on traditional schedules, so this gives teachers more
time to carry out their duties and prepare for their classes. Teachers on the block have a smaller
amount of paperwork, so they can concentrate more on instruction and less on paperwork
(Wilson & Stokes, 1999).

Canady and Rettig (1995) reported that on traditional scheduling students receive
instruction that is “fragmented” or broken up. Wilson and Stokes (1999) reported that block
scheduling allows for longer periods of instruction in a single session than does traditional
scheduling. Many times traditional scheduling might take two or more 50-minute sessions to
entirely cover a single topic. Block scheduling allows opportunity to get deeper into the content
in one sitting. Covering an entire idea in one class session is an advantage for the teacher who
plans the lesson, as well as for the students who are exposed to the entire thought. Teachers in
traditional schedules are pushed for time especially due to the increased number of students. By
the time teachers take roll and check homework, they are limited in time, and this leads to a
lecture style classroom instead of a variety of instructional activities. In a study conducted by
Geismar and Pullease (1996) it was evident that block scheduling led to improvement in
classroom instruction, strategies, and use of time. Before, teachers relied heavily on lecture for
the majority of the class, but after classes became more exciting. Salvaterra and Adams (1996)
studied 129 teachers’ perceptions in northern Pennsylvania and saw a decrease in classrooms that
relied on lecture methods and an increase in collaborative, student-involved instruction. In a
study conducted by Eineder and Bishop (1997) teachers reported more time to focus on
instruction and provide opportunities for cooperative learning. In Duel’s (1999) research, a
majority of teachers using the block schedule used more learning activities and strategies in their
classrooms as compared to teachers using the traditional schedule that relied on lecture. Longer class sessions also support enhanced instructional opportunities for teachers. Teachers who teach on the block schedule are encouraged to use a variety of instructional techniques including cooperative learning and hands-on activities. Students perform better in classrooms where teaching strategies other than just lecture are utilized (Lewis et al., 2005).

Impact on Attitude and Participation

The traditional schedule can be overwhelming to high school students. On the traditional schedule students have six or seven different classes to attend and prepare for, as well as different teachers and classroom rules and procedures to learn. This can lead to a great amount of stress (Geismar & Pullease, 1996). In a study by Rettig and Canady (1999), block scheduling provided an environment that was less stressful for students due to the reduced number of classes. In a study conducted by Geismar and Pullease (1996), the majority of students felt that block scheduling was helping them become more focused on school work, and students appeared to have a better attitude toward school. Payne and Jordan (1996) reported that teachers thought students were less stressed and frantic and therefore more willing to participate in group activities. Biesinger et al. (2008) reported a small increase in positive attitudes toward learning and math. Students also reported a greater sense of “self-efficacy.” Students in traditional schedules, on the other hand reported a decrease in positive attitude. Block scheduling reduces the number of classes and teachers as well as the number of classes with homework. This, along with less movement and encounters with teachers, lowers the anxiety level of students (Gruber & Onwuegbuzie, 2001).

In an experiment where students struggling in algebra I were provided a modified block in a Texas high school, Skrobarcek et al. (1997) stated that students felt less rushed and
experienced less stress because they understood concepts. They were also able to complete homework, and this led to more participation and involvement. They also had time to ask questions. However, some students became bored if there were not a variety of activities. The extended length of time in block scheduling can cause anxiety for students. The attention span of the average high school student is much less than 90 minutes. Students have a difficult time continually focusing in a single class for 90 minutes without a break. Even when teachers plan a variety of activities for a class period, students can still feel fatigue (Liu & Dye, 1998). Wilson and Stokes (2000) quoted students commenting that class periods on block scheduling lasted too long.

**Impact on Discipline**

Canady and Rettig (1995) reported that traditional schedules can lead to increased discipline problems. One reason for this is an increase in the number of times classes change on a traditional schedule. Block scheduling lowers the number of class changes to three times. This halves the amount of time students are in the hall and in turn lowers the number of discipline issues during class change (Liu & Dye, 1998). In a study by Rettig and Canady (1999), teachers reported fewer discipline problems and an overall decrease in tardy referrals. In a study conducted by Geismar and Pullease (1996) the administration noted a decrease in discipline problems as well as tardy referrals due to less class changes. Khazzaka (1998) studied six high schools that implemented a block schedule after being on the traditional schedule and noticed a 4% decrease in truancy, 45.5% decrease in reports of violence, and a 57% decrease in office referrals. However, in this study, reports of tardiness did increase by 17%. According to Eineder and Bishop (1997), when block scheduling was implemented in an Ohio high school there was improvement in overall behavior as well as a drop in discipline, tardy referrals, and
suspensions. Fights were reduced by 40%. Mistretta and Polansky (1997), Deuel (1999), and Stader (2001) all reported a decrease in student discipline and hall infractions with the implementation of block scheduling. However, Veal (1999) examined a Springfield High school that implemented a block, traditional, and hybrid schedule simultaneously. Students in the block schedule had a higher number of discipline referrals. Liu and Dye (1998) concluded that students feeling fatigue from the lengthy class period would be more likely to cause discipline problems than those on a shorter, 50-minute traditional class period. Also, discipline problems that might occur at the beginning of a class period could continue to worsen throughout the 90-minute class and end with a major confrontation. This problem could be reduced on the traditional schedule because the amount of time students spend in a class is almost cut in half.

**Impact on Student–Teacher Relationships and Interaction**

Block scheduling allows teachers and students to spend more time in the classroom together than those who are at schools using traditional scheduling. This produces a social advantage to block scheduling over traditional scheduling. Teachers have half the number of students during a day on block scheduling, which allows teachers to get to know their students better and develop a closer relationship with them. The same principle is true for students who are in class together. These closer relationships produce a stronger positive climate for students and teachers (Veal & Flinders 2001). Canady and Rettig (1995) reported that traditional schedules can decrease positive student–teacher interaction, as the greater number of classes each day makes it difficult for students to develop positive relationships with teachers. According to Skrobarcek et al. (1997) students receive more individual attention and teacher interaction on the block schedule. In a study by Khazzaka (1998), teachers stated that they had more time to get to know students and have positive relationships with them when switched from
According to Eineder and Bishop (1997) when block scheduling was implemented at Philo high School in Ohio, 95% of teachers and 80% of students indicated an improvement in relationships between teachers and students and stated that they knew more about each other. In a study conducted in Broward county schools, teachers on the block schedule were able to spend more individual time with students. They were able to get to know students and their strengths and weaknesses, which led to an increase in positive relationships (Deuel, 1999). Stader (2001) reported that students in Missouri on a block schedule exhibited a better relationship with teachers than when they were on a traditional schedule.

**Impact on Attendance, Dropout, and Graduation Rates**

Missing a 90-minute class on block scheduling is nearly equivalent to missing two 50-minute classes on traditional scheduling (Gruber & Onwuegbuzie, 2001). This can cause a problem for students who miss school and have double the amount of material and class work to make up. Students enrolled in challenging academic classes who miss more than one day of school due to sickness or fieldtrips may have a major challenge in recovering from missed classes. Wilson and Stokes (2000) reported that students revealed on a survey that it was difficult making up work on a block schedule. In a study conducted by Geismar and Pullease (1996) teachers saw an increase in attendance. This was due to the fact that absences results in more time missed and more make-up work. Teachers’ attendance also improved. In an experiment where students struggling in algebra I were provided a modified block in a Texas high school, attendance on the block was lower than that in traditional classes and more students failed algebra I on the block schedule. It was also difficult to make up assignments and catch up in class when days were missed (Skrobareck et al., 1997).
Khazzaka (1998) studied six high schools that showed 100% increases in the graduation rate of Native Americans and 50% increases in at-risk students during block scheduling. Attendance improved 13.5% with an overall 21% decrease in absences. In a study conducted by Geismar and Pullease (1996), graduation rate increased 9% the year block scheduling was implemented. When block scheduling was implemented at a high school in Ohio, Eineder and Bishop (1997) reported a small decrease in dropout rate and a small improvement in attendance. Stader (2001) concluded that both students and teachers reported better attendance in the block.

An increase in graduation rates could be attributed to having more time to gain academic credit. This is helpful to academically overachieving students as well as to students who struggle. Block scheduling allows more time for students who fail a course to retake it and graduate on time. This is particularly useful for math courses. Students who fail a math course on traditional schedules cannot take two math courses the next year to make up the failed credit, because math courses must be taken sequentially. Therefore, they would have to go to summer school to make up the credit or not graduate on time. However, block scheduling allows a student to take two math courses in one year (Wilson & Stokes, 2000).

**Impact on Teachers’ Perceptions**

Wilson and Stokes (1999) conducted a survey to investigate teachers’ perceptions of block scheduling, and the overall results revealed positive attitudes. Teachers reported that standardized test scores had increased, learning was more enjoyable, students were on task more, uses of alternate assessment increased, students interacted more during class, and attendance increased. They also reported that failure, dropout, and discipline problems decreased. It was the opinion of the teachers involved in this study that block scheduling had a positive effect on learning. In a study by Rettig and Canady (1999) the majority of teachers supported block
scheduling at least 2 years after implementation. Teachers also stated that a change in scheduling works better if everyone is involved in the process, and staff development is critical when implementing a schedule change.

Edwards (1995) stated that teachers from Orange County High School using 4x4 block scheduling believed that this schedule increased learning due to it being simple and flexible. Also, the teachers felt that students were more prepared for jobs and postsecondary education. In a study conducted by Geismar and Pullease (1996), teachers stated that students responded better to learning in the block schedule and student behavior improved. Teachers felt that they had more time to help students, and students had more opportunity to work in groups. They felt that block scheduling met the needs of all the school’s population. One concern of teachers was how students would perform on the end-of-year test in May on a subject that they had during the first trimester or semester.

A study was conducted by Salvaterra and Adams (1996) using 129 teachers from northern Pennsylvania high schools concerning teachers’ perceptions of block scheduling. The majority of teachers preferred the block schedule over the traditional schedule. The block schedule allowed more group work, more time to complete lessons and cover material, and more time on tasks. However, teachers did express concerns for students who struggled academically. Also, some teachers did have increased stress with disruptive students due to longer class periods. Some teachers had to reduce concepts during the block due to the shorter number of days. Teachers in math and science did not prefer the longer classes over more days.

According to Payne and Jordan (1996) teachers liked the block schedule due to the increase in opportunities for staff development and planning time. The majority of the teachers improved instructional methods due to an increase in planning time. Skrobarcek et al. (1997)
noted that teachers who participated in staff development incorporated more instructional strategies into the classroom. Khazzaka (1998) reported that teachers on block scheduling did not want to go back to the traditional schedule. They enjoyed having more time to plan, and thus their classes became more meaningful. However, they were concerned about scheduling AP or year-long classes, students that missed several days, and lack of preparation to use strategies. Some teachers and administrators felt that students would benefit from year-long classes in certain areas. Some teachers reported difficulty keeping at-risk students on task. Queen, Algozzine, and Eaddy (1997) reported changes from Year 1 to Year 2 of block scheduling. Teachers reported advantages of block scheduling to be use of various teaching models, increased time for planning, and more classes offered. Disadvantages included a decrease in retention from one year to the next, increased need for outside study, and overuse of lecture. Teachers were also concerned when students transferred from another school that was implementing a traditional schedule.

In a study conducted by Hurley (1997) teachers were interviewed from five high schools that implemented block scheduling. In general, teachers liked having fewer classes and fewer students. They agreed it was an improvement. Hamdy and Urih (1998) reported that teachers from two high schools implementing two different forms of block scheduling believed that staff development should be provided and increased instructional strategies should be implemented. In this study, teachers did experience an increase in stress due to extended times and classroom management. Benton-Kupper (1999) conducted a study using three high school English teachers in their second year of teaching under a block schedule after moving from a traditional schedule. Teachers noted an increase in student learning and interest, which they attributed to the extra time and increased content as well as getting to know students better. Stader (2001) reported that
teachers had more difficulty planning on the block, but they had more opportunities to incorporate more instructional strategies. In a study by Weller and McLeskey (2000), a high school with inclusion had implemented block scheduling. Teachers were able to change the way material was presented and had more time to work with students with disabilities. Some challenges were longer classes and when students were absent it was difficult to make up work. None of the advantages or disadvantages noted were specifically for students with disabilities, and certain strategies were helpful for all students.

**Research in Alabama**

In reviewing literature regarding block scheduling, many studies have been conducted, but few were in Alabama. Liu and Dye (1998) constructed a survey to investigate teacher and student feelings concerning block scheduling in southeast Alabama. Teachers and students surveyed reported an overall positive attitude toward block scheduling. Spencer and Lowe (1994) conducted a study to examine the academic achievement of students on block scheduling. This study was conducted at a high school in Alexander City, AL. This high school was on traditional scheduling, but it had a few classes meet during two 50-minute class periods for one semester. Student grades in the longer block periods were compared with students in the traditional 50-minute classes. Comparison of student grades did not reveal any significant results. Students overall performed the same on both schedules. This study was presented as a paper at the yearly conference of the Mid-South Educational Research Association, but it was never published in a research journal. Lockwood (1995) conducted a study in Dothan, AL high schools that compared the achievement of students in geometry and algebra on the block schedule to those on a traditional schedule. Lockwood concluded that achievement was not significantly related to the type of schedule, but students on the block schedule were able to take
eight more classes and earn more credits, so the overall academic achievement increased. However, teachers expressed concern for students with low ability who had difficulty with school attendance and attention problems when implementing the block schedule.

Most of the research concerning block scheduling conducted in Alabama was conducted by Wilson and Stokes from the University of North Alabama. They published two studies in 1999 and two studies in 2000. Most of the research they conducted used surveys to investigate teacher and student perceptions of block scheduling. They compared schools that were implementing block schedule to schools that had used block scheduling for 3 or 4 years. The overall results of their studies were consistent: Teachers and students reported positive attitudes regarding block scheduling, believed it was better than traditional scheduling, and perceived that academic achievement increased on block scheduling.
CHAPTER 3
METHODOLOGY

Introduction

Supporters of block scheduling boasted great things concerning its potential in creating a positive learning environment and freeing high schools from the hectic traditional schedule. Yet, approximately half of schools in northwest Alabama never transitioned to block scheduling and half of the schools that switched to block have since returned back to traditional scheduling. Studies investigating student achievement through classroom grades and standardized test scores have constantly yielded inconsistent results regarding block and traditional scheduling. These inconsistencies produced questions concerning whether block scheduling was as positive a move as originally thought. This study investigated why particular school systems in Northwest Alabama have abandoned block scheduling and returned to the traditional schedule. A qualitative multiple case study method was used to investigate and answer the research questions.

Qualitative Research Paradigm

Qualitative research is used to make sense of specific social events, groups, or interactions. It employs a set of interpretive procedures to determine the meaning of social phenomena and make visible the significance people assign to them. In order to investigate a social event or problem, researchers must begin with assumptions, use a possible theoretical framework, and gather data in the natural setting of the people and places being examined. Inductive reasoning is used to examine the data, which produces patterns and themes. The final
conclusions include participant voices, the role of the researcher, and a description and interpretation of the event or problem (Creswell, 2007).

Qualitative research emphasizes the interpretive nature of investigation and appropriately positions the study inside the social setting of the researcher, participants, and readers of the study. Data are collected in the natural setting where the participants experience the event or problem being researched. Participants are not observed in a laboratory or removed from their common setting, but researchers go to the place of the participants to observe the social phenomena being studied. Data are collected by observing human behavior, analyzing documents, and interviewing individuals. Instruments or protocol developed by other researchers are normally not used. The researcher may use a personally developed protocol, but the researcher is the instrument that gathers the data. Multiple sources of data are typically used in a qualitative research project. The researcher may incorporate interviews, observations, and documentation rather than just have one data source. All data sources are examined in order to develop categories and themes. Data are analyzed using inductive reasoning. Patterns are observed from all data sources revealing themes and categories. This process involves the researcher working back and forth between the data and categories until an inclusive group of themes is established (Creswell, 2007).

The focus of a qualitative study should be on the meanings given to the problem by the participants. The researcher should remain focused throughout the process on the ideas of the participants, not the researcher’s ideas about the issue or what others have written about the subject. There is not a prescribed plan or process that is to be strictly followed, because the process of a qualitative research project is emergent and constantly evolving. As the research project progresses, the researcher may be led in a totally different direction than the course taken
at the beginning: The interview questions may change, different documentation may be needed for analysis, or a different set of individuals may need to be observed (Creswell, 2007).

Qualitative research is a method of investigation based on interpretation. The data gathered by the researcher must be analyzed and interpreted based on what the researcher sees and hears. The past experiences, knowledge, and understanding of the researcher cannot be separated from the interpretation. After documenting the results of a qualitative research project, the readers and participants may make their own interpretations of the phenomena, causing multiple views of the problem to emerge. The qualitative researcher attempts to create a holistic picture of the question or issue being investigated, which involves stating multiple viewpoints, identifying all factors involved, and describing the whole picture that emerges from the data (Creswell, 2007).

Case Study

Creswell (2007) defined case study research as “a qualitative approach in which the investigator explores a bounded system or multiple bounded systems over time, through detailed, in-depth data collection involving multiple sources of information, and reports a case description and case-based themes” (p. 73). Yin (2003) understood case study methods as being qualitative, quantitative, or a combination of both. Case study designs are appropriate when investigating questions involving why or how something is occurring. After deciding a case study is an appropriate methodology to investigate a topic, the object of the study, called the case, must be determined. A case must be something that has definite boundaries; it cannot be an entity with no discernible end. The case may be an individual, a group of individuals, a community, a program, and so on. Studies may involve a single case or multiple cases, depending on what is most appropriate for the study. The unit of analysis is the source of information and may be an
individual, group of individuals, or documents. A variety of data sources should be used when conducting case study research, which may include but are not limited to the following: interviews, observations, surveys, or documents. After all data are collected, a thematic analysis of all information is conducted and a triangulation of all sources is considered to produce themes that answer the research questions (Merriam, 1998).

**Case Selection and Sampling**

This research project is a multiple case study involving three cases from Northwest Alabama. Each case was a school system from the two in-service regions of Athens State and the University of North Alabama. School systems adopt a system-wide scheduling plan, therefore using an entire system as a case allowed a wide range of sources from which to collect data. There were 24 school systems in this area, all of which were rural, with a few city systems similar to a suburban region. However, no urban areas were present. Of these 24 systems, 18 used traditional scheduling and 6 school systems used block scheduling during the time of this research. Five of these school systems currently on traditional scheduling were on block scheduling and then switched back to traditional. Two of the school systems used trimester scheduling then changed back to traditional. Of the 24 school systems in this region, 11 systems either used block scheduling and transitioned back to traditional or still used block scheduling at the time of this research. Eleven of the school systems never experimented with an alternative form of scheduling.

Convenience sampling was used to choose the school systems involved in this study. Of the five school systems from the Northwest Alabama region that used block for at least 5 years and then decided to go back to traditional scheduling, three were chosen for this study because they were geographically close to where the researcher lived and worked. One of the five
systems was not used because it was the system in which the researcher was currently employed. One high school in each system was selected and faculty from that school interviewed. After explaining the purpose of this study, central office personnel were asked to identify a school having teachers and principals that could positively contribute to this project.

The first case involved a rural county school system with three high schools, each covering Grades 7 through 12. The school system was on traditional scheduling until August 1999, when they implemented the change to a 4 x 4 block schedule. This block schedule required students to take four classes during the fall semester and four different classes during the spring semester. The system stayed on the block until August 2008, when the high schools went back to traditional scheduling. The high school selected for this study contained approximately 520 students, 95.8% Caucasian, 2.9% African American, and 1.3% other ethnicity, with 59.2% eligible for free or reduced lunch.

The second case involved a city system located in a rural area with one high school covering Grades 9 through 12. The school system was on traditional scheduling until August 1996, when the change to a 4 x 4 block schedule was implemented. This block schedule required students to take four classes during the fall semester and four different classes during the spring semester. The system stayed on the block until August 2008, when the high school went back to traditional scheduling. The high school contained approximately 434 students, 66.6% Caucasian, 32% African American, and 1.4% other ethnicity, with 45.2% eligible for free or reduced lunch.

The third case involved a county school system with six high schools each covering Grades 7 through 12, all in rural areas. The school system was on traditional scheduling until August 1997, when the change to a 4 x 4 block schedule was implemented. This block schedule
required students to take four classes during the fall semester and four different classes during the spring semester. The system stayed on the block until August 2007, when the high schools went back to traditional scheduling. The high school selected for this study contained approximately 1,244 students, 78.1% Caucasian, 17.8% African American, 3% Hispanic, and 1.1% other ethnicity, with 23.8% eligible for free or reduced lunch.

**Data Collection**

Multiple sources of data are utilized while conducting a qualitative case study in order to achieve the most comprehensive representation of the central phenomenon. Case studies typically gather data through interviews, observations, and analysis of documents (Creswell, 2007). The data used for this research project were collected from a variety of interviews. There was nothing to observe, therefore observation was not a plausible method. There also were no supportive documents identified at the onset of this project. However, the data collection process was continual and the researcher was constantly asking participants for other sources of information and other individuals that may be helpful to the study. Documents were identified during the data collection process and were investigated, but these were not found to be pertinent to the project. Interviews of the three following types of school employees were conducted in order to gather data for this project: administrators, teachers, and school counselors.

Three administrators were selected from each case and interviewed individually. These included the superintendent of schools, a secondary curriculum supervisor, and a high school principal who was an administrator during the transition from block to traditional scheduling. The interviewer asked opened ended questions and led the discussion concerning scheduling. The interviews were recorded and transcribed for analysis.
A group of teachers from each case was purposefully chosen to participate in the teacher interviews. The teacher interviews conducted in each case involved 4 teachers, including one from each of the following core disciplines: history, math, science, and English. Using teachers from each discipline allowed investigation into contrasting opinions concerning scheduling as it related to each core subject area. The teachers had to have taught on both block and traditional scheduling and been a teacher in the school system during the transition from block back to traditional. Administrators were asked to select four teachers with appropriate qualifications who they believed would contribute in a productive manner to this research project. The interviewer asked open-ended questions and led the discussion concerning scheduling. The interviews were recorded and transcribed for analysis.

At least one school counselor from each case was chosen and interviewed. The counselors were high school counselors during the transition from block to traditional scheduling. The superintendents or high school principals were asked to identify the counselors that met the qualifications for this study and would contribute the most to this project. High school counselors were chosen to be interviewed in this study because of their involvement in making student schedules, adjusting student schedules during the school year, and advising students concerning their schedules.

All interviews were conducted using the same interview protocol (Appendix A) designed to answer the research questions. Each interview was 30 to 45 minutes in length. Interviews of teachers were conducted at their school during their planning period. Counselors and administrators were also interviewed at their school at a convenient time during the school day. Central office personnel were interviewed in their offices at the central office of their district. All interviews were recorded with a digital voice recorder. Each recording was changed to a
digital audio file and emailed to a hired transcriptionist. The interviews were transcribed and transferred to the researcher through email. Transcripts were printed and used for data analysis. After all interviews were transcribed and sent to the researcher, the transcriptionist confirmed through email that all files related to this project were deleted. All transcripts were kept on the researcher’s computer and hard copies in a notebook. At the conclusion of this project all files and recordings were deleted and transcripts shredded.

The researcher received permission from the University of Alabama Institutional Review Board for Human Use to conduct this research study (Appendix B). The superintendent from each participating school system gave written permission for this research project to be conducted in his or her school district.

Data Analysis

A thematic analysis was used to analyze the data gathered. The data analysis process was continuous and took place throughout the entire data gathering procedure. All interviews were recorded using a digital voice recorder and then transcribed by a transcriptionist. Each case was analyzed separately. After transcriptions were produced, the researcher read through the data to get an overall understanding of the information. The interview data was then read many times throughout the analysis process. The data were coded categorically, by locating textual sections and allocating code labels. Each line of transcripts was labeled with a number. While considering research questions and literature review, the researcher read each line of transcripts and highlighted any phrase that he judged as significant and gave it a code that briefly described it. The code was written down and labeled with the line number. While continuing to read the transcripts, any other phrases matching that code was written under it and labeled with its line number. After multiple coding sessions occurred, the data were analyzed for emerging themes.
that applied to the research questions. Similar codes were written together and emerging themes were identified from each group of codes. After all cases were coded and themes identified, a cross-case analysis occurred to compare results among cases and produce rich descriptive results. The cross-case analysis revealed the factors and themes that were identical in each case. These factors and themes that were consistent in all three cases were established as solid responses to the research questions guiding the study. Results of the data are reported in chapter 4 of this project, and the results discussed in chapter 5.

Role of Researcher

An explanation of researcher positionality is needed due to the interpretive nature of this study. I was the instrument of data collection through interviews. During the interviews, I followed a protocol of questions and follow-up questions that directed the discussion. I was also the key person involved in identifying the categories and themes that emerged from the data using thematic analysis. Therefore, a declaration of my experiences and opinions relating to traditional and block scheduling is needed in order to identify assumptions made during this study.

I have degrees in choral music education and secondary mathematics education and 17 years of experience teaching in the public school system. The first 3 years of teaching was at a kindergarten through sixth-grade elementary school teaching general music. Twelve years has been spent teaching all levels of high school mathematics and one year teaching seventh-grade math. Currently, I teach high school mathematics and chorus at a rural high school in Northwest Alabama and have also taught math classes part-time at the local community college. I have an equal number of years of experience with block scheduling and traditional scheduling. Block scheduling has been used by the three school systems in which I have taught high school math.
My current system used block scheduling the first 2 years of my employment and then transitioned to traditional scheduling.

As a teacher, I find block scheduling advantageous because of the long planning period each day and fewer classes to prepare for. However, it is my opinion that block scheduling does not work well for mathematics, especially when teaching struggling students. Even using a variety of teaching strategies, students can only absorb a limited amount of math content at one time before tuning out the teacher and instructional activity. Also, it is very difficult to cover the amount of content required by the state course of study while using block scheduling. A teacher must average two lessons per day in order to cover the same amount of material that is covered on traditional scheduling. If only one concept is taught a day, then only half the required math content will be covered. Therefore, I find a small amount of content each day for the entire school year to be a much more productive use of time than large chunks of time in block scheduling. I do not know if other math teachers share my opinions or if teachers in other core areas have the same views concerning scheduling. It was my intent to use my experiences with scheduling to ask probing questions that gather the most substantial data for this project and to investigate the perceptions of other teachers regarding the topic of scheduling.

My knowledge of scheduling and organization of time during the school day has been enhanced through the review of literature conducted for this study. This knowledge helped me to facilitate informed discussions with the interviewees and interpret the data gathered from the interviews. During the interviews, my intent was to analyze not only what they said but also the manner in which they said it. I attempted to identify any positive or negative feelings concerning the discussion topic as well as any bias toward the topic that might exist with the interviewee.
Validity and Reliability

It is important to establish validity and reliability within a qualitative research project. Qualitative validity is established when the researcher incorporates methods that insure the accuracy of the results. Validity was established in two ways. First, the participants interviewed were asked to read a report that summarized the conclusions made from the data and asked if their perceptions concerning the topic were presented accurately in the conclusions. If they agreed that their views were interpreted correctly, then it was concluded that the results were valid. Second, any negative or inconsistent information that did not support the themes was presented in the write-up. This added to the credibility of the interpretation. Reliability was established by checking transcripts to ensure that obvious mistakes were not made during transcription and taking notes regarding the meaning of themes to ensure the meanings remained constant throughout the project.
CHAPTER 4

FINDINGS

This study investigated why particular school systems in Northwest Alabama changed from block scheduling back to traditional scheduling, examined how this change was implemented, and identified the positive and negative impacts of each schedule on these school systems. The following three research questions directed the inquiry:

1. What understanding do teachers and administrators have concerning the reasons school districts changed from block to traditional scheduling?
2. What views do teachers and administrators have on the process of change from block to traditional scheduling?
3. What views do teachers and administrators have about the effective and efficient use of school time?

As described in chapter 3, multiple case study design was employed involving three school systems in North Alabama that changed from block to traditional scheduling. Each school system represented a case. Data was gathered through interviews of administrators and teachers: superintendents, secondary curriculum supervisors, principals, counselors, and four teachers from each school system. The principal, counselor, and teachers participating in the interviews were from a single high school selected from each school system. The same interview protocol was followed in each case (Appendix A) and each interview was audio taped, transcribed, and analyzed. Analysis involved reading through each interview and identifying codes. After coding all interviews in a single case, similar codes were combined and emerging
themes identified. Initially, a cross-case analysis was conducted and themes that were present in all cases were identified.

Superintendents were asked if any materials existed that might be helpful in determining why a school board decided to first change to block scheduling and then to change back to traditional. Board minutes were the only documentation found. However, these were not transcripts of official discussions by the board but simply notes on the results of the board votes. As such, the only data collection method available for this project was interviewing school personnel involved in the change.

This chapter presents the findings of these interviews. Each case will be offered separately and the following will be presented for each case: a description of the interviewees, reasons the school system changed back to traditional scheduling, explanation of the process of schedule change, each interviewee’s opinions concerning which type of schedule they prefer, and emerging themes with a description of each. After all three cases have been described, the cross-case analysis will be presented and overarching themes identified.

Case 1

Three administrators, one guidance counselor, and four teachers were interviewed. The superintendent of schools was in the process of retiring due to health reasons and had already turned over all responsibilities to the assistant superintendent until the new superintendent took over in January 2013. This retiring superintendent was the administrator responsible for the schedule change back to traditional but wasn’t available for an interview. The assistant superintendent/secondary curriculum supervisor, who was a teacher during the change from block to traditional gave an interview and was the only representative involved from the board of education. The principal at the high school (the newly elected superintendent of education), was
assistant principal during block scheduling and was principal the first year the schools went back to traditional also gave an interview. The retired principal of the high school who was principal during block scheduling and was a teacher during the change to block was interviewed. The guidance counselor in charge of scheduling who was at the school during block and traditional scheduling was interviewed along with four teachers from each of the core subjects.

The school system’s change from traditional to block in the late 1990s was strictly to improve education. The retired principal was a teacher at the time and stated that block scheduling was “the new kid on the block” and was presented as a new kind of scheduling that would be beneficial to all. The teachers would like the new schedule because of having fewer subjects and students to focus on at a time as well as a 96-minute planning period each day. Students would have fewer subjects to focus on and would have more opportunities to get ahead or make up failed classes. The economy was strong so money was not an issue. The administration was prepared to spend extra for what it saw as an improved system of instruction. Professional development was required of all teachers to help them plan block classes with a variety of activities. Most teachers were able visit at least one high school in another district that was on block scheduling and see how the system worked. There was much preparation before the transition to block scheduling occurred.

We took several—I know I went on two as a teacher—and just about all of the teachers here got to go at least somewhere and visit a school system. I went up into Tennessee, around Savannah, I believe. And all of us got to make at least a couple of trips to go and look at the block. (Retired Principal)

All interviewees stated that the primary reason the system changed from block back to traditional was financial. Administration believed it would be cheaper to run the schools on traditional scheduling because teachers would be teaching and supervising students more minutes during the school day than on block. Teachers had 96 minutes of planning on block and
only 50 minutes of planning on traditional. This would allow the schools to function with fewer teacher units and save money. This would not be a significant enough reduction to cause massive teacher layoffs through reduction in force, but could be accomplished through employee attrition. A few secondary reasons were given by the counselor and assistant superintendent. The 96-minute class periods were too long. The students were not getting 96 minutes of quality instruction during class due to down time at the end of periods. It was difficult for teachers to keep students focused for such long intervals. Grades 7 and 8 were housed with Grades 9 through 12, and teachers were shared between them. This meant seventh and eighth graders had to be on block scheduling like the ninth through twelfth graders. But the 96-minute block proved especially difficult for seventh- and eighth-grade teachers.

The time element—the 96-minute block—I felt like we were not getting quality—or 96 minutes of education. It just seemed too long—and especially where we are housed together here, seventh and eighth with high school—that was entirely too long for the seventh and eighth graders. Now one year, it may have been a couple of years, we split there, and they did an eight-period day on the junior high end, and we did a full period on the high school end. That didn’t seem to work too well, either. I mean, the bell was ringing all day and all. (Counselor)

Yes, funding would be the number one thing. Another thing is that our high schools are 7 through 12, so we share quite a bit of teachers. So, if you have a teacher who is teaching in high school who is on block, trying to share a teacher with a junior high teacher who is on a block or a period system just doesn’t mix, because your times are out of kilter. (Assistant Superintendent)

The change from block back to traditional was a process that involved input from principals, guidance counselors, and a committee of teachers and parents. The final decision was made by the superintendent of education and the board of education. The retired principal stated that the subject was brought up at principal meetings many times before his retirement. He was the main principal defending block scheduling and he believed that he was responsible for persuading the superintendent to keep it for a few extra years. The change back to traditional
was made after his retirement. The English teacher was on the committee assembled to investigate the possible change from block to traditional. She said that teachers and parents were on the committee. They discussed different options including a possible trimester system, but were not asked to vote. The final discussion was made by the superintendent of education and successfully voted on by the board of education. Parents were familiar with a traditional schedule because that was the school schedule when they were students, and also with block scheduling because of their children currently in school. Evidently, parents did not have strong preferences for one schedule over the other. Moreover, the interviewees did not have a problem with the decision making process or hard feelings toward leaving the block schedule.

But I think it is just what you get used to. Right now, I am busy with seven periods a day. If they tell me tomorrow that I have to go back to the block, then okay, we can do that too. (English Teacher)

Professional development was minimal during the change from block back to traditional in contrast to the original change to block. The history and math teachers remembered some professional development being offered in the summer but nothing was required. The English and science teachers did not remember any professional development being offered. There were faculty meetings where the management aspect of the traditional day was discussed and ways to manage stress when adjusting to the new schedule. The science teacher said it was like a support group meeting. “They just assumed that everybody knew how to teach on the traditional schedule, I guess. If you can teach on block, then you certainly can on traditional” (Counselor).

Each interviewee was asked which schedule they preferred and why. All those not in the classroom, which included administrators and the school counselor, thought block scheduling was overall better for the school. They felt the options available to students on block were more beneficial than on traditional: students only had two core classes at a time, students could take
extra courses, or students could make up failed courses easier. However, they said teachers had to use a variety of teaching strategies for it to work properly. “In a perfect world, if the resources were adequate by the state to fund us, I would prefer the block system, because it allows us opportunities to offer more courses and to do more things outside of the norm” (Assistant Superintendent).

The teachers interviewed had differing opinions concerning which schedule they preferred. The science teacher preferred block scheduling because the long class periods allowed time for a class to completely do a lab and discuss results. Being able to do a variety of activities each day did not seem to be an issue with the science content. The English teacher preferred traditional scheduling overall because she felt that English needed to be offered the whole school year in order to develop writing skills, fully prepare students for standardized tests, and fully cover content in the course of study. However, she said the extra time during a class period on block was helpful on days the students were writing essays. She said she could teach on either schedule and be happy, but she thought she accomplished more with the students on traditional.

The history teacher did not prefer either schedule. She thought the block was too long and traditional was not long enough. She said she had a difficult time keeping the students on task for the entire 96 minutes of a block class. Between the two schedules she reported that she got more accomplished on the traditional schedule. “I guess I would prefer the traditional. If I had my request, I guess maybe I would ask for a modified block, you know, where you have five periods instead of four, and do the 70-minute period” (History Teacher).

The math teacher stated that she preferred block scheduling for her standard classes but traditional for her advanced classes. She said it was difficult teaching advanced math classes on block because of the amount of content that had to be covered in a single class period in order to
cover everything in the course of study. In other words, there was only so much math a student could process in one class period. Also, she felt that math needed to be taught the entire school year to help with retention of the material. A student could have math in the fall of one school year and not have math again until the spring of the next year. She felt that was too long of a break and was not good for students. The reason she preferred block for her standard classes was because in this school system they offered Algebra A in the fall and Algebra B the following spring. The two geometry courses were offered the same way, which meant the standard students had math the entire school year on block scheduling. So she was able to teach a lesson and allow the students to do practice problems or homework while she was there to answer their questions and keep them on task. Students on standard diploma had completed their math after their sophomore year.

For advanced classes—my algebra II and my precalculus—I hated it, because you could not make sure that they had the understanding of one concept before moving on to another, and still cover the material they needed that the state mandates that we cover. And so, it constantly felt like you were having to throw it at them, and then you would pray that they were getting it on their own time. (Math Teacher)

All interviewees were asked about the use of time in general with regard to the way our high schools are currently set up. All said that students were in school long enough and no more time was needed concerning the number of days in school or minutes during the day. High school students are transitioning into adulthood but are not adults and need breaks and time off from school. The math teacher said it was important for students to have time off at the holidays in order to spend time with family and to have time to be a kid. Concerning the start time of school, all said they thought it was fine because a large demographic of students would leave high school and go straight into the workforce. Having to be at school at a certain time in the morning was needed to help prepare them for work or college. This high school did not have a
break during the day but did have 5 minutes between each class, which gave students a chance to
go to the restroom and go by the snack room. When asked whether recess was needed in high
school, no one thought that was a good idea because of the potential discipline problems. By law
there must be a certain number of minutes of teaching during the day, and in order to add recess,
time would have to be added on to the school day. The assistant superintendent said no more
time was needed in school, but we needed to be sure we were using every minute of the day as
effectively as possible.

I just think it is better to go ahead and start at 8 o’clock in the morning, because that is
what most of them are going to have to be doing for the rest of their lives, and they need
to get used to that pattern. (Math teacher)

I do not see that these 180 days that were mandated now—I do not see that the addition
of 5 days has helped anything. This is my 37th year, so I have seen all the schedules, and
just because we make the kids go 5 days more, I don’t think it has any impact on the
quality of education. (Counselor)

I definitely do not think we need more instructional time. I feel as if we need to use the
time we have more effectively, rather than adding time or taking away time. (Assistant
superintendent)

Traditional Schedule Is More Stressful for Teachers and Students
than Block Schedule

All teachers interviewed discussed how difficult the transition back to traditional
scheduling was during the first year. For teachers, they had to plan for six classes at a time
rather than three on block. The classes were shorter, but having to mentally think about six
classes a day was more exhausting than the three longer classes. Teachers also said the paper
work doubled by adding the other three classes. The classes were shorter, but teachers said they
would take the same number of grades each week than they did on block. For example, they
would still have a test once a week and two or three daily grades, but on traditional they would
have doubled the amount of papers to grade because of the six classes. Also they would have to grade these papers with half the planning time they had on block scheduling.

I remember personally it seeming like I had been thrown under the bus the year that we went back to the traditional seven-period day. The bell rang all day long, it felt you got into the classroom, you just got started on something, and it was time to go again. I think that was a lot of the feeling. (English teacher)

Traditional scheduling was also a difficult adjustment for students when first implemented. On the block, the guidance counselor would schedule two core classes each semester and fill in the other classes with electives. This allowed the students to focus on only two core classes at a time. On traditional, students had all four core classes for the entire school year. Managing the homework and tests for all four core classes increased the anxiety levels of the students. Teachers had to adjust to the amount of homework that was given. At first, teachers would assign the same amount of homework per night to students on traditional that they had assigned on block. The English, math, and science teachers reported receiving complaints from parents.

So when they changed to the periods, they would come home with work from four or five subjects on a given night, and the students were overwhelmed, and would find that their grades were dropping, and for several 6-week periods, the kids were having a hard time adjusting to it. We could tell that even their mentality and stress level—I guess you could say—came out, and the parents, like I said, didn’t like it. (Science teacher)

All teachers and administrators talked about the frantic pace of the traditional schedule, especially when it was first implemented. On the traditional day, teachers said students would come in for what seemed like a few minutes, the bell would ring, and a different set of students would come in for a few minutes, and the pattern would continue all day. They said it seemed as if students were constantly going from place to place. On block, students only had four classes to attend and it did not seem as fast paced. Students were in the hall changing classes six times a
day as compared to three times a day on block. The administrators all mentioned the fact that the more the students are all in the halls together, the greater the chance of having discipline issues.

**Block Scheduling Gives Students a Greater Chance to Be Successful**

The three administrators and counselor all preferred block because of the extra choices and chances block scheduled offered that traditional did not. If a student failed a class, it could easily be rescheduled during the next block and made up without the need for summer school. This became a problem with traditional scheduling because if a student failed a class that was scheduled for the entire school year, the only option was summer school. For “at-risk” students this was a problem if they did not have money to pay for summer school or refused to attend. The principal believed this caused a small increase in the dropout and failure rates after traditional scheduling was implemented. The change was also problematic for courses that had to follow a sequence, such as math classes. For example, students could not take Algebra B before completing Algebra A. On block scheduling a student could take two math classes in two separate semesters. This is not an option on the traditional schedule.

On block, say if you failed English 10 in the fall semester, then you could turn around and repeat it in the spring semester, and catch up. So, that probably had something to do with it, too, as far as the failure rate being higher at the end of the year. (Principal)

For students wanting to get ahead the block schedule worked well. Students who wanted to take extra classes to prepare for college could easily fit those in. The counselor mentioned that more electives and extra classes could be offered when the school was on block. Also dual-enrollment courses through the local community college or university were easy to schedule because on block they would have time to leave school, drive to class, then return to school within the period. Students wishing to take dual-enrollment classes on traditional scheduling had to take the college class after school.
Some of our students do a dual enrollment. They take a college class to try and get ahead. That is another thing. On the block schedule, it is a lot easier to do that. With 96 minutes, they could schedule a class at UNA or Shoals at any time during the day, and they would have time to get to class and back. On block, we could. (Counselor)

Courses Completed in One Semester on Block Have Some Negative Impacts on Education

The English, math, and history teachers all mentioned that not having the students all year long on the block was a problem in regard to retention of material and standardized tests. They felt that students remembered the subject matter better when they were exposed to it the entire school year and when continual review was given. As has already been stated, this was true for math because there was only so much content a math student could absorb in one class session. The only standardized test given to high school students while the system was on block scheduling was the Alabama High School Graduation Exam. It was given to everyone in March of each school year. Students who took English, history, math, or science in the spring semester only had 2 1/2 months of instruction before the Graduation Exam was given. This put those students at a disadvantage.

I cover the same materials, but I feel like it [traditional] gives me a better opportunity to give them a better opportunity to be saturated with that material. I just make sure I present that one concept, they go home, they practice it, they come back the next day, and we can make sure that understanding is there before we move on. That is, the concept, because with math, it builds so much, and if you are not really having that deep understanding, well, you might not notice it that next day, or even a week or 2 weeks down the road. It is going to pop up that you really didn’t get it. You really didn’t learn it. And the block is lending itself to more issues in that way. (Math teacher)

The English and history teachers said they could not cover as much material on block scheduling as they do on traditional. The counselor also stated that he believed more material was being covered by teachers on traditional rather than block. He believed the teachers were able to do a better job of covering more topics by presenting a small amount of material everyday throughout the entire school year rather than big chunks each day for one semester on
the block. He did not know if presenting more material was necessarily a good thing or not; he believed teaching something thoroughly was more important than covering a large amount of material that students did not completely understand. But he did acknowledge that teachers had to cover all topics in the Alabama Course of Study. Teachers could present the same amount of material on block as traditional, but if students’ retention of material was taken into consideration, more could be taught on traditional.

Do you think they get more material covered on traditional than they would on block? Probably. Is that a better thing, do you think? [Hesitating]...It depends. Like, when I was in the classroom, I never was big on X-number of pages being covered. I would rather for the number of pages I covered to be with quality teaching and learning than to say, “We covered the whole book, and nobody learned anything.” Although you have got to follow curriculum and meet certain standards, so I do not know if that would have mattered or not. (Counselor)

The English, history, and math teachers as well as the guidance counselor said that a modified type of block that allowed students to take courses all year long would be a schedule that might work better than traditional or the 4 x 4 block. This could be 96-minute block periods on rotating days where four classes meet one day and then four different meet the next day and then they keep rotating for the entire school year. Or some classes could be shorter 50-minute classes all year long with only two 96-minute block classes during the day. The science teacher had no negative comments about block scheduling as it related to teaching science, so science classes could possibly keep the 96-minute class periods in a modified type of block.

Professional Development Was Not Continually Offered While the System Was on Block

The retired principal described the amount of professional development that was required when block scheduling was first implemented. Teachers received workshops on how to plan a variety of activities in order to use the 96 minutes of a block class period effectively and were
also allowed to go and visit other school systems that were on block to see how the new schedule
worked. This was good for the teachers in the system at the time of the schedule change.

However, teachers hired into the school system after the initial implementation of the block
received no professional development to help them know how to effectively teach 96-minute
classes. All of the teachers interviewed were hired into the system after the implementation of
block scheduling. The English, history, and science teachers only received training to teach on
the block during their student teaching. The math teacher had only taught on traditional
scheduling before being hired at this high school and had no training concerning teaching on
block periods. The system did offer a mentor teacher to help teachers during their first year, but
no professional development was offered.

*(What type of professional development did you receive that prepared you for teaching on
block? None. I was at a previous school, and then when I came here, they were already
on the block. I mean, all I had was the help of another teacher. Honestly, I was a little bit
concerned about working on the block when I first started, but as I worked with that
person, they explained to me how they did things in their classroom, and that allowed me
to transition it over to mine. (Math teacher))*

**A Strong Teacher Will Keep Students Engaged No Matter What Schedule Is Used**

The history teacher and counselor felt that there was wasted time on block scheduling due
to the attention span of students and the long class time. It was easy for teachers to be slow
getting started with class because there was plenty of time. Also, it would be easy to allow
students free time at the end of class due to exhaustion of students and teacher. The history
teacher commented on the difficulty of keeping students engaged for the entire 96-minute period.
This was why they believed that the traditional schedule was more effective in covering material
than block scheduling.

*(Well, from what I understand, [on block] it was like when they walked down the hall,
you would look in a teacher’s room, and there was not active teaching going on, I guess
you would say; but, I don’t think it has to be all the time, I mean, and I am not for busy)*
work, but the teacher can certainly do things when they are not standing in front of the classroom lecturing, but that is not always what they would see in there. A lot of times they would see things like students with their heads on their desks, things like that. (Counselor)

All interviewees discussed the importance of using a variety of activities and instructional methods when teaching a 96-minute class. The only way to use the entire block effectively was to have an average of three different activities planned for each day. To try and lecture the entire 96 minutes would not work. The retired principal and English teacher said there were some older teachers who never changed teaching methods and would lecture the entire block. This was not productive and was not beneficial to the students. The assistant superintendent and science teacher said that discipline problems would occur in block classes where students were not engaged the entire 96 minutes by using a variety of activities and instructional strategies. All those interviewed in this case were aware of what needed to happen in order for block scheduling to work effectively.

You have to have at least three things ready for that given day to do. There is some down time. For biology labs, you’ve got all that time at the end of the period, and some kids may work faster than others, which you’ve got to take advantage of to keep on going to the end of the period, without them being so bored that they quit on you after 4 minutes or so. (Science teacher)

The assistant superintendent stated that time was only used effectively during class when students were engaged in learning. Students must be involved and participating whether it be listening to a lecture and taking notes, group work, or doing practice problems. This was true for traditional scheduling as well as block. The math teacher said that a strong teacher could keep a class on task and engaged the entire 96 minutes no matter what was being taught. It might be difficult to do every day, but a strong teacher could accomplish it. The assistant superintendent said that the most important person in a classroom was the teacher. The teacher determined the success level of the classroom no matter what schedule the school was using.
I don’t think that the schedule has a thing in the world to do with it. I think it all goes back to the number one person in charge, and that is the teacher, and the number two person in charge, and that is the leadership of the school. Those two things are going to impact your success, whether you are on a schedule that I can’t even name or pronounce vs. a block vs. a Carnegie vs. this vs. that. (Assistant superintendent)

**Case 2**

The superintendent was new this school year but had been in the school system as an elementary teacher and principal for most of her career. She was interviewed and was able to discuss what she knew about the schedule change and future plans for the school system. She had a son who was in high school during the first change from traditional to block scheduling and was able to comment on the schedules from a parent’s perspective. The high school principal was new to the school system in 2012. He did have experience as a teacher and administrator on both schedules in another district, and so was interviewed. This school system did not have a secondary curriculum supervisor, so the assistant principal of the high school was interviewed. He was an administrator at the high school during the change from block to traditional and was able to state why the change took place from an administrative perspective. A school counselor in charge of scheduling and four core teachers who taught at the high school during the change from block to traditional were interviewed. The school counselor and English teacher were the only two in the system who worked at the high school during both schedule changes.

The change from traditional to block that occurred during the 1990s was implemented in order to improve education. The English teacher said it was sold to the faculty and parents as a change that would allow teachers to know their students better and allow more time for in-depth learning. The counselor said it was promoted as being beneficial for everyone, students and teachers. It was a new way of doing things that would give students more opportunities as well
as easing the paperwork for teachers. Teachers could concentrate on teaching using a variety of activities, with longer planning periods and fewer students during the school day. The decision to change to block scheduling was not a sudden change. Stakeholders from all groups were included in meetings and involved in the decision process: administrators, teachers, parents, and students. Much professional development was afforded the teachers in order to prepare them for teaching on a 96-minute block.

I think the entire wave of feeling was that this is good for your students. This is good for your school, and good for your faculty. A new way of doing things. It will increase learning. Because the concept was that you did so many minutes of this activity, thirty minutes of another activity, and thirty minutes of another activity, so that the students who had different styles of learning could be given those different styles, and all of the students could be reached within the class period. (School Counselor)

In contrast, the decision to change back to traditional scheduling in 2008 was made by the superintendent of education. The primary reason given by everyone interviewed was financial. The school could save money through fewer teacher units if teachers were responsible for supervising students during more minutes of the day. The current superintendent of education stated that she did not see how it saved money because the high school had more teacher units now than it did while on the block. The change was sudden, and many teachers at the high school were not happy about the decision. The math teacher said the faculty was asked its opinion about changing schedules, and the majority did not want to change. Then a few months later it was announced in a faculty meeting that the high school would be on traditional scheduling the next year.

We were given the reason from the superintendent that this will save money, it is going to happen, and there is no choice. And prior to that—sometime in the winter—we actually had a survey of the faculty. “Would you prefer to stay on block or would you prefer to change?” And the vote was very, very, very high for staying on block schedule. But then, a month-and-a-half later, we had the announcement in a faculty meeting one day that “By the way, we are changing to a seven-period day next year.” And I asked for numbers and how much money it would save, and the response that I received was, “Twenty
million dollars. Ha ha! No, I am just kidding.” And that was the response—in a faculty meeting—that I received. (Math Teacher)

The current superintendent, assistant principal, and English teacher discussed other factors they believed went into the decision to change back to traditional. All three commented on teachers not using the time effectively for the entire block period. The assistant principal said some teachers had become lazy and would teach for half the block and then let the students work on homework the rest of the time. Some students would work on homework while others would just sit and talk. The superintendent also mentioned that all homework was being completed at school and none was going home. She said this was not the purpose of block scheduling. The students should be engaged with a variety of activities during the entire 96-minute block. She also stated that issues arose while the school was on block with teachers showing numerous videos during class. She said complaints came from parents, and a board policy was passed that required teachers to submit a video approval form every time a video was shown. The assistant principal said teachers knew what they should have been doing during class; some chose not to and were allowed not to by the administration.

The purpose of block was more time in class. More in-depth study of the material. They did not specify that you would have time in class to do your homework, but they all did. So, as a parent, homework was done before the children got home, and you did not have that as an added thing to do...but that is not the purpose. (Superintendent)

But with the block schedule, I noticed the downtime gradually increased, and I think from that standpoint, we needed to change. (Assistant Principal)

There were a lot of people dead set against it, because I think here, we were very lazy. I mean, do you know how it is to show a movie and watch the movies, and how it is when you have got a fourth of the day to plan? You know, and I think maybe he saw some of that, that we weren’t covering as much. (English teacher)

There was no professional development offered to teachers when the change from block to traditional scheduling was implemented. The science teacher said he remembered some
discussion in faculty meetings regarding planning for 50-minute classes versus 96-minute classes, but no professional development was offered. The English teacher said there were teachers who had only taught on block scheduling, and the change to traditional was difficult for them, just as the original change from traditional to block was for teachers.

And we were just thrown into it. It was just, “Okay, we’re going back to it.” Then, we had the same thing. We had people here who had never taught on anything but the block. So then what do you do for the whole year? You know, and it was, especially the people in business. I think it threw them for a real loop, because the large block of time was just so great for them. (English teacher)

All interviewees were asked which of the two schedules they preferred. Those favoring each type of schedule were almost evenly divided, with the superintendent not committing to either one. The superintendent was from an elementary background and had no experience teaching or being an administrator at a high school. However, her son was a student at the high school when the system changed from traditional to block, and as a parent she was involved in the meetings concerning the transition. She thought having fewer classes for her son to concentrate on at a time was good, but when he missed a day on block it was the equivalent of missing 2 days on traditional. She thought block scheduling was good as long as teachers used the block classes the way they were supposed to be used.

Well, he was an athlete and had three classes to study for, and three classes to buy supplies for vs. seven. Homework was somewhat easy. The down side was that my child got sick at the beginning of the school year and missed 3 days, which would be about a week-and-a-half of traditional equivalency, and it was hard to bounce back from that, even at the beginning of the year. (Superintendent)

The principal, school counselor, and science and math teachers favored block scheduling. The principal and school counselor discussed the overall advantages of block scheduling for students. Students could make up failed courses easier and take more electives on the block. Also, students could take dual-enrollment classes during the day easier on block due to the
longer class periods. The science teacher liked block because of his subject matter and the need to conduct labs and experiments. On block, he could discuss a topic, have the class conduct a lab, and then have time at the end to discuss results and clean up. He said he was limited as to which labs he could do on the traditional schedule due to the time restraint.

In an ideal world, I like the block schedule, because it gives students more opportunities for high-level courses. You can have more physics, you can have more high-level math/calculus. You can give your students more opportunities. And I think it is great if you have staff who like that idea and are willing to do it, but make the adjustments to differentiate instruction that you are needing to have to fulfill the concepts, and teach for 96 minutes. (Principal)

I really liked the block being a science teacher, because that gave me extra time to do labs and things. I teach zoology, and an extra 30 minutes or so helped get dissections done. Now, with 50 minutes, there is really not a dissection that we can do completely in one period. And some of the specimens—you can try your best to hold them over to the next day. (Science teacher)

The math teacher liked block as a teacher because of the longer planning time and fewer preps. She taught standard math while the high school was on block and taught algebra A in the fall and then the same students in the spring in algebra B. This way of scheduling math classes for students on standard diploma was the same as the school system from Case 1. The standard math students had math all year during their freshman and sophomore years and were finished with math in 10th grade. This system worked well for her because she had the same students all year and had them for 96 minutes per day. This was helpful concerning preparing students for standardized tests and retention of material. She did say that a disadvantage to block would be students only having math a half a year like the advanced math classes were scheduled.

I taught Algebra I-A in the Fall, and Algebra I-B in the Spring, and I had one prep each term. Well, that is much, much easier than three preps. I only had to prepare one exam. I only had to prepare—even if it was different versions of the test—only a test over one chapter at a time and one topic at a time. Then, we moved to seven-period day, and the first year we were on seven-period day, I had five preps. And that just about did me in. It was way too stressful. The disadvantage, I think, for block, is if a student takes algebra I their first term, and maybe they don’t go ahead and take geometry in the spring, then
they come back their sophomore year. They take geometry, and maybe they don’t take algebra II. There is just a lot of time passing between each math class. (Math teacher)

The assistant principal and the history and English teachers preferred traditional scheduling. All three thought time overall during the school day was used more effectively on the traditional schedule rather than block. The assistant principal said students got more instruction from all teachers on traditional because many teachers did not have the ability to effectively use the full 96-minute block. On traditional, all teachers will be engaged with students for most of the class period. The same teachers would teach the same amount of time on a blocked class and allow students to sit and work independently the rest of the time without teacher engagement. The English and history teachers said they had a difficult time covering the amount of material in the course of study on block. This was especially true in the spring semesters due to interruptions from sports and field trips. The English teacher stressed that students needed to be in English the entire school year in order to develop writing skills, allow students opportunities to do speeches, and prepare students for standardized tests.

But even though the six-or-seven-period is harder for me as far as discipline, I probably prefer it over the block just because not many teachers have the time or the ability to keep students on a circuit task for 90 or 100 minutes. (Assistant principal)

And it got to be the last couple of years in classes like 10th grade—it was just the basics—getting the things down for the exit exam—the stuff that matters. And the second semester, if you had English second semester, your chances to pass the exit exam were not very good! Because you had only been in there January and February. (English teacher)

The superintendent discussed that the system was considering going back to block in some form. The reason was because they were talking with a neighboring system and sharing programs such as ROTC and vocational school. The other school system was on block and did not want to change to traditional. In order for the two school systems to share programs they would have to follow the same schedule. Teachers who were completely opposed to block have
said they would support a block schedule that rotated classes each day and allowed teachers to have students all year long. They would have four classes one day and then four different classes the next with this pattern repeating throughout the entire school year. This would allow teachers to have students all year long while still having the benefits of the longer classes for science and major classroom projects. She said the school systems were looking into different options and were not going to jump into something without much thought and input from all stakeholders.

I, though, and I think most of us, and I think this is a huge majority—I think 90%—would love to do a rotating block, where we have got kids all year, but Monday/Wednesday/Friday- and Tuesday/Thursday-type setting, so that you have got them all year. (English teacher)

All interviewees were asked their views concerning the general use of time during the school day. All agreed the state requirement of 180 days of school per year was enough time. The superintendent said there was a time years ago when the school system looked into a year round school calendar. This would have required more days in school than required by the state and eventually was determined not to be financially feasible. The summer maintenance of the buildings and teacher contracts were issues that could not be resolved. She believed that the current requirement of 180 days was sufficient as long as every day was used as effectively as possible. The superintendent, principal, school counselor, and two teachers thought it would be beneficial to start the day a few minutes later, around 8:30. They believed that most teenagers physiologically are geared toward staying up late and sleeping late. They thought teenagers would be more alert and rested if the school start time was later and in turn would be more beneficial educationally. They also felt that students needed time off from school as well as breaks during the school day. When students are not given a break after appropriate intervals they get irritable and lose focus on academics. However, both administrators agreed that a recess in high school was a bad idea due to student supervision and discipline issues. The principal
commented on the current school calendar requirements dictated by the state legislature requiring schools to start no earlier than 2 weeks before Labor Day and be finished before Memorial Day. This law has caused many breaks to be cut out during the school year that are usually in place, which in turn has caused students and teachers to become irritable.

I think it does. I am very much a morning person, so I could start school at 7 a.m. or 6 a.m. That wouldn’t bother me, but as I have read, researched, and heard the experts talk about teenagers and the brain and sleep and everything else, I think we should start school later. We start at 8:00. I think at least 8:30 would be a little compromise to the teenage schedule. (Math teacher)

I don’t like the way the year has gone this year. For the last couple of days, I have noticed the last couple of days that our kids are irritable—and our teachers—because it has been pushed together so much, and they did not have fall break. Everybody needs to have a little time off, especially our kids who do not know how to handle situations as well as we adults are supposed to be able to. And, you know, everybody needs a break from each other. (Principal)

A big problem relating to time during the school day that was mentioned by all teachers was the number of interruptions to class time that occur throughout the school year. These interruptions included school assemblies, homecoming activities, fire and severe weather drills, programs, senior activities, counselor activities, chorus and band trips, pep rallies, and sports. All teachers thought that overall these were good things that were needed to add enrichment to the high school experience, but the amount of time class was being interrupted was too much. The high school in this school system was very athletic and traditionally put a great deal of emphasis on sports. Every kind of sports team usually made it to the state play offs. If a game was scheduled during the school day, then students were excused from school in order to go to the game and support the team. These days along with other interruptions added up to a significant amount of time taken away from instruction. The assistant principal said a teacher during the previous year kept up with every interruption that happened throughout the school year and the total was not good. Also, interruptions from announcements over the intercom were
mentioned as distractions to instruction. Some intercom announcements were necessary, but many were not and did nothing but take away from class time.

But like I said, with the interruptions that are just given within a school year, especially here, because, I mean, we go to state with girls’ volleyball, with boys’ basketball, girls’ basketball, football, you know, if we had a badminton team, we would probably go to state. And we lose class instruction time, not only for pep rallies, but also for excused absences to go and be at the games. (History teacher)

I do not like to have interruptions in class, and so I think it is very ineffective to pop on the intercom and say, well, the worst one was, “Will the custodian come to the office?” There has to be another way to find the custodian than to interrupt every class in the school! And, of course, there are different meetings that happen—class meetings. And if you take away the teaching time, you are never going to gain it back anywhere else. (Math teacher)

Traditional Scheduling Is More Stressful to Teachers and Students than Block Scheduling

The counselor and the science and math teachers discussed the higher level of stress for teachers and students on traditional scheduling versus the block. They mentioned how difficult the change to traditional was at first due to more students and paperwork and less planning time. The science teacher said he was not sure if it was going to work at first because of how exhausted he was and the added classes to think about each day. The counselor said after the first couple of months on traditional the teachers looked tired and worn down. She said the teachers were not as fatigued on block scheduling. The English teacher said the majority of teachers liked the block because of the advantages to teachers, which include longer planning, fewer classes, fewer students, and less paperwork.

Another thing that I see toward the block, when we were on block, was that it did not wear the teachers out as much. They had half the load and half the papers to grade and half a class to deal with. Teachers, bottom line, they were not as tired, and when we went back to the traditional those first few months, they just looked worn down. (School counselor)

Would anybody vote to give up 96 minutes with your feet up? Even if you are spending it grading, which we weren’t, but most people were thinking, we’re going to be teaching
The counselor discussed the difficulty for students when the change to traditional scheduling was first implemented. On block, students were accustomed to having two core classes a semester and completing almost all homework while at school. On traditional, students had all core classes the entire school year and had to do homework at home in most of them. This along with the constant changing of classes all day long was stressful to students. All teachers commented on the good relationship the school had with the parents of their students and how parents trusted teachers to do what was best for their children. The counselor said this was one time when parents did complain about the amount of homework going home and the additional stress to the students. Students at the school now had only been on traditional scheduling and the amount of homework was not an issue now.

**Block Scheduling Gives Students a Greater Chance to Be Successful**

The interviewees mentioned numerous factors of block scheduling that helped students to be more successful. The principal stated that having fewer classes to focus on at a time was an advantage to the students. If the schedule was developed well, every student could only have two core classes at a time. This would be less homework and fewer tests at a time to prepare for. The superintendent said this was one of the parts of block scheduling she thought was helpful when her son was in high school. The science teacher and counselor stated that block scheduling allows students to make up failed courses easier. Any subject matter including math could be doubled up during a school year if needed in order to make up a failed class. If a student failed Algebra A in the fall, the student could turn around and take it again in the spring and still be on schedule. If a student failed Algebra A in the spring, the student could take Algebra A the
following fall and then Algebra B in the spring and still be on schedule. Summer school was the only option for students who failed classes on the traditional schedule. Also, students wanting to take more classes to prepare for college had that option on block. By offering eight classes a year rather than seven, students had the chance to take four more classes overall. Dual-enrollment courses could be taken anytime during the school day. There was enough time on a block for a student to drive to the local community college or university for class and drive back to school. This was not possible on the traditional schedule.

Being under the block, if you are a senior, and you need a class, and you take it the first semester and mess up, you have a second chance. (Science teacher)

The traditional schedule won’t accommodate a dual-enrollment class. We have several students who now have to take a two-period slot of time in order to take a dual-enrollment class, because they cannot do it in a 50-minute period—leave school, go to college campus, come back, and finish the day. Some students choose to do the night classes, because they meet one time a week, and they can still do dual-enrollment that way, but it makes it more difficulty, and we do not have as many students doing dual-enrollment as we did when we were on the block schedule. (Math teacher)

**Courses Completed in One Semester on Block Have Some Negative Impacts on Education**

Some of the interviewees mentioned some negative factors concerning block scheduling affecting teaching and learning in general. One factor was the block class was so long, that if a day of school was missed it was the equivalent of missing 2 traditional days of school. This was especially difficult for students taking intense advanced courses who had a large amount of work to make up following an absence. The superintendent discussed how difficult it was for her son to make up the work he missed while out for a few days due to an illness. The same was true concerning teachers making up missed content due to students being absent on field trips, sporting events, and at assemblies. The English teacher said that when field trips and sporting events would leave half of her class absent, it was not effective to the class as a whole to move
on to the next objective. Therefore, she would give the students in class something to do and then wait until the next day to cover the next topic. For this reason the English and history teachers discussed how difficult it was to cover the required content in one blocked semester. They said the teacher had to move through the content fast in order to get everything covered. When there were numerous interruptions in a semester it was impossible to cover all required objectives in the course of study. The English teacher stated that in English classes all that was being covered was the basics in order to pass the graduation exam, which some teachers incorrectly thought was sufficient. They believed that less content was covered on block scheduling versus traditional. “When you lose class time, it is sort of an exponential factor. Losing one day is like losing 2 on a seven-period day, and we lose a lot of instructional time that you just cannot recover” (History teacher).

The English, history, and math teachers discussed the need for students to be in a class for an entire school year. Having breaks for a semester or year, depending on a student’s schedule, did not work well for subjects such as math and English due to retention of content. Students needed to be constantly exposed to review of math and English topics in order to learn them. These teachers believed that it was difficult having them in class for half a school year. This also was true concerning the graduation exam. Students taking math or English in the fall had a 2-month break from the subjects before they took the graduation exam in March. Students taking them in the spring only had 2 months to cover the content before the exam in March. Taking subjects throughout the whole year would give students the continuity needed to have the greatest chance of success on the exams. The English teacher also stated that the student teacher relationship was better when students were in your class the entire school year. She said she lost track of students from her fall classes in the spring semester and did not know the students in her
spring classes until January. Some students have personal problems that arise throughout the school year and may only have a good relationship with one teacher. If that student had that teacher in class in the fall and was having personal problems in the spring, then that teacher would not know what was going on with the student and be there to offer support.

But instead of learning our kids better, we lost contact in senior English and in government and economics. If they have got that all year, there is some continuity all year. And, I mean, it’s like kids don’t have continuity in their lives anymore. Many of them don’t know where they are going, or what meal they are going to eat, or who they are going to see at home. So, when we were on block, the first half of the year, I did not know half of the kids that I was the sponsor of, and then, as soon as 12th-grade English was over and those kids were gone, I had no leverage over those at all, and lost track of those kids who had been having trouble—having personal problems—I didn’t have them anymore. We let kids fall through some cracks, because there wasn’t that one person. And if I was English, because everybody had to take it, I would see what was going on in this kid every day. And I just think the continuity is a failure. (English teacher)

**Professional Development Was Not Continual While System Was on Block**

One of the key factors needed to make block scheduling effective was the use of a variety of activities and teaching strategies. Most teachers were aware that it would not be productive to lecture each day for 96 minutes; however, knowing how to use a variety of instructional strategies was not always straightforward. Continual professional development for teachers as well as new teachers was a part of the block scheduling design. This school offered extensive professional development when the change to block was first implemented but did not offer continual professional development after the first year. The history, science, and math teachers said they had little training in college concerning block scheduling, and no professional development was offered when they were hired at the high school. They said they got help from other teachers and had to figure out what to do with 96 minutes of teaching time. The math teacher said the teachers who worked at the high school when block was first implemented were well prepared, but all those who were hired after the implementation of block were not.
I think one of the problems that I saw after a year or so was that there was not continual in-service about doing it, and I think as new hires came in, they did not receive in-service or professional development on teaching on the block. I think that was a disadvantage. I think in reality, the block can be wonderful, but I think it needs to have the three divisions per period, for the most part. (Counselor)

After that, though, when teachers came in, there was none. So they were just thrown in. We were all very well prepared. But those who came in for the next few years were just absolutely thrown in the deep end of the pool. (Math teacher)

A Strong Teacher Will Keep Students Engaged No Matter What Schedule Is Used

All interviewees stated that the teacher in the classroom was the main factor that determined the level of success of the students. The assistant principal said that a good teacher would be diligent to teach from bell to bell no matter what schedule a school used. It was not easy keeping students engaged for every minute of a 96-minute block, but a strong teacher would do that every day. The principal said the teaching strategies used by the classroom teacher determined how many discipline issues would arise in that class. The better the teacher was at keeping students busy on meaningful lessons, the fewer discipline problems that teacher would have. It was easy as a teacher to get in the habit of being slow to start class on the block and to stop class early due to the long class time. The assistant superintendent said every time a teacher stopped class early, students expected the same to happen the next day. Then the teaching time during the block would decrease as the semester progressed. He said a teacher who did not keep students fully engaged during the entire class would have discipline issues. The superintendent stated that teacher preparedness was the biggest issue concerning high school teachers using the entire block class effectively. She said teachers should have enough activities available for each day so every minute of every class can be fully utilized.

I think it boils down to the teachers themselves. If you are a good teacher, you are going to be able to deal with your discipline in your classroom—whether it is seven periods or four. On the block schedule, if you have 96 minutes, and you give them 20 minutes of down time, you are going to have problems in that classroom, and with those teachers
who do not fulfill the 96 minutes of teaching, they are going to have problems in that classroom. (Principal)

The assistant principal and English teacher commented on teachers at the high school whom they referred to as “weak links.” These were teachers who did not use good instructional strategies, did not use the entire class time for instruction, and were inconsistent with decisions they made concerning students. This type of teacher exists in every school, and the English teacher said they damage the school environment and make it difficult for teachers who do their jobs and follow the rules. Students do not understand why some teachers will keep up with students being tardy to class and assign consequences, whereas other teachers do not. Both stated that many teachers wasted time on the block and did not utilize the entire 96 minutes. The assistant principal said that some teachers did not have the ability to keep students engaged throughout an entire 96-minute blocked class. He believed that it was easier for the weaker teachers to teach on the traditional schedule due to the shorter classes. The weaker teachers at least taught the first half of a traditional 50 minute class and did not allow as much down time for students at the end of class as in a blocked class. He said the traditional schedule was more effective for the overall school because the students got more minutes of instruction during the day due to the weaker teachers being able to engage students a larger portion of the class time. The stronger teachers engaged students the entire class period no matter what schedule the school was using.

It is always you’ve got weak links that don’t turn in tardies and don’t make them abide by the rules, because they’ll let them eat and drink in class, or whatever. And I think when you have different teachers on different agendas that that confuses kids, and it causes friction between the teachers, and we have some teachers who just flat weren’t in the class. (English Teacher)
Block and Traditional Schedules Each Lend Themselves to Certain Subjects and Types of Students

Every interviewee believed that the block schedule worked well for science classes. The science teacher discussed how easy it was on block scheduling to conduct a lab. There was time to have an introductory explanation, completely do the lab, and then discuss the results at the end of class. On traditional scheduling he was not able to conduct as many labs as he would have liked because of the shortened time. He said dissections were difficult on the traditional schedule because it was difficult to keep the specimens from drying out before the next day. It was also stated that vocational classes and consumer science classes preferred block because of the time needed to cook and do projects. As stated previously, it was the opinion of the math and English teacher that their subjects needed to be taught throughout the school year. The math teacher liked the block when she taught on it, but she had the same students in her classes all year long. She said when students have semesters off in high school without math it negatively affects their ability to retain the material.

Well, with an earthworm you are not going to save an earthworm until the next day. It will become dried out. The larger specimens—the bird specimens—you can surround them with plastic or put them in a plastic bag, and they will hold pretty well until the next day, but by the time you get in goggles, aprons, and gloves, and get the students situated, and get the specimen out, and get prepared, you know, you have a lot of time outs, and by the time you really get into it, and then have time to clean up, and I have even had at times to let them work right up until the bell, and when the bell rung, I would let them leave the stuff out, and I would have to go in behind them and put everything up like it needed to be just to have that little extra time. But in that aspect, I really did like being on the block. We could get most everything done in one period. (Science teacher)

The English, history, and science teachers stated that block works well for motivated students and does not work well for less motivated students. Students who were planning to go to college and chose to take advanced classes did well on either schedule. The block was good for them because it allowed them to take extra courses, take dual-enrollment classes, and
generally gave them more opportunities for college preparation. Students who were less motivated and had trouble sitting in one place for a short period of time were served better with traditional scheduling. Students who did not enjoy school and did not see the need of being there had a more difficult time staying on task in a class that was 96 minutes long rather than 50 minutes. In this situation it was more beneficial for the student and teacher to be on a traditional schedule.

So, the kids who have, like I said, the framework/scaffolding there, it benefits them. They do well. They can take that super-concentrated instruction, and then you can break it up into different segments. Like I said, you know, working with them one-on-one, or doing projects and activities, it works. Kids who are not as motivated to be here, when you break up into groups on the block, you know, you say, “Here, we are going to do this group activity. Here is what I want.” For them, it is just another opportunity to burn 30 minutes or to put their head down or do whatever. You know, all they are doing is just sticking it out. So it is a little more difficult for your kids who are just not motivated to be here or to learn. In 50 minutes, though, you just can’t lie your head down in my room or hide from me in 50 minutes, because I am going to be somewhere on top of you. So, it is sad to say that we have more kids who probably, or, I will put it this way, we have fewer kids in AP or college prep. You know, it’s not the majority. That is usually the minority. (History teacher)

Case 3

The superintendent of education was new to this position and new to the school system. He had previously worked as a teacher and administrator in a system in south Alabama. He was interviewed and questioned concerning his opinion of scheduling, however, he did not work in the system when the change from block to traditional scheduling took place and did not know about the process. The secondary curriculum director was not interviewed because she was new to the job and was not involved when the change to traditional occurred. The federal programs coordinator was interviewed instead because she was the middle school curriculum director when the scheduling change took place and was involved in meetings with the superintendent during the transition back to traditional. She was the only person still working in the school
system who was involved in the discussions at the board of education. The principal and assistant principal at the high school were interviewed. The principal had been an administrator longer than anyone in the system and was an administrator during both schedule changes. The assistant principal was a teacher during the first schedule change and administrator during the second change. She was responsible for making the master schedule and was interviewed in the place of a guidance counselor. A teacher from each of the four core subject areas was interviewed. The English and history teacher taught at the school during both schedule changes. The science teacher taught during the change from block back to traditional. A math teacher who taught during both scheduling changes did work at the school but chose not to participate in this study. Another math teacher who had taught on both schedules was interviewed.

The English and history teacher said the reason for the first change from traditional to block scheduling was to improve education. It was described as a way to get to know students better and allow more time for projects. It also promoted using a variety of teaching techniques that would allow teachers to increase learning in their classrooms. Teachers would have a longer planning period and fewer students at a time per semester, which would lower the amount of paperwork and allow more time for concentrating on planning quality lessons. Much professional development was given to teachers to help them learn how to prepare for 96-minute block classes. Also trips were made to other school systems using block scheduling in order to see how it worked and talk with other teachers with experience on the schedule. Much preparation and discussion occurred prior to the implementation of block scheduling.

They had people come in from other systems that were on block to train us. They had to make sure that we taught by the bell. And one of the concerns that they had was, don’t let them do homework in class. Use that hour-and-a-half for instruction, rather than teach for this long and let them do their homework. They didn’t want that. So they tried the school on some different techniques, with different things to do that would kind of stretch the time—instead of that kind of thing, wasting time. (English teacher)
Every interviewee stated that the reason given for changing from block back to traditional scheduling was financial. Students would be taking seven classes a year rather than eight, which would require fewer teachers. Teachers would have a shorter planning period and would be supervising students more minutes of the day, which would require fewer teacher units to run the schools. The teachers and administration at the high school described the change as a decision made and promoted by the superintendent. The principal and assistant principal said the superintendent put several committees together to investigate changing the schedule back to traditional until he found a group that would support his opinion. They said it took three different committees of teachers and administrators to find one that agreed with him to implement the schedule change. After the final decision was made, the schools were told they would be going to a traditional seven-period schedule during the next school year. No professional development was offered to teachers when the schedule change occurred. “Dr. Joe liked traditional better than he did block, and so therefore, he made the decision when the new superintendent came in that we would be making the change from block back to the seven-period day” (Principal).

The principal and assistant principal said a secondary reason for the change to traditional scheduling was middle school math and physical education classes. All the high schools in this system serviced Grades 7 through 12, and all grades followed the block schedule. Parents from other schools in the county complained about middle school students not having math the entire school year and thought it would have a negative effect on their retention of the material. This was especially true if a student had math in the fall of one academic year and not again until the spring of the next academic year. That would be an entire year a middle school student would have without a math class. Also, parents complained about students having physical education
all year long on the block. It was a state requirement that middle school students have physical education for the entire school year, which meant these students had 96 minutes of it a day all year long. Parents thought that was not appropriate when the students were only having math half a year. The principal said that most of the complaining was from parents in other parts of the county. The assistant principal said that when she made the student schedules, she made sure students did not go a year without math. She also said she encouraged the county to try a modified block for the middle school, which would split a block into two 45- or 50-minute periods and allow math and physical education to be taught all year. The assistant principal said that other principals in the county thought a modified block schedule would have been too difficult to initiate and never tried it.

In middle school block, the middle school didn’t work real good, because you have to have P.E. all year long, and you automatically had to shift to some kind of modified block, so that was one of the other things. It worked well for us. (Principal)

And because you could have done a modified block, which would have taken care of, and you could have had math all year long, which would have been a little bit tougher to schedule, but a lot of schools everywhere do modified block, which would have worked. (Assistant principal)

The English teacher reported what was said among the teachers concerning the superintendent and the change back to traditional scheduling. She said the superintendent had a son who was in one of the high schools in the county. His son never had homework because his teachers taught for half the block class and let the students do their homework the last half. She stated that it was the impression of the faculty that he did not think high school teachers were working hard enough and using their time appropriately. Two years before the system went back to traditional, he required high school teachers to be responsible for supervising students through tutoring or graduation exam remediation, during half of their planning period. All of the administration and teachers interviewed had a negative view of the superintendent and his
reasons for changing schedules. The federal programs coordinator was asked to verify what the English teacher had described concerning the superintendent and his views of the way high school teachers used their time. She stated that to her knowledge the decision to go to traditional scheduling was strictly due to financial reasons and the middle school math issue. She said the reason high school teachers were asked to tutor students during half of their planning periods was also to save money. When teachers were responsible for supervising students more minutes of the day, fewer teacher units would be needed.

I guess you would say, was that the administration in the central office was so concerned about teachers having an hour-and-a-half planning period. They just didn’t like that at all. I guess they thought that we would be slacking off or would have so much time on our hands or what have you. So, after a while, after several years of being on the block, they took away half our planning period, and for about 45 minutes we had to go and tutor those students who failed, you know, to keep documentation. So, that really made it harder, because we only had the 45 minutes to plan deep, in-depth lessons for three hour-and-a-half classes. That was tough. We kind of felt like they were just kind of against us, trying to keep it going; afraid we were going to slack off. (English teacher)

The history teacher said that some parents were upset when the decision to change schedules was first made and approved by the board of education. He said that the board had discussed the topic at a board meeting and had put a small article in the paper inviting any parents and community members to come and voice their opinions. He said that very few parents went to the meeting or seemed concerned until after the decision was final. He had parents call him complaining and asking what they could do about the decision. He replied that it was too late at that point to do anything because the decision had been made and approved by the board. Some students were upset because they could not take some electives and finish their high school years with the extra options that block scheduling offered.

They had a public forum, and parents didn’t go. Very few people went to the board meetings to voice their opposition to it. And then when it was voted on at the board meetings and in the newspapers, that is when I had students, and I had people calling me.
I had students say, “What can we do?” I mean, it was, ‘We’ll sign a petition!’ And it was too late. It was already voted on. (History teacher)

All administrators and teachers interviewed preferred block scheduling over traditional. The federal programs director did not have an opinion concerning which schedule she preferred because most of her career had been associated with elementary and middle school. The principal and assistant principal thought that block scheduling was best for the students because of having four classes to concentrate on at a time and only two of them being core classes. They thought the block offered many more opportunities for students to advance by taking more electives and for students to make up failed classes. The English, history, and science teachers preferred block because they believed their teaching was better on block because they had time in class to do more hands-on activities. They all stated that on traditional they do not have time to do the same kind of projects they did while on block. The math teacher said she preferred block for herself as a teacher because of the longer planning period and less paperwork due to fewer students. However, she thought that math needed to be taught all year long and did not think the 4 x 4 block worked well for math.

All interviewees were asked their opinions concerning the general use of time during the school day. The science teacher expressed her feelings concerning interruptions during the school day with club meetings and sports. She said that if something was extracurricular then it should never interfere with the curriculum. Sports games should never be played during the school day, nor should students ever miss class because of any kind of sports activity. The same could be said of clubs and organizations. She said interruptions happened too often and interfered with the education process. All teachers thought students needed breaks from school and 180 days of instruction was enough. No one thought there needed to be any changes concerning the amount of time scheduled in school. They all commented on the current school
calendar that was effected by the state mandated start and end of school dates; school could not start earlier than two weeks before labor day and must be finished by memorial day. This caused the students and teachers to go to school many weeks at a time without an off day. They did not get a fall break or Veteran’s Day off this year, which meant their first day off was Thanksgiving. Students need a break from each other and teachers. They all commented on having more fights than usual between students this year, which they credited to the schedule. The English teacher commented on how many more discipline problems she had this year compared to years past that she blamed on the fact that there had not been any off days for the students. All interviewees were asked if recess time would be a good idea for high school. Everyone thought it was not a good idea because of student supervision and discipline issues.

And then the other thing that I would eliminate is all of the interruptions and extra curriculum. Extra curriculum tells me that that is extra—outside of school—and it should not be brought into the school day on a regular basis, because it does cause problems as far as student achievement goes, because they are out of class, and sometimes they don’t make it up. (Science teacher)

I think this last go around of the mandated calendar, I think a lot of people are starting to scratch their heads about that one. I know personally, when we looked at our calendar, I am a worker, but no Labor Day. And we did not have a break until Thanksgiving, and I said, “Boy, that is going to be a long haul.” And I know, from the flip side of going more days, that it has been horrible for the teachers—and especially the students. And it is such a human business we’re in, that actually now that we have done that, I do see the need for a break. (History teacher)

**Block Scheduling Gives Students a Greater Chance to Be Successful**

The assistant principal and the math and history teachers discussed ways block scheduling was more beneficial to students than traditional because of the extra opportunities that it offers. The assistant principal said that students were able to take four more electives on block scheduling than traditional. This allowed students to take classes they enjoyed or classes that would help prepare them for college or the work force. The history teacher said there were
not as many options concerning electives on the traditional schedule. Students also could get their credits finished early, by December of their senior year, and then start taking college classes the following January. This allowed students who were interested to get an early start on college. This was not an option on the traditional schedule. If a student failed a class on the block, that course could easily be rescheduled the next semester and made up. The math teacher said this worked well for math courses because they had to be in sequence, and students could not take two math courses at the same time if they get behind. On traditional, the only option for a student who failed a class was to go to summer school. The principal said a student having a teacher in class only one semester was an advantage if there was conflict between them. Sometimes a student’s personality does not get along well with a particular teacher’s personality. He said it was easy for an administrator to tell the student to behave in class and follow directions when the student would only be in the class until the end of the semester rather than the rest of the school year.

We had kids who were graduating in December who wanted to go on and pursue their degree who were not playing sports or involved in extracurricular activities. With the seven-period day, that part is out of it. You know, you can’t do it. (Principal)

I think in block, if somebody fails the first semester, we have a chance to still keep them in school and get them to graduate. But at least, if you failed that class the first semester, we could roll you back over second semester, and still give you an opportunity to still graduate. (Assistant principal)

**Traditional Schedule Is More Stressful for Students and Teachers than Block Schedule**

The principal and assistant principal felt that the traditional schedule was more stressful on students than block. Students on block scheduling only had four classes to concentrate on at a time in comparison to seven classes on traditional. The assistant principal said that when she made the schedules students only had two core classes at a time each semester. This allowed students to have two core classes with homework and tests, and two elective courses that usually
did not require a great deal of work outside of class. On traditional, students had all four core classes all year long with three electives. The principal currently had a son in high school and said he sometimes had a test in all four core classes on the same day. He said that was difficult for the student and caused him to stay up late the night before trying to prepare. This was not an issue on the block; at most the student would have two tests to study for at a time. The science teacher said she received complaints from parents when traditional scheduling was first implemented concerning the amount of homework assigned to students due to having all four core classes all year long.

They took two cores and two electives. So we tried to make sure that they had two cores. In other words, we didn’t let any student have four cores in one semester. And that way, you could concentrate on what they had. It was so much better for the athletes, because they didn’t have these nights where they had five tests in a row or four tests in a row. Chances were, they were probably going to have P.E. or have an elective, and so they could concentrate on their core classes. I would say that we had less failures on block. (Assistant principal)

All teachers commented on how much more chaotic and stressful the traditional schedule was versus the block. The history teacher said that it felt as if they were constantly rushing throughout the day on the traditional schedule. Students came into class and then after a short period of time the bell rang and another group of students came in. All teachers discussed how it was difficult to completely develop a concept in a 50-minute class as compared to a 96-minute class. They said they did not do as many hands-on activities as they did on block because there was no time in class to prepare students for an activity and then execute it. The English and history teachers said it was difficult to assign essays for students to write in class due to the shorter class time. On block, they were able to assign an essay and have students easily complete it in one class session. Having fewer classes to prepare for and having a longer planning period are two factors that made the block less stressful for teachers than traditional.
The science teacher commented on how much time was needed to properly plan a hands-on activity for a class. She said that on traditional schedule teachers did not do as many hands-on activities as they did on block because of having more classes to plan for and less planning time during the day.

But the pace was wild, going from three classes to six—twice as many. You had to become a little more organized. It was to the point where I was making a lot of lists. Transition involves making you keep yourself highly organized and making plenty of lists and documenting as much stuff as you can, because otherwise, it will blow your mind. (English teacher)

**A Strong Teacher Will Keep Students Engaged No Matter What Schedule Is Used**

Both administrators said strong teachers would do whatever it took to keep students on task from bell to bell no matter what type of schedule a school was using. The principal said the teacher in the classroom was the most important factor determining the academic success of the students. The teacher must use a variety of teaching strategies and must keep students engaged throughout the class period. The assistant principal said that the majority of the teachers at their high school used a variety of activities while the system was on block and used the extended class periods effectively. The principal said that when teachers did not do their jobs appropriately, it was the responsibility of the administration to fix the problem. He said he watched closely teachers who he felt were not using good teaching methods or engaging the class throughout the entire class period and instructed the teachers on what needed to be done.

And when I say this, good teachers teach. It doesn’t matter if you are on a seven-period day, six-period day, or block; it doesn’t make any difference. The good teachers are going to teach, and they are going to teach pretty much every day from bell-to-bell, whether it is 96 minutes or 53. The teachers who are weaker teachers, you have to keep your eye on them. (Principal)
Block and Traditional Scheduling Each Lend Themselves to Certain Subjects and Types of Students

Everyone interviewed believed that science classes worked best on the block schedule because of the need for time to do labs and hands-on activities. The 96-minute class worked best because the introductory directions and material could be discussed before the lab, students could do the lab, results could be discussed, and everything could be cleaned up. The science teacher said it was difficult to do a lab in one 50-minute class and usually would require two 50-minute classes. She said she did not do as many labs on traditional as she did on block because it was so much more difficult to do the lab in 2 days. She also said planning labs for six classes on traditional rather than three on block with half the planning time was more difficult and also contributed to science teachers deciding to do fewer labs on traditional. The science teacher was also certified in math and taught math classes occasionally. She said when the block was first implemented the math teachers did not think block worked well for math, and she agreed. She said it was difficult to get the curriculum covered because an average of two topics needed to be covered each day and students could only absorb so much math content in a single day. The math teacher interviewed said that for the best results concerning retention of concepts, math needed to be taught all year long.

I remember the chemistry teacher, you could start a lab and you had time to finish to the end. I can’t tell you how many times when I was teaching AP biology that we would have to do it over 2 days. You would have to stop the lab in the middle, or you would have to wait and do it and have the kids come after school to try and finish it. And so, it was a lot easier to do labs, get them done, and let them see it from start to finish instead of having to stop them. (Assistant principal)

I did hear a discussion on math. Math teachers, I think, were a little in favor of the seven-period day, because on the block they had to cover so many different concepts and move faster, and they felt like they worked better on seven-period day, as far as the math goes. (Science teacher)
The science, math, and English teachers believed that students on advanced diploma who were trying to prepare for college would do well on either type of schedule. However, because block offered more opportunities to get ahead, they believed that block was best for those students. The advanced students could focus and stay on task for 96 minutes at a time if that was what they needed to do to be successful. This would be true even if they had a teacher that lectured for 96 minutes each day. Some teachers had a different view concerning students on standard diploma. The math and English teachers thought these students did better on the traditional schedule because many of these students had difficulty focusing and staying on task. They believed these students did better with smaller chunks of material given throughout the entire school year.

**Professional Development Was Not Continual While System Was on Block**

Much professional development was offered to teachers when the block schedule was first implemented. The English and history teachers were teaching at the school when that happened, so they felt well trained for block due to all of the discussions and workshops. However, they said that no professional development was offered after block first began, and none was available for new teachers employed after the implementation of block. A mentor teacher was assigned to a new teacher and was available to help them properly handle the 96-minute block classes. The science teacher said she did her student-teaching at a school that was on block and felt she was prepared for it. However, she said the school system did not offer any professional development except the mentor teacher.

We had what you call teacher mentoring. We had a mentoring program, and the new teachers who came in were mentored in, and they would have a mentoring teacher of either the same subject or a teacher who was beside them, you know. It depended on what they were teaching. (Assistant principal)
Cross-Case Analysis

All three school systems involved in this study implemented block scheduling in the 1990s and within the past 10 years went back to traditional scheduling. The reason each system decided to change back to traditional scheduling was investigated, and the primary reason given by all was financial advantages. The systems could save money by requiring teachers to be responsible for supervising students more minutes of the school day. This would allow systems to use fewer teacher units and save the school systems money. A secondary reason mentioned by at least one interviewee in each system was a belief of superintendents that teachers were not using the 96-minute block class effectively. The counselor in Case 1 said that the administrator would walk by classrooms and see students and teachers sitting without any educational activities occurring. The superintendent, assistant principal, and English teacher in Case 2 said that teachers were allowing students to spend the last half of the class working on homework and were not fully utilizing the block period. The English teacher in Case 3 said that the superintendent did not think the teachers were fully utilizing the block classes because they were allowing students to work on homework during class. Further, interviewees in Cases 1 and 3 pointed out that block did not work well with Grades 7 and 8. Because teachers were shared by all grades, the entire school needed to be on the same schedule.

The process of change in all three cases was the same when block was first implemented and when the systems went back to traditional scheduling. The first change occurred in an attempt to improve the educational effectiveness of the school day. Much preparation went into the change including trips to schools using block scheduling, workshops, and professional development. The second change occurred in an attempt to save money, and in each case an announcement was made to faculty in the spring that the school would be using traditional
scheduling the next year. The change was quick without much preparation. No professional
development was offered in any of the systems when traditional scheduling was implemented.

Teachers and administrators from all three cases commented on the chaotic atmosphere
of traditional scheduling (see Table 1). Traditional scheduling was more stressful than block for
both teachers and students due to the extra classes. Students had four classes to manage on block
as compared to seven on traditional. The block schedule allowed students to only focus on two
core classes and two electives at a time. On traditional, students had all classes every day all
year long, which meant multiple homework assignments and tests. Teachers had more classes to
plan for on traditional scheduling than on block with a shorter planning period. The extra classes
on traditional scheduling doubled the number of students and amount of paperwork for teachers.

Interviewees in all cases commented on the factors associated with block scheduling that
gave students a higher chance of success. Students took four more courses in high school on
block than on traditional. These electives were chosen by the students and allowed them to
advance in whatever area was of interest to them. The longer time of a blocked class allowed
students to drive to a local college to take a dual-enrollment course and return to school. This
was not an option on the traditional schedule because of the shorter class period. Students also
had the option of retaking failed courses within a school year without getting behind or having to
go to summer school.

In all three cases, professional development was not continually offered while the system
was on block. Teachers who were employed during the initial implementation of block received
a good deal of professional development. After the transition was made, professional
development was not continually offered to assist teachers in fully utilizing the 96-minute class
period. Teachers who were hired after the change to block scheduling received no training in
how to teach on block scheduling. A mentor teacher was made available for new teachers to ask questions and get ideas from concerning effectively using the long class period.

Table 1

Research Themes*

<table>
<thead>
<tr>
<th>Case 1</th>
<th>Case 2</th>
<th>Case 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional schedule is more stressful for teachers and students than block schedule</td>
<td>Traditional schedule is more stressful for teachers and students than block schedule</td>
<td>Traditional schedule is more stressful for teachers and students than block schedule</td>
</tr>
<tr>
<td>Block scheduling gives students a greater chance to be successful</td>
<td>Block scheduling gives students a greater chance to be successful</td>
<td>Block scheduling gives students a greater chance to be successful</td>
</tr>
<tr>
<td>Professional development was not continual while system was on block</td>
<td>Professional development was not continual while system was on block</td>
<td>Professional development was not continual while system was on block</td>
</tr>
<tr>
<td>A strong teacher will keep students engaged no matter what schedule is used</td>
<td>A strong teacher will keep students engaged no matter what schedule is used</td>
<td>A strong teacher will keep students engaged no matter what schedule is used</td>
</tr>
<tr>
<td>Courses completed in one semester on block have some negative impacts on education</td>
<td>Courses completed in one semester on block have some negative impacts on education</td>
<td>Block and traditional scheduling each lend themselves to certain subjects and types of students</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Cross-case are boxed together, within case are separated.

All administrators in each case stated that a strong teacher would keep students engaged no matter what schedule was being used. A strong teacher would use a variety of instructional
strategies and have enough activities prepared to keep students engaged the entire class period on every school day. The assistant principal in Case 2 stated that the performance of the teacher in the classroom was the key to success concerning the achievement of the students. The principal in Case 3 said there were always weaker teachers in schools, and it was the job of the administration to watch them and instruct them on how to be more effective.

**Conclusion**

Three research questions were used to direct this study through interview questions and discussions with interviewees. This section briefly aligns the data gathered from interviews with the research questions.

**Research Question 1**

What understanding do teachers and administrators have concerning the reasons school districts changed from block to traditional scheduling? All interviewees in each case said the primary reason given for each system changing back to traditional scheduling was financial advantages. The systems could save money by requiring teachers to be responsible for supervising students more minutes of the school day. This would allow systems to use fewer teacher units and save the school systems money. A secondary reason mentioned by at least one interviewee in each system was a belief of superintendents that teachers were not using the 96-minute block class effectively. The counselor in Case 1 said that the administrator would walk by classrooms and see students and teachers sitting without any educational activities occurring. The superintendent, assistant principal, and English teacher in Case 2 said that teachers were allowing students to spend the last half of class working on homework and were not fully utilizing the block period. The English teacher in Case 3 said the superintendent did not think the teachers were fully utilizing the block classes because they were allowing students to work
on homework during class. Further, interviewees in Cases 1 and 3 pointed out that block did not work well with Grades 7 and 8. The middle school grades were another secondary reason given for the change in schedule. Numerous complaints from middle school teachers and parents arose concerning block scheduling. Because teachers were shared by all grades, the entire school needed to be on the same schedule.

**Research Question 2**

What views do teachers and administrators have on the process of change from block to traditional scheduling? The process of change in all three cases was the same when block was first implemented and when the systems went back to traditional scheduling. The first change occurred in an attempt to improve the educational effectiveness of the school day. Much preparation went into the change including trips to schools using block scheduling, workshops, and professional development. The second change occurred in an attempt to save money, and in each case an announcement was made to faculty in the spring that the school would be using traditional scheduling the next year. The change was quick without much preparation. No professional development was offered in any of the systems when traditional scheduling was implemented. All interviewees in each system felt that the final decision was made by the superintendent and approved by the board of education. Interviewees from Cases 1 and 3 reported committees of administrators, teachers, and parents being assembled to investigate options concerning scheduling. However, members on the committees were not asked to vote or make a final decision concerning which schedule the system would use. Interviewees from Case 2 stated that teachers were asked to fill out a survey concerning scheduling during a faculty meeting, but the superintendent made the decision to change schedules the following year.
Research Question 3

What views do teachers and administrators have about the effective and efficient use of school time? All of the emerging themes relating to block and traditional scheduling apply to this research question, along with a couple of ideas relating to time in general during the school day.

The interviewees reported positive and negative factors relating to block scheduling. Some teachers and administrators believed that block scheduling gave students a greater chance to be successful. Block scheduling allowed students more options concerning selection of elective courses. By completing eight courses a school year on block rather than seven on traditional, students were able to take four extra courses a year. Students could choose to take courses that would help prepare them for college or prepare them for a particular track in technical school. Teachers stated that fewer elective courses were offered after the school system changed to traditional scheduling. Interviewees from all three cases said that the longer time of a blocked class allowed students to drive to a local college to take a dual-enrollment course and return to school. This was not an option on the traditional schedule because of the shorter class periods. Another positive factor relating to block was that students also had the option of retaking failed courses within a school year without getting behind or having to go to summer school.

Teachers interviewed from Cases 1 and 2 stated a few negative factors concerning the courses being offered on block in one semester. On block scheduling, students went half a year or an entire year without being in a math or English class. Teachers felt that this caused problems with retention of subject matter and standardized test scores. Math and English teachers felt that their subjects needed to be taught all year long to maximize student retention of
material. This was also mentioned in Case 3 concerning parents of middle school students complaining because their child did not have math for the entire year on block scheduling.

Teachers also felt that they did not cover as much material on block scheduling as they did on traditional. Teachers were able to do a better job of covering more topics by presenting a small amount of material every day throughout the entire school year rather than big chunks each day for one semester on block.

Interviewees from all three cases stated that traditional scheduling was more stressful for students and teachers than block scheduling due to the extra classes. Students had four classes to manage on block as compared to seven on traditional. The block schedule allowed students to only focus on two core classes and two electives at a time. Administrators in all three cases said they would schedule only two core classes a semester for students while on block. On traditional, students had all classes every day all year long, which meant multiple homework assignments and tests. All cases reported complaints from parents when systems changed to traditional due to large amounts of homework assignments each night. Teachers had more classes to plan for on traditional scheduling than block with a shorter planning period. The extra classes on traditional scheduling doubled the number of students and amount of paperwork for teachers.

Some teachers and administrators stated that each type of schedule lent themselves to certain subjects and types of students. All those interviewed felt that the extended class time on block scheduling worked well for science classes with labs. The long class period allowed teachers to present a topic, do a lab or experiment, discuss results, and clean up without having to extend it to the next day. Math teachers felt that they were more productive in covering the course of study by giving students a small amount of material each day for the entire year on
traditional, rather than a large amount each day for one semester on block. Math teachers did not feel that they were able to cover a topic and be confident that students got it before moving on to the next topic while on block. Concerning types of students, teachers felt that students on advanced tracks would do well on any type of scheduling system. Block scheduling was beneficial to those types of students because of the extra college prep courses they were able to take. Some teachers felt that students on standard tracks would be better served on traditional scheduling due to low attention spans and the need for only small amounts of material offered at a time.

All teachers and administrators commented on the importance of using a variety of activities and teaching strategies to effectively use the entire 96 minutes of a block period. Administrators said the teacher was the most important factor affecting the learning process in a classroom. The teacher had to plan an assortment of activities and be willing to do whatever it took to keep students engaged in quality educational activities throughout the entire class period. Administrators said that a strong teacher would keep students engaged no matter what schedule was used. Planning enough activities and the correct kinds of activities to properly use the block periods required training. All three systems offered a great deal of professional development to teachers when block scheduling was first implemented. But teachers hired after the first year the school system was on block did not receive training. New teachers had to ask other teachers what to do during a 96-minute class or figure it out on their own. Professional development was not continually offered while the systems were using block scheduling.

Teachers and administrators made a few comments concerning time in general during the school day. In all systems teachers stated that students needed breaks. It was pointed out that teenagers are not adults and they need time away from school to be kids and spend time with
family. Everyone interviewed thought that the state requirement of 180 days a year of school was enough and adding more days to the school calendar would not increase student achievement. Teachers in Case 3 stated that the state law requiring schools to fit their entire school year between 2 weeks before labor day and memorial day was a problem because of the lack of time for breaks from school. Teachers said that students as well as teachers were irritable. The English teacher said that during that year the school had more fights between students and she had more discipline problems in her classroom than normal. She blamed that on the lack of breaks during the school year.

Teachers in all systems commented on the amount of interruptions during the school day and the negative effect these had on learning. Interruptions included assemblies, sports games, club meetings, field trips, and announcements made over the intercom during class. Teachers in Case 2 discussed how important sports was to the school system and how it interfered with class time through games during the day and assemblies. Their system was very competitive and would usually make it to state playoffs in every area. If a state game was being held during the day, school would either dismiss or students would be excused in order to attend the game. They felt that extracurricular activities were important but should not interfere with class time. The science teacher in Case 3 said that if something was extracurricular, then it should never interfere with the regular curriculum. It should always be after school.
CHAPTER 5
CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This purpose of this study was to investigate why particular school systems in Northwest Alabama changed from block scheduling back to traditional scheduling, to examine how this change was implemented, and to identify the positive and negative impacts of each schedule on these school systems. The following three research questions directed the inquiry:

1. What understanding do teachers and administrators have concerning the reasons school districts changed from block to traditional scheduling?
2. What views do teachers and administrators have on the process of change from block to traditional scheduling?
3. What views do teachers and administrators have about the effective and efficient use of school time?

In what follows, conclusions are grouped into three sections: (a) the reasons school districts changed from block to traditional scheduling, (b) the process of change from block to traditional scheduling, and (c) the effective and efficient use of school time. Implications for school policy are then discussed and recommendations for future research offered.

Conclusions
Reasons School Districts Changed From Block to Traditional Scheduling

In each school system involved in this study, it was the understanding of all administrators and teachers that the schedule change from block to traditional occurred primarily because of financial reasons. School systems needed to save money in order to balance their
budgets. Changing schedules was one way to help accomplish that goal. Teachers were responsible for supervising students more minutes of the day on the traditional schedule, which required fewer people to run the school. Systems could save money by using fewer teacher units. No research was found that investigated school systems that had changed from block back to traditional scheduling. However, research does document reasons school systems changed to modular scheduling in the 1960s and block scheduling in the 1990s. The modular schedule was implemented to end the rigid traditional schedule and to focus on the individual learning needs of students by offering classes of different lengths and sizes. Classes were of varying length depending on the need at the time, and students were given up to 40% of the school day for individual study (Canady & Rettig, 1995). The modular schedule was abandoned due to the lack of structure. Teachers could not control the movements of students, which resulted in increased discipline problems (Queen & Isenhour, 1998). The block schedule was also implemented to end the rigid traditional schedule and to create large segments of instructional time (Robbins et al., 2000). Block scheduling promised to reduce the number of classes teachers had to prepare for, the number of students to interact with, the number of class changes, and the transition time from class to class. It could also increase opportunities for students to accelerate through the grades and for superior teaching strategies to be implemented (Canady & Rettig, 1996).

Clearly when modular scheduling and block scheduling were implemented, the change was entirely for educational reasons. The intent was to improve instruction and the educational effectiveness of high schools. In contrast, the unanimously identified reason for the schedule change of the systems involved in this study had nothing to do with improving education. Traditional scheduling was not believed to be a better way of organizing time during the school day, simply a cheaper way to run the schools. All administrators and school counselors
interviewed in each system reported that block scheduling positively benefitted students more than traditional scheduling. However, they did not feel that block scheduling was a perfect system without issues, nor did they believe traditional scheduling was not effective. Because the change was not for educational reasons, this cannot be seen as advantageous for students. Lack of research on similar curriculum changes in other areas of the country indicates a severe lack in the literature and greatly compromises the likelihood that intelligent decisions can be made on this issue.

A few interviewees from each school system mentioned a secondary reason for the change back to traditional scheduling. At least one person in each case felt that one reason for the schedule change was that teachers were not properly using class time on block. Teachers were only teaching for the first half of the period and then allowing students to do their homework during the last half. As such, considerable time was spent without productive engagement. Jenkins et al. (2002) stated that a typical class on block scheduling must include at least two or three types of activities. Group work and cooperative learning should be used along with lecture and individual work. The extended class time on block scheduling gives teachers an opportunity to use a variety of teaching methods that should increase learning in the classroom.

Other studies (Biesinger et al., 2008; Jenkins et al., 2002) found that teachers were not using the block class the way it was designed. These teachers used lecture most of the time and used the same teaching strategies on block that they had used on traditional scheduling. It is unclear whether this secondary reason given was considered by administrators during the schedule change because none of the superintendents were still in the school systems to ask. However, if that was the case, then the teachers failed the block schedule by not using it properly, which should not be a reason to conclude that block scheduling did not work. It also
raises the question of why superintendents did not attempt to address the issue previously, during the time when block scheduling was in operation. The literature provides little help regarding these questions.

Another secondary reason mentioned by two of the school systems involved scheduling conflicts with the middle school. The high schools in two of the school systems housed Grades 7 through 12 and shared teachers throughout all grade levels. This meant all grades needed to be on the same schedule. It was reported that block scheduling did not work well with the middle school grades for a couple of reasons. Middle school students by law had to have physical education for an entire year. Parents complained because students had physical education for 96 minutes every day for the entire school year, while only having math for one semester. They believed that students needed math all year long to help with retention of the material. Also, teachers said it was difficult keeping seventh- and eighth-grade students on task for 96 minutes at a time. This scheduling conflict between middle school and high school did not appear in any research studies and clearly needs further attention. For example, administrators indicated that this could have been resolved if systems were willing to implement a modified block schedule for middle schools.

**Process of Change From Block to Traditional Scheduling**

In all three school systems involved in this study the process of change from block to traditional scheduling was similar. Administrators, teachers, and parents formed committees that asked teachers their opinions concerning whether they would like to change to traditional scheduling or stay on block scheduling. However, all interviewees stated that there was no vote, and that the superintendent of education, apparently independent of recommendations, made the final decision. The schedule change was quick with little preparation beforehand. The faculty
members received word in the spring that the system would be changing to traditional scheduling at the start of the next school year in August. Students found out about the change when they prepared their schedules. The teachers received no professional development, and there was no research available to inform the change from block to traditional scheduling.

In marked contrast, Jenkins et al. (2002) detailed the preparation and professional development that occurred when school systems changed to block scheduling. To make the block system work, teachers needed to apply rich and diverse instruction. They needed training to know how to implement changes and plan for the extended time during a block period. In a study by Rettig and Canady (1999), teachers stated that a change in scheduling works better if everyone is involved in the process and staff development is critical when implementing a schedule change. None of this happened in Northwest Alabama.

The schedule changes that occurred in these three systems were quick and involved minimal planning regarding preparing teachers and students. They told the teachers that the change was going to occur and offered no professional development to help them adjust to the schedule change. The teachers had to figure out how to manage the traditional schedule after being accustomed to the block. Some of the teachers interviewed stated they had never taught on traditional scheduling, and it was a major adjustment for them. This process of change was completely different than when block scheduling was implemented. When block was implemented, the purpose was to improve instruction and education strategies. Much professional development was offered to teachers to prepare them before the schedule was implemented, including guest speakers, workshops, and visits to other school systems using the new schedule. Why was this not supplied for the change back to traditional scheduling? Like the administrators in these systems, the literature is silent on this question.
Effective and Efficient Use of School Time

All interviewees reported that the traditional schedule was more stressful for students than the block schedule was. However, all did not believe that block provided better organization of time during the high school day. The traditional schedule requires students to take seven courses each day for the entire school year. The block schedule requires students to take four courses each day during one semester and four different courses each day during the second semester. The traditional schedule is more stressful for students because they have to think about and manage seven different classes each day. Students taking all four core classes each day could have four homework assignments per night and four tests in one day. On block scheduling, counselors in each system said that students were scheduled two core classes each semester. This meant two classes of homework and at most two tests in one day. Geismar and Pullease (1996) showed that traditional scheduling could lead to a great amount of student stress. Other studies (Gruber & Onwuegbuzie, 2001; Rettig & Canady, 1999) reported that block scheduling provided an environment that was less stressful for students due to the reduced number of classes, less movement, and fewer encounters with teachers. Payne and Jordan (1996) reported that teachers thought students were less stressed and frantic and therefore more willing to participate in group activities.

Similarly, interviewees reported that traditional scheduling was more stressful for teachers because of managing more classes and students during the day. Teachers taught three classes a day on block scheduling compared to six classes a day on traditional scheduling. In sum, this means that teachers had twice as many classes to prepare for and double the number of students to manage during the day on traditional compared with block scheduling. Having more students in class per day meant more paper work concerning grading and documentation.
Likewise, by design the planning period on the traditional schedule was almost half as long as the planning time on block. In sum, this means that teachers had double the number of classes and twice the paperwork, with half the planning time. In a study conducted by Hurley (1997), teachers liked having fewer classes and students and thought it was an improvement over traditional scheduling. Payne and Jordan (1996) reported that teachers liked the block schedule due to the increase in opportunities for staff development and planning. The majority of the teachers improved their instructional methods due to increased planning time. Khazzaka (1998) reported that teachers on block scheduling did not want to go back to the traditional schedule.

The opinions of the interviewees in this study concerning the higher stress level for students and teachers on traditional scheduling were consistent with previously published research. Although all interviewed did think the traditional schedule was more stressful for everyone, all did not think block was a better option. Some teachers who expressed that students needed their subject taught the entire school year said they adjusted to the frantic pace of the traditional schedule and felt like they accomplished more than when on block. One teacher felt that teachers at their school had become lazy due to the block schedule and said that teachers did not need to be free of students for a quarter of the day. However, other teachers said that the longer planning was beneficial for improving instruction. One science teacher stated that she did not do as many hands-on activities on traditional because she did not have enough time to plan them effectively.

All administrators and school counselors—and some teachers—interviewed reported that block scheduling gave students a greater chance to be successful. On block students were able to take a wider variety of courses during high school, as there were eight courses a year on block compared with seven courses a year on traditional. Students could choose elective courses that
interested them and helped prepare them for college or the work force. Students were also able to double up math or other core classes in order to get ahead. Moreover, with longer class periods, there was time for students to leave campus and return to take dual-enrollment courses through a local college. Counselors said that when schools changed to traditional, dual-enrollment courses had to be taken after school because there was not enough time for students to leave and return in a single class period. Another advantage of block scheduling for students was being able to make up failed courses the next semester. This was especially helpful for math because students could not go to the next math class in sequence until the previous one was passed. When students failed math courses on traditional scheduling, the only option was to make up the credit in summer school in order to remain on sequence with math courses.

The view that block scheduling gave students a better chance at being successful is consistent with research. This was one of the advantages stated when block scheduling was designed and first implemented. Canady and Rettig (1996) stated that block scheduling increases opportunities for students to accelerate. Wilson and Stokes (2000) asserted that block scheduling is an advantage because it allows students more time to gain academic credit and allows more time for students who fail a course to make it up and graduate on time. All administrators and school counselors believed that block scheduling benefitted the students more than traditional did because of these reasons. They acknowledged that there were negative issues with block scheduling, but overall they believed that the students were better off when their system was on block.

Some teachers interviewed felt that completing courses in one semester on block had various negative impacts on education. The long block class was a problem for a student who was absent concerning making up missed work. It did not matter if the absence was due to
sickness or a field trip; making up 96 minutes of content per day absent was a problem. Wilson and Stokes (2000) reported that students revealed on a survey that it was difficult making up work on block scheduling.

Some English, history, and math teachers interviewed said it was difficult covering all the required course of study objectives while on block. This was because even using a variety of activities, there was only so much content a high school student could absorb at one time. Liu and Dye (1998) stated that even when teachers plan a variety of activities for a class period, students can still feel fatigue. Wilson and Stokes (2000) quoted students commenting that class periods on block were too long. Another reason teachers in this study said they had difficulty covering the curriculum was because of having fewer total minutes per class on block as compared to traditional scheduling. Salvaterra and Adams (1996) reported that some teachers had to reduce concepts during the block due to the shorter number of days.

Teachers interviewed also stated that students taking math or English for only half of the school year had problems with retention of content. In some circumstances students could go an entire year without having math or English if the core classes were not consistently scheduled in the same semester each school year. Queen et al. (1997) stated that teachers felt that a disadvantage of block scheduling was a decrease in retention of content from one year to the next. Khazzaka (1998) reported that some teachers and administrators felt students would benefit from year-long classes in certain areas. Teachers from this study believed this resulted in lower standardized test scores. The graduation exam was given to all students in March of each school year. Students taking math or English in the fall had a 2 ½-month break from the subject before taking the exam. Students taking math or English in the spring only had 2 1/2 months of instruction before they took the exam.
Research conducted on student achievement comparing standardized test scores or class grades did not consistently support one schedule over the other. Concerning teacher perceptions, Wilson and Stokes (1999) said teachers reported standardized test scores increasing after implementation of block scheduling. The teachers in this study said they felt the standardized test scores were lower but had no data to back up their belief. In considering all of the interviewees involved in this study, those who favored block scheduling did not think it negatively affected academic achievement. Teachers who favored traditional scheduling felt that block scheduling did negatively affect academic achievement.

Teachers involved in this study reported that each type of schedule worked better for certain subject areas. All teachers believed that block schedule worked well for science classes due to the ability to conduct an entire lab in one class period. All science teachers interviewed said they missed the block schedule and admitted they did not do as many labs or hands-on activities on the traditional schedule. No research found specifically mentions teachers believing block scheduling works well for science classes. However, one of the main advantages of block scheduling that is documented is the time available to incorporate a variety of activities (Lewis et al., 2005). All math teachers stated that math classes worked better on traditional scheduling, covering small amounts of material each day throughout an entire school year. They thought they were able to cover the curriculum better on traditional and stated that it was difficult trying to present two math topics per day on block. This corresponded with Salvaterra and Adams’s (1996) finding that math teachers did not prefer the longer classes of block scheduling over more days on traditional.

Teachers involved in this study felt that each type of schedule worked better for certain types of students. Teachers felt that block scheduling worked best for advanced college-bound
students because of the extra advantages mentioned earlier that block scheduling offers (Canady and Rettig, 1996; Wilson & Stokes, 2000). These types of students would perform well in any situation they are placed in, whether a 50-minute class on the traditional schedule or a 96-minute class on the block schedule. Teachers felt that traditional scheduling worked best for lower achieving students because of short attention spans and a lack of interest in academics. They felt it was more effective to keep those types of students engaged for a shorter amount of time each day for the entire year on traditional rather than trying to keep them on task an entire block period for half a school year. Again this is supported by the findings of Salvaterra and Adams (1996), who reported that on the block schedule teachers expressed concern for students who struggled academically. Similarly, Khazzaka (1998) reported that teachers had difficulty keeping at-risk students on task during a 96-minute block class.

All administrators involved in this study discussed the importance of a strong teacher in the classroom. One administrator said that the most important factor affecting academic success in a classroom was the teacher in charge. A strong teacher kept students engaged during the entire class period no matter what schedule was being used. Some administrators stated that weak teachers would only teach for half of the block period and then allowed students to work on homework and talk during the last half of class. This is not how block classes were designed to be used. A variety of teaching strategies and activities should be employed that used the entire 96-minute class period (Canady & Rettig, 1995; Robbins et al., 2000). One administrator said it was the job of the administration to ensure that all teachers were using the full block period appropriately. He said if teachers were not doing their jobs then administration needed to be in that classroom every day informing the teacher of changes that should be made.
Research studies conducted after block scheduling was first implemented in schools revealed that some teachers used the block period appropriately and some did not. In a study conducted by Geismar and Pullease (1996) it was evident that block scheduling led to improvement in classroom instruction, strategies, and use of time. Before, teachers relied heavily on lecture for the majority of the class, but after the implementation of block, classes became more exciting. In contrast, Biesinger et al. (2008) found little instructional changes among teachers on block schedule from teachers on traditional scheduling. These teachers used lecture most of the time. Jenkins et al. (2002) conducted a study using a survey to examine teaching strategies used on block and traditional scheduling. They found that teachers’ opinions concerning teaching strategies were the same on both schedules. A disadvantage of block scheduling was poor instruction when teachers chose not to use a variety of instructional techniques.

If teachers are to utilize a variety of teaching strategies and plan beneficial lessons for a block period, professional development must be offered. The teachers and administrators in each system who were teaching when block was first implemented reported many such opportunities. They said there were guest speakers, workshops, and visits to schools using block scheduling to see how it worked in practice. Those teachers felt very prepared for block scheduling when it was first implemented. However, in all three systems new teachers hired after the first year of block received no professional development. They were assigned a mentor teacher who they could ask questions concerning planning if they wanted to. Many teachers interviewed in this study had minimal experience with block scheduling when they were first hired and said they had to simply figure out what to do with the 96-minute class period. This was a failure on the part of each of these school systems. Professional development should have been continually
offered to veteran teachers as well as new teachers in order to ensure the proper use of the extended class periods. Jenkins et al. (2002) stated that a typical block class must include at least two or three types of activities. The extended class time on block scheduling gives teachers an opportunity to use various methods of instruction that should increase learning in the classroom. However, teachers need training to know how to implement changes and plan for the extended time during a block period. As yet, the research contains no studies on this matter, which is surely an issue of concern in this field.

**Implications**

This study examined why specific school systems in Northwest Alabama changed from block to traditional scheduling, the process of this change, and the effects of each type of scheduling. The following implications were derived from the findings and conclusions of this research project and should be considered by school systems reviewing issues relating to scheduling and the organization of time during the school day.

1. School systems should consider implementing a modified block schedule, which applies the positive factors of both the traditional and block schedules. Teachers and administrators in all school systems believed that the implementation of a modified block schedule would fix many of the negative factors associated with the 4 x 4 block. Science classes and classes that involve a great deal of hands-on activities could be offered in one semester in a longer period while offering math courses the entire school year in a shorter period. Flexibility concerning the scheduling of classes could be utilized depending on the needs of a particular high school. The assistant principal in Case 3 stated that all of the complaints concerning block scheduling in their county could have been solved with a modified block schedule. Researchers have presented the modified block schedule as an alternate type of block scheduling that offers
similar advantages to teachers and students as the 4 x 4 block schedule (Brower & Moran, 2009; Canady & Rettig, 1995; Canady & Rettig, 1996). Traditional length or split-block classes could include classes such as physical education, enrichment, or remediation.

2. School systems should consider implementing an A/B block schedule, which involves classes being taught throughout the entire school year on a schedule that rotates from day to day. This type of schedule was mentioned by teachers and principals as a solution to correct some of the negative factors of the 4 x 4 block schedule. This would allow classes like math and English to be taught all year and address the concerns related to retention of material. It would also allow extra time for classes incorporating labs and hands-on activities. The second school system involved in this study was considering going back to block scheduling, but only in the A/B form. Researchers described the A/B block schedule as having similar advantages as the 4 x 4 block schedule (Canady & Rettig, 1995; Canady & Rettig, 1996; Queen, 2009).

3. School systems utilizing block scheduling need administrators who are aware of proper types of teaching strategies that fully utilize the longer class periods and who are proactive in encouraging teachers to incorporate them. School principals ought to expect all teachers to fully engage students the entire 96 minutes of the block period and require homework to be completed outside the regular class time. One of the problems concerning block scheduling mentioned by teachers and administrators involved in this study was that teachers were not using the block periods appropriately so as to engage students the entire class period. Some teachers were allowing students to work on their homework during the last part of class each day. When a block schedule is utilized, it is the responsibility of administrators to ensure that all teachers use the 96-minute periods appropriately.
4. School systems that utilize block scheduling need to continually offer professional development to all teachers to insure that proper teaching strategies are used that fully utilize the longer class periods. All new teachers should have extensive training on how to plan a variety of activities for the block period, and previously hired teachers should train on how to continue to use the longer class periods effectively.

5. School systems should make data-informed decisions regarding scheduling and school reform in general. Decisions should be based on facts concerning finances and be research based.

**Recommendations for Future Studies**

This study investigated why particular school systems in Northwest Alabama changed from block scheduling back to traditional scheduling, how this change was implemented, and identified the positive and negative impacts of each schedule on these school systems. Additionally, it explored the views of teachers and administrators about the effective and efficient use of school time. As a result of this study, the following recommendations are offered for future research:

1. This study should be carried out with more school systems from a larger region to validate results.

2. This study should be carried out in school systems where superintendents responsible for implementing a schedule change from block to traditional are still in office and are available to be interviewed to clarify genuine reasons for change and factors affecting change.

3. Future research should investigate school systems that use a modified block schedule or an A/B block schedule and identify and explore the positive and negative effects of each type of schedule.
4. Research should be conducted examining teachers’ perceptions concerning scheduling as it relates to their specific subject areas.

5. Research should be conducted examining the amount of financial benefits that occurred to school systems which changed from block to traditional scheduling.

This research project has examined the process of change involving the organization of time during the school day in three school systems. The reasoning for the schedule changes and the process of change in each school system has not been consistent with schedule changes of the past, which has been to improve education. The policy changes investigated in this study have not been good examples of educationally sound decisions because the decision to change schedules had nothing to do with improving high schools but simply to save money. If United States schools are to remain competitive with other countries concerning student achievement, school systems need to be moving forward when making choices regarding educational reform in schools. Every decision made by the administration should be to improve learning and be centered on what is best for the students. The schedule changes that occurred in the three school systems involved in this study did not meet those criteria and were not made for the right reasons.
REFERENCES


APPENDIX A

INTERVIEW PROTOCOL
Interview Protocol

Time of Interview:

Date:

Place:

Have interviewee introduce himself/herself and identify his/her position.

(Briefly describe the project and offer an overview of the history and use of block scheduling in regional schools)

Questions:

1. Open with a general discussion about the uses of time in schooling—should we have a different start to the day? Ought there to be a recess in the morning and afternoon? How long should the school year be? What happens when we treat time as a variable? Point out that traditional and block scheduling are examples of different use of time—why should we choose one over the other?

2. Did you work in the school when it changed from traditional to block? If so, what reasons were given for the new schedule?

3. How did the change take place? Who was involved in the decision making process? Were there any efforts to prepare teachers for the new schedule—discussions or workshops on instructional methods perhaps? Were parents consulted?

4. How did Block scheduling work out in your school? What were its strengths? What were its weaknesses?

5. When your school changed from Block to Traditional, what reasons were given for the new schedule?
6. How did this change take place? Who was involved in the decision making process?
   Were there any efforts to prepare teachers for the new schedule—discussions or
   workshops on instructional methods perhaps? Were parents consulted?

7. Can you recall any other differences in the first and the second reforms?

8. What comments have you received from parents concerning block or traditional
   scheduling? Did the community have any influence in either decision?

9. How, in your opinion, did each type of schedule affect the following?
   a. school discipline
   b. student achievement
   c. attitude and participation of students (and teachers)
   d. student–teacher relationships and interactions
   e. attendance/dropout rate/graduation rate
   f. instructional time and teaching strategies

10. What type of professional development did you receive that prepared you for teaching on
    block scheduling?

11. In what ways were your teaching practices on block scheduling different than those in
    traditional scheduling?

12. (Administrators) Did you see a change in the instructional strategies of teachers on block
    scheduling versus traditional scheduling? If so, in what ways were they different?

13. Which of the two schedules do you prefer? Why?
    Are the schedules better for one kind of student over another?
    Do they lend themselves better to different school subjects?

14. Is there anything else you can add?
APPENDIX B

IRB APPROVAL
October 11, 2012

Matthew Gargis  
P.O. Box 740753  
Tuscaloosa, AL 35674

Re: IRB # 12-OR-341: “An Investigation into the Change from Block to Traditional Scheduling in Selected Alabama High Schools”

Dear Mr. Gargis,

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Your application will expire on October 10, 2013. If the study continues beyond that date, you must complete the IRB Renewal Application. If you modify the application, please complete the Modification of an Approved Protocol form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, please complete the Request for Study Closure (Investigator) form.

Please use reproductions of the IRB-stamped consent form.

Should you need to submit any further correspondence regarding this application, please include the assigned IRB application number.

Good luck with your research.

Sincerely,

[Signature]

Carmelita L. Mylles, MSME, CRM  
Director & Research Compliance Officer  
Office for Research Compliance  
The University of Alabama