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Teachers' perceptions of the effectiveness of block scheduling in Nebraska high schools

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TEACHERS' PERCEPTIONS OF THE EFFECTIVENESS OF BLOCK

SCHEDULING IN NEBRASKA HIGH SCHOOLS

By

Steven P. Shanahan

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Under the Supervision of Dr. Laura Schulte

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TEACHERS' PERCEPTIONS OF THE EFFECTIVENESS

OF BLOCK SCHEDULING IN NEBRASKA

HIGH SCHOOLS

Steven P. Shanahan, Ed.D.

University of Nebraska at Omaha, 2006

Advisor: Dr. Laura Schulte

The purpose of this study was to investigate teachers' perceptions of the effectiveness of block scheduling in seven key areas: staff development, curriculum, teaching methods, students class work, student achievement school climate, and satisfaction. The demographic factors considered included responsibility, years of teaching at this school, years in education, highest level of educational degree attained, type of student schedule used prior to block scheduling, the time at which block scheduling was implemented at this school, and size of the school.

The study was conducted in five schools that had implemented an Alternating Day, A/B Block Schedule, for a minimum of 2 school years. The schools encompassed urban, suburban, and rural geographical areas of Nebraska and ranged in student population from 232 to 1,738. Professional teaching staff size for the schools ranged from 26 to 113. All schools were comprised of grades 9-12. A survey, using a Likert scale of 1-5, was administered to 261 teachers with 186 surveys (71%) returned and analyzed. Significant differences were found regarding teachers' perceptions of the effectiveness of block scheduling in the (a) curriculum areas taught, (b) years of experience that teachers had at the school when a block schedule was implemented, and (c) size of the school.

Although the the success of an innovation in one community does not insure that it will be successful in another, understanding the thoughts of those most affected by the change can be extremely beneficial. The perceptions of the members of an organization in regard to the effectiveness of any change are ultimately what causes the success or failure of the innovation. This research gives the reader valuable information about how teachers perceive block scheduling. Armed with this information, school leaders can make informed and accurate decisions on the possibilities of instituting block scheduling in their school.

DISSERTATION TITLE

Teachers' Perceptions of the Effectiveness of Block

Scheduling in Nebraska High Schools

BY

Steven P. Shanahan

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Finally and certainly most importantly, I would like to thank my wife Vicki and my sons, Ryan and Eric. They have sacrificed a great deal so that I could advance my professional career. It is time to give back. Without their support and understanding the accomplishment of this goal would not have been possible. It is my hope that they somehow know how much this meant to me and how necessary it was. Hopefully I can repay the debt I owe them someday.

TABLE OF CONTENTS

LIST OF TABLES

Chapter 1

Introduction

The shift to learning in longer blocks of time became the most prevalent educational innovation in high schools across the nation during the last decade of the 20th century. A more than 70-year tradition of six or seven period school days consisting of 55-minute periods seems to be facing a serious threat (Black, 1998). Estimates by researchers indicate that between 40% and 50% of the high schools in many states are now using some form of block scheduling (Black, 1998; Bruckner, 1996; Canady & Rettig, 1995; Cawelti, 1994; Gorman, 2000; Hackmann, 1995; Hottenstein, 1996; Sommerfeld, 1996). By the year 2010 many of these same authors say that over 75% of all schools in the United States will be using some form of alternative scheduling.

Although block scheduling has its roots in the elementary setting (Merembloom, 1999), its use has expanded dramatically in the last 10 years to both middle and high school settings. The National Education Commission on Time and Learning (1994) in its report entitled Prisoners of Time has been seen by many educators as the impetus for change. "For far too long," the researchers state, "schools have been captives of clock and calendar" (Manzo, 1997, p. 29). Arguing that "time is learning's warden," and that, while time in schools is a national obsession, its effective use is not, the commission urged educators to use all time in new, different, and better ways. The Carnegie Foundation for the Advancement of Teaching and the National Association of Secondary School Principals published Breaking Ranks: Changing an American Institution (1996), which emphasized six themes and 13 recommendations for better education at the high school level. When dealing with Organization and Time the report states,

High schools must examine the basic assumptions about time under which they

have operated the length of the class period, the length of the school day, and the length of the school year. So called block scheduling provides extended periods that teachers can devote to one course or, if they choose split between courses (p. 47).

It seems clear that schools are changing to any one of a number of alternative schedules in increasing numbers. The Copernican Plan, the Intensive Block, the 4 X 4 Block, the A/B Block, the Modified Block and any variation of these and other schedules are becoming more common everyday.

The benefit of utilizing longer blocks of time within the educational setting is well documented in the literature (Aquilera, 1996; Black, 1998; Bonstingl, 2000; Canady & Rettig, 1999; Guskey & Kifer, 1995; Hackmann, 1995; Horenstein, 1993; Oregon Department of Education, Office of Curriculum and Instruction and Field Services, 1996). The benefits mentioned by these educators and researchers include:

1. Increased grade point averages

2. More students attaining honor roll status

3. Less disciplinary problems

4. More in depth learning

5. Less student dropouts

6. A less hectic, more relaxed student and staff schedule

7. Increased scores on locally developed criterion-referenced examinations

8. Fewer failures

9. Opportunities for students to take more elective classes

To a much lesser degree, however, is evidence that norm-referenced test scores on such exams as the ACT and SAT College Entrance Examinations, as well as the Advanced

Placement Examinations, have increased due to a block schedule. The predominance of what researchers feel are "soft statistics" based on locally defined criteria helps fuel the feeling that schools may manipulate the data to prove a change in the schedule leads to an increase in academic achievement. "Hard data regarding block scheduling and student achievement is scarce" (Howard, 1998, p. 36), and there is a lack of scientific support regarding the effect of block scheduling on academic achievement (Lawrence & McPherson, 2000). As block scheduling has become more prevalent, so have the demands by school boards, parents, and communities for more information regarding the impact of the schedule on academic achievement (Shortt & Thayer, 2000).

It may be very difficult to establish a cause and effect relationship between student academic achievement and block scheduling as many policy makers are demanding. There are so many variables operating when any change is instituted that can distort the results. The very nature that a school is involved in restructuring efforts implies that there is a heightened interest in making a change to the school climate and academic achievement. While working to implement block scheduling, schools may be incorporating numerous strategies to promote student success, any of which may be a significant factor in the improvement of test results (Lybbert, 1998).

<u>Purpose</u>

Schools typically define success around three key areas of measurement, school climate, student and teacher interaction and performance in the classroom (student class work), and student achievement results (Hottenstein, 1999). The purpose of this study was to investigate teachers' perceptions of the effectiveness of block scheduling in seven key areas. In addition to Hottenstein's three key areas of measurement, the areas of staff development, teaching methods, curriculum, and school size were assessed.

This study was conducted in five schools that had implemented an Alternating Day, A/B Block Schedule, for a minimum of 2 school years. The schools selected encompassed urban, suburban, and rural geographical areas and ranged in student population from 232 to 1,738. Professional staff size for these schools ranged from 26 to 113. All schools were comprised of grades 9-12. A survey, using a Likert scale of 1-5, was administered to all teachers to determine their perceptions of the effectiveness of block scheduling in their school.

When looking at the perceptions of the effectiveness of block scheduling in these schools the following factors were investigated through surveys of the teachers.

Demographic questions:

1. Area of responsibility, i.e., English, Social Studies, etc.

2. Years of teaching at this school

3. Years in education

4. Highest level of educational degree attained

5. Type of student schedule used prior to block scheduling

6. The time at which block scheduling was implemented at this school

7. Size of the school (student population)

Perception questions:

1. Staff Development

2. Curriculum

3. Teaching Methods

4. Student Class Work

5. Student Achievement

6. School Climate

7. Satisfaction

Research Questions

1. What are the teachers' perceptions of the effectiveness of block scheduling following at least 2 years of implementation of the schedule?

2. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on area of responsibility?

3. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on years of teaching at the school?

4. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on years in education?

5. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on highest level of educational degree attained?

6. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on the type of schedule used prior to block scheduling?

7. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on teaching at the school during the time the schedule was implemented?

8. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on the size of the school?

Definition of Terms

Block Scheduling is a schedule that allows at least part of the daily schedule to be organized into larger blocks of time (more than 60 minutes) to allow flexibility for a

diversity of instructional activities (Cawelti, 1994).

Alternating Day A/B Block Schedule Alternating Day Schedules are those that offer six or eight courses spread out over 2 days. Teachers meet with half of their students each day ("So many schedules," 1995, p. 17).

Intensive Block Students on this type of schedule concentrate on only one or two subjects at time. One example of this is the trimester plan in which students take only two classes for a 60-day time period and then go on to another two classes for the next 60 days. A total of six classes can be completed in a 180 school year ("So many schedules," 1995, p. 17).

4 X 4 Block In this schedule students take four subjects each semester in blocks that generally last between 85 - 100 minutes each. Quarter classes receive the same credit as traditional scheduled semester courses would and semester courses generally cover 1 year's worth of material ("So many schedules," 1995, p. 17).

Modified Block This schedule may be a combination of any of the other models of block scheduling. Combining a 4 X 4 with some classes that meet all year, on alternating days, or conducting an A/B Schedule with one day when all classes meet, are all examples of a Modified Block. Any schedule that allows for extended periods of time, yet is customized to the individual needs of a school is considered a Modified Block ("So many schedules," 1995, p. 17).

Flexible Modular Scheduling Trump is generally credited with the original design of the flexible modular schedule. This schedule utilizes instructional sessions of varying lengths. Regular 40-50 minute classes are replaced with one or more 20 minute "mods." During the height of the modular scheduling movement in the late 1960s and early 1970s about 15% of the nation's high schools used this form of scheduling (Canady & Rettig,

1995).

The Copernican Plan This schedule was developed by Carroll in 1983, and was first tested at Masconomet High School, Topsfield, MA in 1989. This student schedule was based on research Carroll had done concerning summer school classes where students showed gains of up to 2 years by studying one subject in an intensive setting for up to 4 hours each day, 5 days per week for a 6 week period. Carroll's schedule called for students to study either one subject for 30 days in intensive 4 hour blocks, or two subjects for 2 hours each day for a 60 day period (Carroll, 1990).

Delimitations and Limitations

Delimitation. This study was conducted in five schools that have implemented an Alternating Day, A/B Block Schedule, for a minimum of at least 2 school years. The schools selected encompassed urban, suburban, and rural geographical areas and ranged in student population from 232 to 1,738. Professional staff size for these schools ranged from 26 to 113. All five schools were comprised of grades 9-12. Surveys were conducted with teachers to determine their perceptions of the effectiveness of block scheduling in their school.

Limitation. The perceptions of teachers regarding the effectiveness of a block schedule may be influenced either positively or negatively by past experiences and communication with staff from other schools who have experienced block scheduling as well as pre-service training prior to beginning a teaching career.

Significance of the Study

The research conducted for this study measures the perceptions of teachers related to seven key areas of teaching and learning effectiveness in schools using block scheduling for at least 2 years. Teachers' perceptions have significance for several

audiences. Students, parents, and educators at all levels certainly have a stake in the findings of this study. It is evident that all schools must determine the need to change students' yearly schedule. The ability to increase academic achievement and improve the learning climate for all students must be one of the major considerations for stakeholders involved with a change in students' yearly schedule.

Because student achievement is at the very core of why schools are organized, any change in students' yearly schedule, i.e., the method schools use to organize student learning, should be a major consideration for school administrators. Teachers' perceptions of the effectiveness of a block schedule as it relates to staff development, curriculum, teaching methods, student class work, student achievement, school climate, and satisfaction will be of assistance to any school administrator contemplating a change to a block schedule. This study contributes to the body of scholarly literature and gives practitioners valuable information on teachers' perceptions of block scheduling and how their perceptions relate to improved academic achievement and a positive learning environment.

Chapter 2

Review of Related Literature

This review of the literature provides historical and background information on the movement to block scheduling in American schools in the last 20 years. This literature review focuses on the student schedule of a traditional high school in the United States, its history, benefits, and shortcomings, as well as the impetus for change and innovation in this schedule during the last 20 years. A chronology regarding the change to block scheduling in schools in the United States is reviewed with a particular emphasis on the perceptions of the effectiveness of this schedule.

The American High School Student Schedule

As Tyack describes in his book Turning Points in American Educational History (1967), a schoolman in 1892 stated "the term high school is the vaguest in the school vocabulary...it covers an endless variety of schools with an infinite variety of courses of study, aims, ideals and methods" (p. 352). Although the purpose of the high school seems to have fluctuated over the course of the last century, the history of the American high school student schedule is an interesting study in the ability of an institution to withstand the changes of time. However, the rigid high school schedule that has been part of the educational landscape in America for most of the last 60 years of the 20th century did not always exist.

Prior to 1892 and the work of the National Education Association's Committee of Ten, the early American high school and its predecessor, the Latin Grammar Schools and Academies, offered flexibility in students' schedules. These academies and most high schools offered many subjects based on a 2, 3, or 4 day week (Canady & Rettig, 1995). In fact, in 1897, Rice in one of the earliest studies regarding school time found that time

was the major independent variable in a student's learning (as cited in Anderson, 1984).

It was in 1910 when the Committee of Ten suggested that the emphasis on studying subjects should be in regular blocks of time. The result was "to encourage every high school…to center the work of each student upon five or six academic areas in each of the 4 high school years" (Canady & Rettig, 1995, p. 13). This change in philosophy signaled a change in the schedule a student would follow during a school day.

Early in the 20th century the Carnegie Foundation proposed a standard unit of measurement for the work completed by a high school student based on time. A total of 120 hours in one subject – meeting 4 or 5 times a week, for 40 to 60 minutes for 36-40 weeks each year – would earn for the student one "unit" of high school credit. The Carnegie Unit has dominated the structure of the American secondary school for almost a century (Carroll, 1994). With the exception of adding one or two periods to the Committee of Ten recommendation for a five or six period day, the structure of the school day for the average student in the United States has not changed a great deal during most of the last century.

The advent of vocational education promoted by the Smith-Hughes Act of 1917 and further encouraged during the 1930s by President Hoover's White House Conference on Vocational Education, prompted the inclusion of such courses as industrial education, home economics, business education, agricultural education, music, art education, and physical education into the curriculum. Additional courses and additional choices necessitated additional periods in the school day. Traditional four, five, or six period days, became six, seven, or eight period days. Periods of class ranged from 45 to 55 minutes. Still the basic structure of the American high school schedule did not change.

In the late 1960s and early 1970s there was an attempt by some educators to

break away from this traditional six, seven, or eight period day. The "modular schedule" with its flexible "block" scheduling was introduced. Trump is generally credited with the original design of the flexible modular schedule (Canady & Rettig, 1995). This innovative plan sought to eliminate the rigid schedule used by so many high schools of the day and replace it with instructional sessions of varying length. Based on the time needs of a particular subject and the instructional strategies necessary for a particular class, some courses might have short meetings consisting of a 20 minute module while others might have classes that would convene for 40, 60, 70, or 100 minutes. Subjects and teachers could structure classes around such things as 40 minute lectures, 100 minute laboratory sessions, and 20 minute study sessions. During its zenith in the late 1960s and early 1970s, estimates show that around 15% of high schools across the country were using modular scheduling.

Although popular with students, primarily due to the fact that most flexible modular schedules allocated 30 – 40% of a student's daily schedule to unsupervised independent study, parents were less receptive to this scheduling innovation. The problems associated with this unscheduled student time were cited as a major factor in the discontinuation of the flexible modular schedule in most schools (Goldman, 1983). As Goldman so aptly put it, a student schedule "must produce significantly better results than any system it replaces, and it must not cause more problems than it solves" (p. 209).

With the virtual demise of flexible modular scheduling the search for a better, more efficient and educationally sound student schedule became a major thrust in restructuring the American high school in the late 1980s and the early 1990s. The time appeared to be right for block scheduling to be discovered.

A History of Block Scheduling

The quest for the ideal secondary school schedule reaches as far back as the 1890s when educational leaders began searching for the ultimate arrangement of time, rooms, teachers, students, and the curriculum (Traverso, 1991). The search has continued ever since with countless educational reformers looking for the best way to deliver instruction to students in the most efficient and effective way possible.

The decade of the 1960s, spurred on by the so called "race to the moon" and the launching of Sputnik by the Soviet Union, saw the greatest proliferation of literature on changing the landscape of the American high school. Practitioners such as Alexander, Allen, Brown, Gruhn, Petroquin, and Trump all expressed the need to reassess the existing order and search for better methods (Traverso, 1991). Increasing technological advances in the area of computers at this time also made "tinkering" with the student schedule much easier.

Copernican Plan. The earliest and certainly most widely publicized of these models of student scheduling is that of Carroll who began his studies of block scheduling around 1983. Carroll called his method of student scheduling the "Copernican Plan" after the Renaissance scholar who proclaimed that the sun, not the earth, as had been previously thought, was at the center of the universe (Black, 1998). Carroll challenged the predominant thinking of the time by utilizing extended blocks of time for classes, rather than the traditional 45-50 minute periods that most schools were accustomed to using. His research was based on his studies of intensive summer school programs in Washington, DC and Los Alamos, New Mexico, and was tested at Masconomet High School in Topsfield, Massachusetts beginning in 1989 (Black, 1998).

Carroll (1994) found that during an extensive study of the summer school program

in Washington, DC at the time he was Assistant Superintendent, students who studied math and English for 4 hours per day, 5 days a week for 6 weeks, a typical summer school program, showed gains of up to 2 years achievement from that of a regular classroom based on pre-tests and post-tests of the students. Similar results were reported by Carroll when he became Superintendent in Los Alamos, New Mexico, during the summer school program.

Carroll's Copernican Plan called for two basic schedules. In the first schedule students enrolled in only one 4 hour class each day for a period of 30 days. A student would take six of these 30 day, 4 hour classes per year for a total of 180 school days. In the second schedule, students would enroll in two classes that met for 2 hours each for a period of 60 days. A student would enroll in three of these two course trimesters each year, once again for a total of 180 school days (Carroll, 1990). Shorter blocks of time were allowed in the schedule in order to accommodate student elective subjects such as physical education, music, and art. Individualization of instruction and a variety of instructional approaches were keys to this new schedule. Additionally, the reduction of class size and teaching load for instructors was seen as a major advantage in giving teachers the opportunity to prepare. Students concentrated on two or three classes at a time, and Carroll believed that this allowed students to learn and teachers to actually teach students, rather than simply cover the material.

It is not a surprise that the interest in the Copernican Schedule coincided closely with the release of the National Commission on Excellence in Education's (1983) report, A Nation at Risk . The national call for improvement in education, and in particular high school education, found practitioners looking for solutions. Many appeared to see the advantages of block scheduling as described in Carroll's research. Schools with traditional

six or seven period days were seeing the need to add time in the day to accommodate electives such as fine arts, computer education, health, physical education, and career education. Students were being asked to adjust to as many as eight or more teachers during a day and juggle multiple assignments and tests over a full school year (Canady & Rettig, 1999). It was becoming clear to many educators that both teachers and students were having increasing difficulty working productively in short and fragmented periods of time.

Schools in the 1980s were experiencing a decline in such things as ACT and SAT test scores. Equally alarming to many educators were the results of student achievement on national tests such as the National Assessment of Educational Progress (NAEP), which showed many students were not performing at grade level expectations. Reformers were looking at better ways to use resources and it was logical to question how time was being used during the school day. Differing from other educational reforms, better use of the available time in schools did not require the spending of additional money for such things as increasing the school day or incorporating technology into the curriculum (Lybbert, 1998). It became clear to many educators that challenging how the traditional six, seven, or eight period day was utilized appeared to be a viable option for increasing student achievement.

The use of time in high schools. The challenges of incorporating the increasing demands of such national reports as A Nation At Risk (National Commission on Excellence in Education, 1983) and America 2000 (U.S. Department of Education, 1991), both of which called for schools to not only increase the rigor of the courses taken, but the number as well, added impetus to the idea that schools could use time in more and better ways. When the curriculum was more limited and schools focused on a few core

classes, a six period day could adequately address students' needs. As more and more was required of schools and students, there was simply not enough time in the school day to provide all the courses for students to be successful in the 21st century. Educators not only saw the manipulating of the organizational structure of the school day as a way to offer more to students, but more importantly as a method of enhancing the quality of instruction.

Another very public call for a change in the way time was utilized in schools took place in the early 1990s. Public Law 102-62, the Educational Council Act of 1991, established the National Education Commission on Time and Learning as an independent advisory board made up of nine members. Their report was released in 1994 and entitled Prisoners of Time. The report argued that the clock and calendar controlled American education to a surprising degree. Schools opened and closed at the same time each day, class periods averaged 51 minutes nationally, no matter how complex the subject or how well prepared the student; schools devoted about 5.6 hours a day, 180 days, to instruction and awarded diplomas on the basis of Carnegie units or seat time (Joekel, 1996). The Commission argued that learning in America was a prisoner of time and that this time schedule made it difficult for students to compete internationally. Among the eight recommendations issued by the report were two that appeared to serve as an impetus to change the way the high school student schedule was organized; reinvent schools around learning, not time and fix the design, use time in new and better ways.

The final push for block scheduling in America's schools came in 1996 when Breaking Ranks: Changing an American Institution was released by the National Association of Secondary School Principals in cooperation with the Carnegie Foundation for the Advancement of Teaching. In its report Breaking Ranks six major themes for the

improvement of high schools in the future were presented. Among these themes was one entitled Organization and Time, Restructuring Space and Time for a More Flexible Education. Among the recommendations in this theme were the following:

1. High schools will create small units in which anonymity is banished.

2. Each high school teacher involved in the instructional program on a full-time basis will be responsible for contact time with no more than 90 students during a given term so that the teacher can give greater attention to the needs of every student.

3. High schools will develop a flexible schedule that allows for more varied uses of time in order to meet the requirements of the core curriculum.

4. The Carnegie unit will be redefined or replaced so that high schools no longer equate seat time with learning.

5. The high school will reorganize the traditional departmental structure to meet the needs of a more integrated curriculum.

6. Each high school will present alternatives to tracking and ability grouping without restricting the range of courses and learning experiences it offers.

7. The academic program will extend beyond the high school campus to take advantage of learning opportunities outside the four walls of the building.

8. Schools will operate on a 12-month basis to provide more time for professional staff development, collegial planning, and the added instruction needed to promote better student learning. ("Breaking Ranks," 1996, p. 45)

The report went on to state that high schools must examine the assumptions under which they have operated, not only the length of the class period, but the length of the school day and school year, as well. Quoting from The National Education Commission on Time and Learning (1994), Prisoners of Time stated, "Unyielding and

relentless, the time available in a uniform six hour and 180 day year is the unacknowledged design flaw in American Education" (p. 8). "So-called block scheduling provides extended periods that teachers can devote to one course or, if they choose, split between courses" ("Breaking Ranks," 1996, p. 47). In fact, the report goes on to describe the block schedule used by Hatboro-Horsham High School in Pennsylvania and Carroll's Copernican Plan, as models for others to follow.

Block scheduling. The earliest published documentation of schools adopting block scheduling appears around the year 1990 in most of the literature. Hottenstein (1996), the former Principal at Hatboro-Horsham High School, believed that by the mid 1990s over 40% of high schools nationwide would be doing some form of block scheduling or preparing to implement some form of it. By the year 2010 he stated that as many as 75% of America's high schools would be using some form of alternative scheduling. Canady and Rettig (1999), two of the leading researchers in the area of block scheduling in the United States, stated that by the year 1996 about 30% of all schools in the nation had some form of block scheduling in place. While block scheduling takes a number of forms in schools, the most prevalent of these include:

- Alternating Day A/B Block Schedule Alternating Day Schedules are those that offer six or eight courses spread out over 2 days. Teachers meet with half of their students each day ("So many schedules," 1995, p. 17).

- Intensive Block Students on this type of schedule concentrate on only one or two subjects at time. One example of this is the trimester plan in which students take only two classes for a 60-day time period and then go on to another two classes for the next 60 days. A total of six classes can be completed in a 180 school year ("So many schedules," 1995, p. 17).

- 4 X 4 Block In this schedule students take four subjects each semester in blocks that generally last between 85 - 100 minutes each. Quarter classes receive the same credit as a traditionally scheduled semester course would and semester courses generally cover 1 year's worth of material ("So many schedules," 1995, p. 17).

- Modified Block This schedule may be a combination of any of the other models of block scheduling. Combining a 4 X 4 with some classes that meet all year, on alternating days, or conducting an A/B Schedule with 1 day when all classes meet, are all examples of a Modified Block. Any schedule that allows for extended periods of time, yet is customized to the individual needs of a school is considered a Modified Block ("So many schedules," 1995, p. 17).

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The benefits of block scheduling. The benefit of utilizing longer blocks of time

within the educational setting is well documented in the literature (Aquilera, 1996; Black, 1998; Bonstingl, 2000; Canady & Rettig, 1999; Guskey & Kifer, 1995; Hackmann, 1995; Oregon Department of Education, Office of Curriculum and Instruction and Field Services, 1996). The benefits mentioned by these educators and researchers include:

1. Increased grade point averages.

2. More students attaining honor roll status.

3. Less disciplinary problems.

4. More in depth learning.

5. Less student dropouts.

6. A less hectic, more relaxed student and staff schedule.

7. Increased scores on locally developed criterion-referenced examinations.

8. Fewer failures.

9. Opportunities for students to take more elective classes.

As Cawalti suggests in his research entitled The Effects of High School Restructuring: Ten Schools at Work (1997) "one of the boldest moves to restructure the American high school is the block schedule" (p. 8). As Wood (1998) stated in his book, A Time to Learn:

> In school after school the results are overwhelming. Attendance rates go up, discipline referrals go down, and students and staff alike report a more relaxed and comfortable learning environment. Regardless of whether or not we ever change what or how we teach, just simply changing the way we organized our kids' day in high school can improve our schools. The simple reason for this is that changing the schedule releases the time necessary for teachers to build community relationships necessary for learning to happen. (p. 76)

Yet many critics of block scheduling cite evidence that norm-referenced test scores on such exams as the ACT and SAT College Entrance Examinations, as well as the Advanced Placement Examinations, have not increased due to a block schedule. The predominance of what researchers feel are "soft statistics" based on locally defined criteria helps fuel the feeling that schools may manipulate the data to prove a change in the schedule leads to an increase in academic achievement. "Hard data regarding block scheduling and student achievement is scarce" (Howard, 1998, p. 36), and there is a lack of scientific support regarding the effect of block scheduling on academic achievement (Lawrence & McPherson, 2000). However, it is difficult to establish a cause and effect relationship between block scheduling and achievement scores on objective examinations. There are many variables operating that can distort test results. The very nature that a school is involved in restructuring efforts implies that there is a heightened interest in making changes to improve the school climate and academic achievement. While working to implement block scheduling, schools may be incorporating numerous strategies to promote student success, any of which may be a significant factor in the improvement of test results (Lybbert, 1998).

Lindsay (as cited in Black, 1998), one of the harshest critics of block scheduling, says that increasing class time from 45 to 90 minutes does nothing to increase learning. Instead he asserts that teachers use "fun activities" to fill up class time. Further he states that student retention lags when long gaps of time happen between classes that are sequential in length. Finally, he asserts that in some cases students spend less total class time in classes that meet for long blocks of time than they would in a traditional schedule.

Notwithstanding, overwhelming evidence collected by such researchers as Canady and Rettig (1999), suggest that students' academic performance is not harmed by a block

schedule, and in fact many schools report increases in student performance. Although not a "panacea for their problems of American Education...a school schedule can have an enormous impact on a school climate" (p. 20).

Summary

Change is difficult in any institution, but it is particularly hard to accomplish in such a complex and isolated organization as the American high school. Most of what a high school student does during the school day remained virtually unchanged during the first 60-80 years of the 20th century across the country. A student's day in high school has traditionally been conducted based on a six, seven, or eight period day with students taking a required number of courses involving English, science, social studies and mathematics, as well as various electives from the vocational, fine arts, physical education, or business areas. Educators appeared to be much more interested in the content of the courses taught and delivered to their charges than they were to the way the information was imparted. The traditional "sit and get" method of instruction was the norm. During the last 20-40 years of the 20th century all this began to change.

Educators were looking at new and different ways of delivering instruction to their students starting around the late 1960s and early 1970s. Various innovations in the way instructional material was delivered to students began to appear; Flexible Modular Scheduling, the Copernican Plan, and ultimately Block Scheduling, started to reshape the way content was being delivered in the American high school.

It is difficult, as the research indicates, to isolate improvements in a school. Improvements such as increased academic performance are difficult to pinpoint as the result of a particular innovation or change. Credit for an improvement (or lack of it) to any one change or innovation is almost impossible to determine in such a complex and

highly diverse institution as the American high school. Yet with the estimates of up to 75% of schools utilizing some form of alternative schedule by 2010, educators appear to be looking for new and better ways to utilize time.

Although the the success of an innovation in one community does not insure that it will be successful in another, understanding the thoughts of those most affected by the change can be extremely beneficial. The perceptions of the members of an organization in regard to the effectiveness of any change are ultimately what may impact the success or failure of the innovation. This study concentrates on an investigation of the perceptions of teachers in regard to block scheduling. This research gives the reader valuable information about how teachers perceive block scheduling in regard to the areas of staff development, curriculum, teaching methods, student class work, student achievement, school climate, and satisfaction. Armed with this information, school leaders can make informed and accurate decisions on the possibilities of instituting block scheduling in their school.

Chapter 3

Research Methodology

The purpose of this study was to investigate teachers' perceptions regarding the implementation of block scheduling in five Nebraska High Schools. This study centered around the key areas of staff development, curriculum, teaching methods, student class work, student achievement, school climate, and satisfaction. The information derived from this study gives the practitioner valuable information concerning those areas that teachers believe to be the most effective and beneficial aspects of block scheduling. Conversely, the ability to isolate the factors that teachers believe to be a negative result of block scheduling assists policy makers in a school district to determine if a block schedule is appropriate for them.

<u>Research Design</u>

This descriptive quantitative study was conducted to determine the perceptions of teachers on seven areas in regard to block scheduling. The questionnaire developed for this study was structured specifically for use with this research.

<u>Dependent Variables</u>

Information was collected on the following:

1. Staff Development

2. Curriculum

3. Teaching Methods

4. Student Class Work

5. Student Achievement

6. School Climate

7. Satisfaction

<u>Independent Variables</u>

Information was collected on the following:

1. Area of responsibility, i.e., English, Social Studies, etc.

2. Years of teaching at this school

3. Years in education

4. Highest level of educational degree attained

5. Type of student schedule used prior to block scheduling

6. The time at which block scheduling was implemented at this school

7. Size of the school (student population)

<u>Sample</u>

This study was conducted in five schools that had implemented an Alternating Day, A/B Block Schedule, for a minimum of at least 2 school years. The schools selected for this study encompassed urban, suburban, and rural geographical areas in the state of Nebraska and ranged in student population from 232 to 1,738. Professional teaching staff size for these schools ranged from 26 to 113. All five schools were comprised of grades 9-12. A total of 261 surveys were sent out with 186 surveys (71%) returned and analyzed in order to conduct this research. A single stage sampling procedure was used and the entire population was surveyed during the month of May, 2005.

Those schools selected for this study included:

School No. 1

Urban

Student Population (grades 9-12) = 1,738

Teaching Staff = 113

School No 2

Suburban

Student Population (grades 9-12) = 665

Teaching Staff = 50

School No. 3

Rural

Student Population (grades 9-12) = 464

Teaching Staff = 40

School No. 4

Rural

Student Population (grades 9-12) = 420

Teaching Staff = 32

School No. 5

Rural

Student Population (grades 9-12) = 232

Teaching Staff = 26

Permission to survey the teachers in each school was secured from the Superintendent of each school district or his/her designee. Approval of this research was received from the Institutional Review Board in May, 2005 (see Appendix A).

Data Collection

The data collection for this survey was conducted during a 3 week period from May 9-27, 2005, by the principal in each school surveyed. It was determined by this researcher that this was a logical time to give the Teacher Perception Survey so that those teachers who were new to the profession or new to this type of schedule would have had

the opportunity to experience this schedule for the entire year.

The survey was introduced by the individual principals at each of the five schools in a manner that they determined would allow for the greatest understanding of the purpose of the survey. A sample letter of explanation was given to the principal of each school to use with his or her staff introducing them to the survey prior to the administration (see Appendix B). The ability to survey a large number of teachers in a quick and expedient manner made this method of survey administration the most effective in order to achieve the highest return of survey information.

Instrumentation

Because an adequate research instrument was not available to measure the areas of teachers' perceptions of the effectiveness of block scheduling, the researcher developed an instrument designed expressly for this purpose. The instrument development was based on an extensive review of the literature and the researcher's previous survey of the reasons schools adopt a block schedule (see Appendix B).

For the purpose of this research a 5-point Likert survey was developed consisting of 34 questions in seven specific categories: staff development, curriculum, teaching methods, student class work, student achievement, school climate, and satisfaction. Teachers were asked to rate their satisfaction with each survey question by choosing from one of the following: 5=Strongly Agree, 4=Agree, 3=No Opinion, 2=Disagree, or 1=Strongly Disagree.

Specific questions that were answered by respondents in this survey were selected to measure the seven areas of importance in regard to teachers' perceptions of the effectiveness of block scheduling. In the area of staff development questions regarding communication, sufficiency of training, and development of new teaching

strategies were asked (Likert items 1-6). Curriculum questions were asked to explore

teachers' perceptions concerning the depth and breath of the curriculum covered in class,

as well as perceptions of students' understanding of basic concepts (Likert items 7-9).

The area of teaching methods asks questions regarding the use of new teaching strategies

and methods, individualization of instruction, and planning for instruction (Likert items

10-18). Student class work questions were asked to gather information regarding

students' preparation for class, understanding of the course content, and ability to think

critically (Likert items 19-23). Student achievement questions included the teachers'

perceptions about the methods used to assess student understanding, level of

performance of students, and the ability to assess the work with students of varying

ability levels (Likert items 24-28). School climate was assessed in order to determine

teachers' perceptions of the establishment of a positive learning environment,

collaboration with colleagues, and student behavior (Likert items 29-33). Finally,

satisfaction with the block schedule was queried in order to determine if this schedule was

not only something the teacher was happy with, but if the teacher felt that the schedule

best fit the needs of the students at their school (Likert items 33-34).

Validity. The content validity of this research instrument was established by a

three step process. First, an extensive review of the literature was completed regarding

the history of student scheduling in the American high school including the reasons many

schools have decided in the last decade to adopt the block scheduling method for

students. Secondly, the recent adoption of block scheduling at the researcher's own

school district led to the interest in determining if this method of scheduling was indeed of

benefit to both students and staff. Thirdly, a panel of experts reviewed the survey

instrument. This panel consisted of 10 school administrators who were either currently

practicing or had just recently retired from schools that had utilized a block schedule for at least 2 school years. They were asked to provide feedback regarding the appropriateness, clarity, and comprehensive nature of the research instrument. Appropriate adjustments based on the panel's feedback were made to the instrument.

Pilot study. In April, 2005, a pilot study of the survey instrument was conducted using 30 professional staff members from two different schools utilizing a block schedule. The survey was distributed in paper format in order for those taking part in the pilot study to make comments and suggestions as to the adjustments and improvements needed in the research instrument. Based on the results and analysis of the pilot study, the researcher made appropriate adjustments and improvements to the research instrument to enhance content validity and reliability.

Reliability. The reliability of the instrument was estimated using Cronbach's alpha. Cronbach's alpha estimates the internal consistency of the responses to the Likert items and is considered a conservative measure of reliability. The range for Cronbach's alpha is from 0 to 1.0 with an alpha of .70 considered to be indicative of internal consistency.

The reliability for each of the subscales of the Teacher Perception Survey were staff development .85, curriculum .83, teaching methods .77, student class work .89, student achievement .89, school climate .85, and satisfaction .96.

Research Questions

The following questions were tested using the survey instrument.

1. What are the teachers' perceptions of the effectiveness of block scheduling following at least 2 years of implementation of the schedule?

2. Is there a significant difference in teachers' perceptions of the

effectiveness of block scheduling based on area of responsibility?

3. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on years of teaching at the school?

4. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on years in education?

5. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on highest level of educational degree attained?

6. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on the type of schedule used prior to block scheduling?

7. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on teaching at the school during the time the schedule was implemented?

8. Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on the size of the school?

Data Analysis

Research question 1 was analyzed using descriptive statistical measures. Means and standard deviations were reported for each of the seven subscales, staff development, curriculum, teaching methods, student class work, student achievement, school climate, and satisfaction. Research questions 2-6 and 8 were analyzed using one-way analyses of variance (ANOVAs) to test each of the seven subscales of teachers' perceptions of the effectiveness of block scheduling as reported by area of responsibility, i.e. English, Social Studies, etc., years of teaching at this school, highest level of educational degree attained,

type of schedule used prior to block scheduling, and school size across the five schools studied. Research question 7 was analyzed using an Independent t-test for each of the seven subscales. A .01 level of significance was used to control for Type I errors because multiple statistical tests were conducted.

Chapter 4

Data Analysis

The purpose of this study was to investigate teachers' perceptions regarding the implementation of block scheduling in five Nebraska high schools. This study centered around the key areas of staff development, curriculum, teaching methods, student class work, student achievement, school climate, and satisfaction. These dependent variables were analyzed in comparison to the independent variables, which included teachers' area of responsibility (i.e., English, Social Studies, etc.), their years of teaching at their current school, their total years in education, the highest level of educational degree they had attained (i.e., Bachelor's Degree, Master's Degree, etc.), the type of student schedule they had used prior to block scheduling being implemented at their school (i.e., the number of class periods in the schedule), the time at which block scheduling was implemented at their school (i.e., before they came to this school or while they were at the school), and finally the size of the school (student population). The survey was distributed to 261 teachers with 186 (71%) completing the survey.

Research Question 1

What are the teachers' perceptions of the effectiveness of block scheduling following at least 2 years of implementation of the schedule?

The overall mean score for the staff development subscale was 3.75 ($SD = 0.84$). The overall mean score for the curriculum subscale was 3.80 ($SD = 0.97$). The overall mean score for the teaching methods subscale was 3.58 ($SD = 0.64$). The overall mean score for the student class work subscale was 3.33 ($SD = 0.83$). The overall mean score for the student achievement subscale was 3.41 ($SD = 0.78$). The overall mean score for the school climate subscale was 3.51 ($SD = 0.78$). The overall mean score for the

satisfaction subscale was 3.86 ($\underline{SD}$ = 1.15). Table 1 presents the means and standard deviations for each individual item and the means and standard deviations for each of the seven subscales surveyed.

<u>Research Question 2</u>

Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on area of responsibility?

In order to determine if there were significant differences in teachers' perceptions of the effectiveness of block scheduling based on their area of responsibility one-way analyses of variance (ANOVAs) were conducted on each of the survey subscales. There were no statistically significant differences across departments on the staff development subscale, $\underline{F}$(9, 173) = 2.399, $\underline{p}$ = .014; teaching methods subscale, $\underline{F}$(9, 174) = 2.469, $\underline{p}$ = .011; student class work subscale, $\underline{F}$(9, 174) = 1.713, $\underline{p}$ = .089; and school climate subscale, $\underline{F}$(9, 172) = 1.721, $\underline{p}$ = .087. There were statistically significant differences across departments on the curriculum subscale, $\underline{F}$(9, 174) = 3.306, $\underline{p}$ = .001; student achievement subscale, $\underline{F}$(9, 172) = 3.501, $\underline{p}$ = .001; and satisfaction subscale, $\underline{F}$(9, 171) = 3.413, $\underline{p}$ = .001. Table 2 presents the means and standard deviations for the survey subscales broken down by department.

To investigate the statistically significant differences across departments on the curriculum, student achievement, and satisfaction subscales follow-up Tukey pairwise comparison tests were conducted. On the curriculum subscale the mean score for the Career and Technical Education department ($\underline{M}$ = 4.26, $\underline{SD}$ = 0.83) was significantly higher than the mean score for the Mathematics department ($\underline{M}$ = 3.35, $\underline{SD}$ = 0.80). On the student achievement subscale the mean scores for the English ($\underline{M}$ = 3.77, $\underline{SD}$ = 0.60)

Table 1

Teachers' Perceptions of the Effectiveness of Block Scheduling Following at Least 2

Years of Implementation

Staff Development		
	Mean	SD
1. I received adequate training and information in order to prepare me to teach in a block schedule.	3.69	1.13
2. I was (am) kept informed of changes in this schedule that affect me.	4.02	0.92
3. Communication between the administration and teachers appeared sufficient to allow this schedule to be successful.	3.98	0.94
4. I believe the staff development received for teaching in the block schedule has made me a more versatile teacher.	3.59	1.09
5. This schedule provides me with the opportunity to collaborate with colleagues on teaching strategies.	3.46	1.19
Staff Development Subscale Total	3.75	0.84
Curriculum		
6. I am able to cover the needed material in the curriculum in the block schedule.	3.84	1.13
7. Because of this schedule, I am allowed to cover the material in greater depth.	3.86	1.11
8. Students have a better understanding of the basic concepts of the curriculum due to instruction in longer blocks of time.	3.70	1.12
Curriculum Subscale Total	3.80	0.97

Table 1 (continued)

Teaching Methods		
	Mean	SD
9. I used new teaching strategies as a result of this schedule.	4.11	0.84
10. I have incorporated teaching methods that deal with cooperative learning because of this schedule.	3.83	0.99
11. Due to the block schedule I have incorporated teaching methods that deal with multiple intelligences in my classroom.	3.74	0.99
12. This schedule encourages more active learning in my class.	3.94	0.99
13. This schedule allows me to lecture less often in my class.	3.43	1.11
14. Block scheduling requires spending more time on lesson planning.	3.66	1.03
15. I am better able to individualize instruction in my classroom because of the block schedule.	3.65	0.96
Teaching Methods Subscale Total	3.58	0.64

Table 1 (continued)

Student Class Work

	Mean	SD
16. Students in my classroom are better prepared for daily class sessions using a block schedule.	3.06	1.02
17. Students in my classroom understand the course content better because of this schedule.	3.36	1.05
18. A higher percentage of students are completing homework assignments because of this schedule.	2.86	1.03
19. Extended periods of time allow students to demonstrate their understanding of concepts before they leave the classroom.	3.81	0.90
20. Longer blocks of class time encourage students to think analytically and critically.	3.56	1.02
Student Class Work Subscale Total	3.33	0.83

Student Achievement

21. Block scheduling gives me the opportunity to use different methods of assessing student achievement.	3.90	0.84
22. Students with learning difficulties achieve at a higher level because of the block schedule.	3.15	1.03
23. High ability learners are able to be challenged satisfactorily with this schedule.	3.66	0.95
24. Student performance has improved in my class because of this schedule.	3.32	1.00
25. Fewer students are failing my classes, in part because of the block schedule.	3.02	0.95
26. I feel that a block schedule improves a student's academic achievement.	3.40	1.04
Student Achievement Subscale Total	3.41	0.78

Table 1 (continued)

School Climate

	Mean	SD
27. The climate in this school has improved due to the block schedule.	3.50	1.04
28. I have been able to collaborate more with colleagues on teaching strategies because of this schedule.	3.22	1.09
29. Because of this schedule students have more opportunities to take classes they have been unable to take in the past.	3.35	1.07
30. Students like this schedule.	3.73	0.91
31. Student behavior in the school building is better because of this schedule.	3.34	1.14
32. Longer blocks of time allow me to know my students better.	3.92	0.95
School Climate Subscale Total	3.51	0.78

Satisfaction

33. Overall, I am happy with the present block schedule.	3.96	1.14
34. I feel the block schedule best fits the needs of our students.	3.76	1.21
Satisfaction Subscale Total	3.86	1.15

Table 2

Teachers' Perceptions of the Effectiveness of Block Scheduling Based on Area of

Responsibility

DEPARTMENT	n	Mean	SD
Staff Development			
English	26	4.06	0.79
Mathematics	26	3.45	0.77
Science	22	3.62	0.82
Social Studies	19	3.66	0.88
Foreign Language	12	3.85	0.76
Career and Technical Education	23	4.05	0.65
Physical Education	7	4.29	0.28
Fine Arts	16	3.48	0.99
Special Education	17	3.32	1.01
Other	15	3.92	0.79
Curriculum			
English	26	4.15	0.78
Mathematics	27	3.35	0.80
Science	22	3.56	0.90
Social Studies	19	3.67	1.14
Foreign Language	12	3.50	0.89
Career and Technical Education	23	4.26	0.83
Physical Education	7	4.57	0.32
Fine Arts	16	3.50	1.32
Special Education	17	3.57	0.92
Other	15	4.20	0.88

Table 2 (continued)

DEPARTMENT	n	Mean	SD
Teaching Methods			
English	26	3.90	0.60
Mathematics	27	3.33	0.56
Science	22	3.54	0.57
Social Studies	19	3.46	0.71
Foreign Language	12	3.60	0.59
Career and Technical Education	23	3.84	0.58
Physical Education	7	3.76	0.50
Fine Arts	16	3.51	0.81
Special Education	17	3.22	0.57
Other	15	3.62	0.68
Student Class Work			
English	26	3.65	0.69
Mathematics	27	3.09	0.92
Science	22	3.26	0.67
Social Studies	19	3.27	0.98
Foreign Language	12	3.10	0.62
Career and Technical Education	23	3.58	0.68
Physical Education	7	3.74	0.60
Fine Arts	16	3.23	0.87
Special Education	17	2.98	1.00
Other	15	3.44	0.86

Table 2 (continued)

DEPARTMENT	n	Mean	SD
Student Achievement			
English	26	3.77	0.60
Mathematics	27	3.02	0.85
Science	22	3.47	0.65
Social Studies	18	3.27	0.65
Foreign Language	12	3.44	0.62
Career and Technical Education	23	3.74	0.55
Physical Education	7	3.83	0.76
Fine Arts	16	3.06	1.04
Special Education	19	2.97	0.87
Other	15	3.57	0.69
School Climate			
English	26	3.87	0.67
Mathematics	27	3.27	0.79
Science	22	3.42	0.63
Social Studies	18	3.43	0.94
Foreign Language	12	3.34	0.65
Career and Technical Education	23	3.67	0.69
Physical Education	7	3.80	0.39
Fine Arts	16	3.30	0.82
Special Education	16	3.25	0.84
Other	15	3.69	0.98

Table 2 (continued)

DEPARTMENT	n	Mean	SD
Satisfaction			
English	26	4.48	0.75
Mathematics	27	3.33	1.29
Science	22	3.86	0.97
Social Studies	18	3.56	1.21
Foreign Language	11	3.82	0.64
Career and Technical Education	23	4.35	0.55
Physical Education	7	4.50	0.50
Fine Arts	16	3.44	1.57
Special Education	16	3.28	1.35
Other	15	4.00	1.24

and the Career and Technical Education ($\underline{M}$ = 3.74, $\underline{SD}$ = 0.55) departments were significantly higher than the mean scores for the Mathematics ($\underline{M}$ = 3.02, $\underline{SD}$ = 0.85) and the Special Education ($\underline{M}$ = 2.97, $\underline{SD}$ = 0.87) departments. On the satisfaction subscale the mean scores for the English ($\underline{M}$ = 4.48, $\underline{SD}$ = 0.75) and the Career and Technical Education ($\underline{M}$ = 4.35, $\underline{SD}$ = 0.55) departments were significantly higher than the mean score for the Mathematics department ($\underline{M}$ = 3.33, $\underline{SD}$ = 1.29), and the mean score for the English department ($\underline{M}$ = 4.48, $\underline{SD}$ = 0.75) was significantly higher than the mean score for the Special Education department ($\underline{M}$ = 3.28, $\underline{SD}$ = 1.35).

<u>Research Question 3</u>

Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on years of teaching at the school?

In order to determine if there were significant differences in teachers' perceptions of the effectiveness of block scheduling based on their years of teaching at the school one-way ANOVAs were conducted on each of the survey subscales. There were no statistically significant differences across years of teaching at the school on the curriculum subscale, $\underline{F}$(4, 180) = 1.002, $\underline{p}$ = .408; teaching methods subscale, $\underline{F}$(4, 180) = 0.634, $\underline{p}$ = .639; student class work subscale, $\underline{F}$(4, 180) = 2.640, $\underline{p}$ = .035; school climate subscale, $\underline{F}$(4, 178) = 2.740, $\underline{p}$ = .030; and satisfaction subscale, $\underline{F}$(4, 177) = 2.932, $\underline{p}$ = .022. There were statistically significant differences across years of teaching at the school on the staff development subscale, $\underline{F}$(4, 179) = 3.780, $\underline{p}$ = .006; and the student achievement subscale, $\underline{F}$(4, 178) = 3.646, $\underline{p}$ = .007. Table 3 presents the means and standard deviations for the survey subscales broken down by years of teaching at the school.

Table 3

Teachers' Perceptions of the Effectiveness of Block Scheduling Based on Years of

Teaching at Their School

YEARS TEACHING AT SCHOOL	n	Mean	SD
Staff Development			
1-3 years	44	3.58	0.95
4-7 years	53	3.51	0.72
8-15 years	29	4.06	0.80
16-25 years	33	3.80	0.72
26 or more years	25	4.10	0.91
Curriculum			
1-3 years	44	3.75	0.96
4-7 years	53	3.61	0.99
8-15 years	30	3.96	0.89
16-25 years	33	3.96	0.99
26 or more years	25	3.89	1.03
Teaching Methods			
1-3 years	44	3.54	0.68
4-7 years	53	3.53	0.63
8-15 years	30	3.66	0.62
16-25 years	33	3.53	0.70
26 or more years	25	3.73	0.57
Student Class Work			
1-3 years	44	3.24	0.92
4-7 years	53	3.11	0.84
8-15 years	30	3.63	0.70
16-25 years	33	3.40	0.81
26 or more years	25	3.55	0.70

Table 3 (continued)

YEARS TEACHING AT SCHOOL	n	Mean	SD
Student Achievement			
1-3 years	42	3.29	0.83
4-7 years	53	3.16	0.82
8-15 years	30	3.67	0.65
16-25 years	33	3.47	0.76
26 or more years	25	3.72	0.60
School Climate			
1-3 years	42	3.38	0.65
4-7 years	53	3.32	0.75
8-15 years	30	3.69	0.70
16-25 years	33	3.57	0.91
26 or more years	25	3.84	0.84
Satisfaction			
1-3 years	42	3.67	1.14
4-7 years	53	3.58	1.23
8-15 years	30	4.25	0.92
16-25 years	32	3.89	1.20
26 or more years	25	4.28	1.00

To investigate the statistically significant differences across years of teaching at the school on the staff development and student achievement subscales follow-up Tukey pairwise comparison tests were conducted. On the staff development subscale the mean scores for those teachers who had taught at the school for 8-15 years ($\underline{M}$ = 4.06, $\underline{SD}$ = 0.80) and those who had taught for 26 years or more ($\underline{M}$ = 4.10, $\underline{SD}$ = 0.91) were significantly higher than the mean score for those teachers who had taught at the school for 4-7 years ($\underline{M}$ = 3.51, $\underline{SD}$ = 0.72). On the student achievement subscale the mean scores for those teachers who had taught at the school between 8-15 years ($\underline{M}$ = 3.67, $\underline{SD}$ = 0.65) and those who had taught for 26 years or more ($\underline{M}$ = 3.72, $\underline{SD}$ = 0.60) were significantly higher than the mean score for those teachers who had taught at the school between 4-7 years ($\underline{M}$ = 3.16, $\underline{SD}$ = 0.82).

Research Question 4

Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on years in education?

In order to determine if there were significant differences in the teachers' perceptions of the effectiveness of block scheduling based on years in education one-way ANOVAs were conducted on each of the survey subscales. There were no statistically significant differences based on the years in education on any of the subscales surveyed: staff development subscale, $\underline{F}$(4, 171) = 1.173, $\underline{p}$ = .324; curriculum subscale, $\underline{F}$(4, 172) = 0.981, $\underline{p}$ = .419; teaching methods subscale, $\underline{F}$(4, 172) = 0.576, $\underline{p}$ = .680; student class work subscale, $\underline{F}$(4, 172) = 0.900, $\underline{p}$ = .466; student achievement subscale, $\underline{F}$(4, 170) = 1.748, $\underline{p}$ = .142; school climate subscale, $\underline{F}$(4, 170) = 2.334, $\underline{p}$ = .058; and satisfaction subscale, $\underline{F}$(4, 169) = 1.958, $\underline{p}$ = .103. Table 4 presents the means and

Table 4

Teachers' Perceptions of the Effectiveness of Block Scheduling Based on Years in

Education

YEARS IN EDUCATION	n	Mean	SD
Staff Development			
1-3 years	22	3.75	0.96
4-7 years	21	3.53	0.77
8-15 years	34	3.60	0.88
16-25 years	44	3.87	0.73
26 or more years	55	3.88	0.83
Curriculum			
1-3 years	22	3.95	0.96
4-7 years	21	3.59	1.04
8-15 years	34	3.75	0.95
16-25 years	45	4.00	0.79
26 or more years	55	3.72	1.09
Teaching Methods			
1-3 years	22	3.74	0.69
4-7 years	21	3.61	0.64
8-15 years	34	3.48	0.70
16-25 years	45	3.59	0.58
26 or more years	55	3.55	0.67
Student Class Work			
1-3 years	22	3.24	0.98
4-7 years	21	3.23	0.88
8-15 years	34	3.21	0.89
16-25 years	45	3.52	0.73
26 or more years	55	3.33	0.80

Table 4 (continued)

YEARS IN EDUCATION	n	Mean	SD
Student Achievement			
1-3 years	21	3.22	0.91
4-7 years	21	3.16	0.80
8-15 years	33	3.30	0.80
16-25 years	45	3.60	0.72
26 or more years	55	3.44	0.75
School Climate			
1-3 years	21	3.32	0.66
4-7 years	21	3.26	0.77
8-15 years	33	3.38	0.75
16-25 years	45	3.76	0.69
26 or more years	55	3.54	0.89
Satisfaction			
Satisfaction	21	3.8	1.26
4-7 years	21	3.45	1.18
8-15 years	33	3.64	1.08
16-25 years	45	4.18	0.87
26 or more years	54	3.94	1.28

standard deviations for the survey subscales broken down by years in education.

Research Question 5

Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on highest level of educational degree attained?

In order to determine if there were significant differences in the teachers' perceptions of the effectiveness of block scheduling based on highest level of educational degree attained one-way ANOVAs were conducted on each of the survey subscales. There were no statistically significant differences based on the highest level of education attained on any of the subscales: staff development subscale, $F(3, 167) = 1.226$, $p = .302$; curriculum subscale, $F(3, 168) = 1.261$, $p = .289$; teaching methods subscale, $F(3, 168) = 0.335$, $p = .800$; student class work subscale, $F(3, 168) = 0.659$, $p = .578$; student achievement subscale, $F(3, 166) = 1.359$, $p = .257$; school climate subscale, $F(3, 166) = 0.912$, $p = .436$; and satisfaction subscale, $F(3, 165) = 2.159$, $p = .095$. Table 5 presents the means and standard deviations for the survey subscales broken down by highest level of educational degree attained.

Research Question 6

Is there a significant difference in teachers' perceptions of the effectiveness of block scheduling based on the type of schedule used prior to block scheduling?

In order to determine if there were significant differences in the teachers' perceptions of the effectiveness of block scheduling based on the type of schedule used prior to block scheduling one-way ANOVAs were conducted on each of the survey subscales. There were no statistically significant differences across the types of schedule used prior to block scheduling on any of the subscales: staff development subscale, $F(4, 178) = 0.597$, $p = .665$; curriculum subscale, $F(4, 179) = 1.399$, $p = .236$; teaching

Table 5

Teachers' Perceptions of the Effectiveness of Block Scheduling Based on Highest

Educational Degree Attained

HIGHEST LEVEL OF EDUCATION	n	Mean	SD
Staff Development			
Bachelor's Degree	60	3.62	0.84
Master's Degree	105	3.80	0.85
Specialist Degree	3	3.13	0.50
Doctoral Degree	3	4.07	0.90
Curriculum			
Bachelor's Degree	60	3.62	1.09
Master's Degree	106	3.87	0.90
Specialist Degree	3	4.33	1.15
Doctoral Degree	3	3.44	1.35
Teaching Methods			
Bachelor's Degree	60	3.51	0.66
Master's Degree	106	3.58	0.65
Specialist Degree	3	3.81	0.73
Doctoral Degree	3	3.43	0.87
Student Class Work			
Bachelor's Degree	60	3.21	0.89
Master's Degree	106	3.22	0.79
Specialist Degree	3	3.80	1.20
Doctoral Degree	3	3.07	1.33
Student Achievement			
Bachelor's Degree	59	3.21	0.79
Master's Degree	105	3.46	0.77
Specialist Degree	3	3.50	1.09
Doctoral Degree	3	3.50	1.01

Table 5 (continued)

HIGHEST LEVEL OF EDUCATION	n	Mean	SD
School Climate			
Bachelor's Degree	59	3.39	0.71
Master's Degree	105	3.53	0.80
Specialist Degree	3	2.94	0.38
Doctoral Degree	3	3.37	1.10
Satisfaction			
Bachelor's Degree	59	3.53	1.22
Master's Degree	104	3.99	1.10
Specialist Degree	3	4.17	1.44
Doctoral Degree	3	3.50	1.32

methods subscale, $F_{(4, 179)}$ = 2.886, p = .024; student class work subscale,

$F_{(4, 179)}$ = 1.409, p = .233; student achievement subscale, $F_{(4, 177)}$ = 0.981, p = .419;

school climate subscale, $F_{(4, 177)}$ = 2.280, p = .063; and satisfaction subscale,

$F_{(4, 176)}$ = 1.719, p = .148. Table 6 presents the means and standard deviations for the

survey subscales broken down by type of schedule used prior to block scheduling.

Research Question 7

Is there a significant difference in teachers' perceptions of the effectiveness of

block scheduling based on teaching at the school during the time the schedule was

implemented?

In order to determine if there were significant differences in teachers' perceptions

of the effectiveness of block scheduling based on whether or not they were teaching at the

school during the time the schedule was implemented, independent t-tests were

conducted on each of the survey subscales. There were no statistically significant

differences in teachers' perceptions based on whether or not they were teaching at the

school during the time the schedule was implemented: staff development subscale,

$t_{(177)}$ = 2.525, p = .012; curriculum subscale, $t_{(178)}$ = 0.884, p = .378; teaching methods

subscale, $t_{(178)}$ = -0.092, p = .927; student class work subscale, $t_{(178)}$ = 2.230,

p = .021; student achievement subscale, $t_{(176)}$ = 2.539, p = .012; school climate subscale,

$t_{(176)}$ = 2.584, p = .011; and satisfaction subscale, $t_{(175)}$ = 2.116, p = .036. Table 7

presents the means and standard deviations for the survey subscales broken down by

implementation status.

Research Question 8

Is there a significant difference in teachers' perceptions of the effectiveness of

Table 6

Teachers' Perceptions of the Effectiveness of Block Scheduling Based on the Type of

Schedule Used Prior to Block Scheduling

PRIOR SCHEDULE USED	n	Mean	SD
Staff Development			
none (first year teaching)	31	3.61	0.92
6 period day	4	4.15	0.77
7 period day	53	3.79	0.88
8 period day	90	3.74	0.81
other	5	4.04	0.67
Curriculum			
none (first year teaching)	31	3.80	0.93
6 period day	4	4.50	0.79
7 period day	54	3.66	1.02
8 period day	90	3.83	0.98
other	5	4.67	0.73
Teaching Methods			
none (first year teaching)	31	3.75	0.59
6 period day	4	4.11	0.47
7 period day	54	3.46	0.58
8 period day	90	3.54	0.69
other	5	4.17	0.43
Student Class Work			
none (first year teaching)	31	3.11	0.89
6 period day	4	3.80	0.65
7 period day	54	3.35	0.80
8 period day	90	3.37	0.83
other	5	3.84	0.61

Table 6 (continued)

PRIOR SCHEDULE USED	n	Mean	SD
Student Achievement			
none (first year teaching)	31	3.22	0.86
6 period day	4	3.92	0.78
7 period day	54	3.42	0.79
8 period day	88	3.44	0.75
other	5	3.53	0.64
School Climate			
none (first year teaching)	31	3.28	0.74
6 period day	4	3.67	0.71
7 period day	54	3.72	0.82
8 period day	88	3.44	0.73
other	5	3.90	1.08
Satisfaction			
none (first year teaching)	31	3.53	1.22
6 period day	4	4.50	1.00
7 period day	54	4.00	1.20
8 period day	87	3.81	1.10
other	5	4.60	0.55

Table 7

Teachers' Perceptions of the Effectiveness of Block Scheduling Based on Teaching at the School During the Time the Schedule was Implemented

TIME SCHEDULE IMPLEMENTED	n	Mean	SD
Staff Development			
Teaching at school	96	3.89	0.83
Came after implemented	83	3.57	0.84
Curriculum			
Teaching at school	96	3.86	0.97
Came after implemented	84	3.73	0.96
Teaching Methods			
Teaching at school	96	3.58	0.65
Came after implemented	84	3.59	0.64
Student Class Work			
Teaching at school	96	3.46	0.81
Came after implemented	84	3.17	0.83
Student Achievement			
Teaching at school	96	3.53	0.78
Came after implemented	82	3.24	0.75
Climate			
Teaching at school	96	3.63	0.82
Came after implemented	82	3.33	0.67
Satisfaction			
Teaching at school	95	4.01	1.13
Came after implemented	82	3.65	1.16

block scheduling based on the size of the school?

In order to determine if there were significant differences in teachers' perceptions of the effectiveness of block scheduling based on the size of the school one-way ANOVAs were conducted on each of the survey subscales. There were no statistically significant differences in teachers' perceptions based on the size of the school on the teaching methods subscale, $\underline{F}(4, 181) = 3.351$, $\underline{p} = .011$. There were statistically significant differences based on the size of school on the staff development subscale, $\underline{F}(4, 180) = 10.223$, $\underline{p} < .0005$; curriculum subscale, $\underline{F}(4, 181) = 6.961$, $\underline{p} < .0005$; student class work subscale, $\underline{F}(4, 181) = 4.593$, $\underline{p} = .001$; student achievement subscale, $\underline{F}(4, 179) = 3.665$, $\underline{p} = .007$; school climate subscale, $\underline{F}(4, 179) = 11.994$, $\underline{p} < .0005$; and the satisfaction subscale, $\underline{F}(4, 178) = 8.063$, $\underline{p} < .0005$. Table 8 presents the means and standard deviations for the survey subscales broken down by size of the school.

To investigate the statistically significant differences across the size of the schools on the staff development, curriculum, student class work, student achievement, school climate, and satisfaction subscales follow-up Tukey pairwise comparison tests were conducted. On the staff development subscale the mean scores for school 1 ($\underline{M}$ = 3.67, $\underline{SD}$ = 0.83) and school 2 ($\underline{M}$ = 3.99, $\underline{SD}$ = 0.54) were significantly higher than the mean score for school 4 ($\underline{M}$ = 2.94, $\underline{SD}$ = 0.95), and the mean score for school 3 ($\underline{M}$ = 4.12, $\underline{SD}$ = 0.64) was significantly higher than the mean scores for school 4 ($\underline{M}$ = 2.94, $\underline{SD}$ = 0.95) and school 1 ($\underline{M}$ = 3.67, $\underline{SD}$ = 0.83). On the curriculum subscale the mean scores for school 2 ($\underline{M}$ = 4.09, $\underline{SD}$ = 0.80), school 3 ($\underline{M}$ = 4.04, $\underline{SD}$ = 0.92), and school 5 ($\underline{M}$ = 4.29, $\underline{SD}$ = 1.13) were significantly higher than the mean score for school 4 ($\underline{M}$ = 3.01, $\underline{SD}$ = 0.91). On the student class work subscale the mean score for school 3

Table 8

Teachers' Perceptions of the Effectiveness of Block Scheduling Based on the Size of the

School

SIZE OF SCHOOL	n	Mean	SD
Staff Development			
School 1	69	3.67	0.83
School 2	47	3.99	0.54
School 3	38	4.12	0.64
School 4	23	2.94	0.95
School 5	8	3.53	1.26
Curriculum			
School 1	69	3.67	0.96
School 2	47	4.09	0.80
School 3	39	4.04	0.92
School 4	23	3.01	0.91
School 5	8	4.29	1.13
Teaching Methods			
School 1	69	3.52	0.72
School 2	47	3.72	0.61
School 3	39	3.66	0.50
School 4	23	3.22	0.48
School 5	8	3.93	0.82
Student Class Work			
School 1	69	3.13	0.83
School 2	47	3.48	0.73
School 3	39	3.64	0.63
School 4	23	3.00	0.92
School 5	8	3.75	1.21

Table 8 (continued)

SIZE OF SCHOOL	n	Mean	SD
Student Achievement			
School 1	69	3.29	0.83
School 2	46	3.51	0.67
School 3	39	3.66	0.62
School 4	22	3.00	0.85
School 5	8	3.69	0.87
School Climate			
School 1	69	3.22	0.73
School 2	46	3.68	0.68
School 3	39	4.03	0.63
School 4	22	3.04	0.72
School 5	8	3.79	0.82
Satisfaction			
School 1	69	3.57	1.18
School 2	45	4.16	0.85
School 3	39	4.44	0.93
School 4	22	3.07	1.26
School 5	8	4.06	1.21

($\underline{M}$ = 3.64, $\underline{SD}$ = 0.63) was significantly higher than the mean scores for school 4

($\underline{M}$ = 3.00, $\underline{SD}$ = 0.92) and school 1 ($\underline{M}$ = 3.13, $\underline{SD}$ = 0.83). On the student achievement

subscale the mean score for school 3 ($\underline{M}$ = 3.66, $\underline{SD}$ = 0.62) was significantly higher than

the mean score for school 4 ($\underline{M}$ = 3.00, $\underline{SD}$ = 0.85). On the school climate subscale the

mean scores for school 2 ($\underline{M}$ = 3.68, $\underline{SD}$ = 0.68) and school 3 ($\underline{M}$ = 4.03, $\underline{SD}$ = 0.63) were

significantly higher than the mean scores for school 4 ($\underline{M}$ = 3.04, $\underline{SD}$ = 0.72) and school 1

($\underline{M}$ = 3.22, $\underline{SD}$ = 0.73). On the satisfaction subscale the mean scores for school 2

($\underline{M}$ = 4.16, $\underline{SD}$ = 0.85) and school 3 ($\underline{M}$ = 4.44, $\underline{SD}$ = 0.93) were significantly higher than

the mean scores for school 4 ($\underline{M}$ = 3.07, $\underline{SD}$ = 1.26) and school 1 ($\underline{M}$ = 3.57, $\underline{SD}$ = 1.18).

Summary

This chapter presented the results of the survey of teachers' perceptions of the

effectiveness of a block schedule in five separate schools. The survey recorded the

responses of 186 teachers as they related to the areas of staff development, curriculum,

teaching methods, student class work, student achievement, school climate, and

satisfaction. Chapter 5 interprets these findings, draws and discusses conclusions, and

makes recommendations for continued study of this subject.

Chapter 5

Discussion

In this chapter findings relevant to the study's research questions and general

observations are discussed. Implications based on the findings are also included.

Introduction

This study was conducted in five schools that had implemented an Alternating

Day, A/B Block Schedule, for a minimum of at least 2 school years. The schools selected

for this study encompassed urban, suburban, and rural geographical areas in the state of

Nebraska and ranged in student population from 232 to 1,738. Professional teaching staff

size for these schools ranged from 26 to 113. All five schools were comprised of grades

9-12. Of the 261 surveys that were sent out, 186 surveys (71%) were returned and

analyzed. The areas studied were staff development, curriculum, teaching methods,

student class work, student achievement, school climate, and satisfaction.

Change in Schools

As the results of the study unfolded the researcher gained new insights into

change in today's high schools. "It is often said that the only constant in education is

change" (Morris, 1999, p. 1,893). Although this may be true, change is often difficult to

accomplish in the American high school and often more difficult to sustain. In fact, as

this research found, the larger and more complex the innovation, the more difficult the

change is to implement (Evans, 1996). Real change is always personal (Evans, 1996), and

it is quite evident that the change to a block schedule in many schools is a very personal

issue. Change is not only a collective activity in many schools, but it also involves

individuals and their personal commitment to the change. Consequently, in many

schools, the slogan might well be similar to that first echoed by Fullan in 1993 when he

stated "change is mandatory, growth is optional" (p. 135).

<div align="center">Nonsignificant Findings</div>

No significant findings were discovered regarding teachers' perceptions of the

effectiveness of block scheduling across the subscales surveyed based on teachers' total

years in education (research question 4), the highest level of educational degree attained

(research question 5), the type of schedule used prior to implementing block scheduling

(research question 6), and whether or not a teacher was teaching at the school at the time

block scheduling was implemented (research question 7).

<div align="center">Significant Findings</div>

Significant differences were found in the survey results for teachers' perceptions

of the effectiveness of block scheduling across the (a) area of responsibility (research

question 2), (b) years they had been teaching at the school (research question 3), and

(c) size of the school (research question 8).

<u>Teachers' Perceptions of the Effectiveness of Block Scheduling Based on Area of</u>
<u>Responsibility</u>

<u>Career and Technical Education teachers.</u> Teachers who were part of the Career

and Technical Education departments were identified by the study as those who were

satisfied with a block schedule in regard to the subscales of curriculum, student

achievement, and satisfaction. Career and Technical Education courses, such as Industrial

Technology, Construction Sciences, and Business Education, seem to be a natural fit for

the time parameters of a block schedule. The curriculum lends itself well to extended

periods of time and in fact many schools that are using a traditional six, seven, or eight

period day often "manufacture" a block schedule for these classes by combining two class

periods. Early in the 20th century the federal government seemed to realize that extended

periods of time fit well with courses in the Career and Technical Education area. With the passage of the Smith-Hughes Act of 1917, many schools were provided funding for vocational education, home economics, and agricultural education courses that encouraged just such innovation (Horn, 2002).

Students are most able to begin working on long range projects and make meaningful advances on work during longer class periods. Teachers are able to help students work through problems that require extended periods. Time wasted in start up and shut down activities, such as taking attendance and cleaning areas, are less of a concern. As one 26 year Career and Technical Education teacher stated, "The block schedule format has allowed me to be more creative and to help students be successful." This teacher's statement is supported by O'Neil (as cited in Adams & Salvaterra, 1997) when he found that teachers involved in block scheduling become more creative in their instructional strategies and as a result, have greater job satisfaction.

English teachers. English teachers were also identified as being satisfied with the indicators on the subscales of student achievement and satisfaction. English classes at the high school, especially during the junior and senior years, often require students to do research projects that extend over long periods of time.

Many times these are the same sort of assignments or research projects that are required when students fill out applications for post secondary education or take state or national writing assessments. A block schedule, understandably, allows students time for the reflection and analysis needed for such projects and affords a similar amount of time required by many writing assessments. An English teacher with 13 years of experience stated, "Block schedule helps students transition into college schedules. Students appreciate having the extra night to prepare for the next class."

Students are better able to make use of library and media centers to research projects when involved in a schedule that utilizes extended periods of time and often can make use of community resources, such as local colleges or public libraries. As a 17 year teacher explained, " Block scheduling allows for more time with research projects in the media center." Another teacher with 35 years of experience stated "Good for honors classes," but warns, "Not sure of the effectiveness for intro classes."

Mathematics teachers. Teachers who were members of the Mathematics Department were identified by the study as those who were less satisfied with a block schedule in regard to the subscales of curriculum, student achievement, and satisfaction. Survey results indicated that mathematics teachers had definite opinions in regard to the effectiveness of mathematics instruction in a block schedule. As a math teacher with 24 years of experience said, "For the area of mathematics most of our students are taking Algebra 1-2, Geometry, Algebra 3-4, Pre-Cal/Trig. I think the 45 minute everyday (schedule) is superior for student understanding, student achievement and curriculum coverage."

Another Mathematics teacher with 38 years of experience expressed a similar concern that enough classes might not be available for students when he stated:

No, teachers don't work 93 minutes. Many have upwards of 60 minutes of "seat time." We didn't have a lot of training, but most teachers vary activities and learning methods during the period, but some don't. Students need to take 8 classes. We don't have 8 classes/year/4 years unless they take classes they don't want to take (electives) or take multiple classes they like. Ex. After next year I will have many math students who have taken all math classes by the end of their junior year - some sophomores. We give them college release and work experience

- good ideas, but play time.

Traditionally, many mathematics teachers have relied on homework as a method to check for student understanding. The model of "check the assignment, teach the new material, begin the assignment, do the homework," has been the standard classroom period instructional format followed in many schools and with many mathematics instructors for years. It is important to note that the standards presented by professional organizations related to mathematics education are making serious attempts to move away from such overly structured approaches. Possibly the issue of homework, or more specifically what many consider the lack of "homework production" in block scheduled schools, is the major area of concern for teachers of mathematics.

Comments concerning homework were many. They included:

"Students forget lots of information between classes because there is a day between them. They also forget homework."

"Students in general seem to resist doing preparation for classes. I cannot judge if they would be the same on a traditional schedule. I do not feel scheduling affects their preparation one way or another."

"I hear kids comment that they forget assignments more because classes don't meet everyday. It is tough, I suppose, to remember what is due."

"I felt I had a better opportunity to encourage students to turn work in when I met with them everyday. Also, because we met daily, they were better at remembering from the previous day."

In responses to the Student Class work question 18 on the Teacher Perception Survey. "A higher percentage of students are completing homework assignments because of this schedule," one teacher with 39 years of experience indicated that this was the

"biggest problem." Perhaps one English teacher with 1.5 years of experience said it best, "I feel that finding a way, although nearly impossible, to have daily shorter math and foreign language classes, but keep the block for English, social studies, etc. would be beneficial."

Special Education teachers. Special Education teachers were identified as being less satisfied with student achievement, as well as their overall satisfaction with a block schedule. Teachers of students with specials needs will agree that additional time is a necessary ingredient for students to successfully master content material. But it appears repetition and consistency are more important than longer periods of time. This was expressed best by a Social Studies teacher with 39 years of experience when he stated:

Please explain how seeing students 2 or 3 times a week is better than 5 times. Block does not give you more class time. I can't cover as much material (2-3 weeks less). Makeup work is an overwhelming nightmare for students. Consistency is impossible, especially for students who miss class time. In education we need more time with students, not more time in a "block" format. The modern world is based on a "sound bite" approach. Students do not retain more if they are exposed to material over a long period and then there is an extended gap before they deal with (it) again. Does a piano player play a chord and then wait 2 days before going to the next one?

A Special Education teacher with 20 years of experience said it very clearly, "too long for students with ADD/ADHD." Another teacher with 26 years of experience echoed this sentiment by stating, "strugglers have a problem mainly because of responsibility."

It is evident some teachers in the regular classroom and those in the Special Education classes have the perception that a schedule that prevents teachers from seeing

students on a regular, daily basis, is perceived as less satisfactory than one that allows this to happen. As one regular classroom teacher with 26 years of experience stated, "My biggest concern is for the students who are academically challenged and have a great difficulty in being successful."

Teachers' Perceptions of the Effectiveness of Block Scheduling Based on Years of Teaching at the School

Teachers with 8-15 years and 26+ years of experience. On both the staff development and student achievement subscales those teachers with 8-15 years of experience and those with 26+ years of experience were more satisfied with the block schedule than were their colleagues with 4-7 years of experience. The composition of a group, what many researchers call the "cohort factor" (Evans, 1996, p. 92), can often times become a formidable force when change initiatives are considered. A teacher's stage of career, age, life goals, and ability to deal with peers, all influence the capacity of a school to implement a change. This is obviously true when looking at teachers' perceptions of the effectiveness of a block schedule.

Typical of the responses of teachers with 26+ years of experience was that of a Career and Technical Education teacher with 26 years of experience who stated:

I think teaching in the block schedule is awesome. I would never go back to teaching in an 8 period day. We worried for 3+ years as to whether or not the block schedule would be good for students at (school 2) and it totally exceeded my expectations. The whole atmosphere of the school is quieter with fewer passing periods. By also getting rid of study halls, students have more options for courses.

Increased instructional time seemed to be particularly important to veteran

teachers. Those teachers in classes that are dominated by student activity, such as art, career and technical education, and physical education, felt that the increased student contact time improved learning. An art teacher with 27 years of experience summarized this when she stated:

> What I like most about the A/B block schedule is having more instructional time. Art students spend a certain amount of time getting things out and putting things away each period. This not only allows more time for in-depth thinking or concentration on their work, I can cover several aspects of a topic w/time for students to work in between. Lecture time is minimal. I feel it helps increase students' attention span.

An English teacher with 29 years of experience expressed much the same opinion when stating that the schedule not only is better for students, but also allows teachers to do a better job. This teacher felt so strongly about the block schedule that she would rather leave the school than go back to a traditional schedule. She stated:

> There are many factors that cause students to be well prepared, so I find it difficult to decide if it's because of the schedule. I do think it lessens the pressure and allows more (homework) preparation time. I adamantly believe that today's instruction requires more preparation for teachers. A block for prep each day is not a luxury. If I was teaching on an 8 period schedule w/only 45 min. (or so) prep time, I would change the way I teach - and don't think it would be for the better. It would be an issue of managing the work load. It's much more efficient to lecture than to do the student-centered instruction. I do not cover as much material, although I think what I do cover is more complete. Thanks for doing this work. My school is returning to an 8 period day next year (modified block

w/block 2 days) so we can offer more classes. A mistake! For several reasons, I'm leaving to teach at a school that has block scheduling.

This lessening of pressure on both teachers and students may account for comments that centered around the issue of school climate and learning atmosphere. An English teacher with 5 years of experience at her school, but 13 total years of experience, made the comment, "I think block scheduling creates a more relaxed atmosphere in the classroom for students and teachers."

Staff development. In part, the length of time a teacher has spent teaching at the school may attribute to the positive feeling teachers have regarding the issue of staff development in relation to the implementation of the block schedule. When extensive in-service training programs are utilized and the use of coaches, demonstration lessons, and materials are made the most of, student achievement increases and effective implementation of a change occurs (Joyce, Hersch, & McKibbin, 1983).

A mathematics teacher with 3 years of teaching at the school, but 12 years total experience in education, felt that staff development is a key component to the success of a block schedule:

We have only received a couple of opportunities for training and only a few teachers have been involved. I consider myself lucky as I had the opportunity a month ago to attend a training session. All teachers should be required to attend a minimum of one block schedule training session.

A foreign language teacher with 12 years of experience at her school felt that regardless of the schedule teachers need to take personal responsibility for their effectiveness in the classroom. She stated, "I believe that a teacher should find the means necessary to be an effective teacher regardless of training. We have a very important job

and cannot go year after year blaming someone or something for our inefficiencies." This "can do" attitude quite possibly is one of the key reasons that veteran teachers work to make a block schedule, or any schedule, effective for their students. As Fullan (1993) states, "Only when individuals take action to change their own environments is there any chance for deep change " (p. 130).

This belief is further supported by a Science teacher with 20 years of experience in education, but only 2 years at the school with block scheduling:

Training. I wasn't trained in the block schedule, but it hasn't been difficult to adapt some of the work on different types of activities, anyway. 1 1/2 hour classes sound like a long time, but (it is fine) once you get use to it!

Understandably training and staff development are essential components in the process to change to a block schedule. The more thoroughly one understands something the more likely one is to master and be committed to it (Joyce et al., 1983). Training must be coherent and sequential, unfolding in logical ways that provide teachers with an overview of the larger goals and information on the specific objectives associated with the change. Ongoing support must be available, not just in the beginning of an innovation, but on a continuous basis. The time and support invested in the early stages of a school reform are reflected in the outcomes (Rust & Freidus, 2001).

Teachers' Perceptions of the Effectiveness of Block Scheduling Based on the Size of the School

Teachers from schools 2 and 3, those that were the second and third largest in the sample, perceived the block schedule to be more effective on many of the subscales than teachers from schools 1 and 4, the largest and next to smallest schools in the sample.

The size of school appeared to have little impact on the teachers' perceptions of

block scheduling. What contributed to the teachers' positive perceptions of block scheduling at these two schools? Possibly the answer can be found in the comments of staff from these schools.

A fine arts teacher with 33 years of experience might have expressed this best when she said, "I would not want to teach in a school without the block. The key to success is that faculty and administration must research and develop it TOGETHER." It would appear that school leadership, whether from the teaching staff or the administrative ranks, is a key component in the success of the schedule. This notion of a shared vision for success is essential and only comes from a dynamic interaction between the members of an organization and the leaders of that organization (Fullan, 1993).

A 39 year veteran Social Studies teacher supported this feeling that leadership in a school is essential to the positive perception of teachers when he stated "block scheduling is an administrative driven format. Get in the classroom and see for yourself." Clearly this teacher does not share the feeling that he "worked together" with the school administration to develop the schedule. Trust in administrative leadership is the key component that appears to be lacking in this teacher's opinion. Although the leader's trustworthiness is not enough to guarantee successful implementation of a change, its lack virtually guarantees resistance and failure (Evans, 1996).

As we have known for years, top down centralized leadership does not work in any organization. Yet decentralization of control often results in chaos and uncertainty. Certainly in a school where teachers become independent operators this sense of collegial decision making is lost. Obviously what is necessary for a block schedule to be successfully implemented in a school is what Fullan (1993) calls "two way top down/bottom up solutions in which schools and districts influence each other through a

continually negotiated process and agenda" (p. 128).

<div align="center">Implications for Practice</div>

Teaching Area of Responsibility

This study supports the fact that teachers who have traditionally seen the use of extended periods of time as beneficial for their students seem to adapt most easily to a block schedule. Teachers in the areas that involve "hands on" activities such as industrial technology, business education, computer education, family and consumer sciences, physical education, art, and English, all felt that the use of a block schedule improved student achievement and enhanced the delivery of curriculum. Conversely, those teachers involved in curriculum areas such as special education and mathematics, viewed the delivery of curriculum as best accomplished in shorter segments of time. The gap in student contact necessitated by an alternating day block schedule was generally viewed as less than satisfactory.

School officials contemplating the adoption of a block schedule should find this information beneficial as they begin the process of determining if this schedule is appropriate for them. Teachers who already have an affinity for teaching in longer blocks of time could serve as the staff leaders in the implementation process.

Likewise, those teachers from curricular areas that this research found were less likely to see the benefits of a block schedule could be targeted by the faculty leaders as those who need more information and staff development. Unless collective activity becomes the norm through which personal satisfaction is gained, no real change can take place (Joyce et al., 1983). Teachers who have no regular interaction with other school cultures that might provoke questioning and reflection have only their own experiences to draw on (Rust & Freidus, 2001). Teachers then become limited to their own experiences

in the classroom.

By allowing teachers to help lead colleagues through the process of discovery, the entire staff may eventually become closer and may more clearly understand the mission, goals, and beliefs of the school. It is clear from research that teaching is a lonely profession. This isolation of teachers may limit their access to new ideas and better solutions (Fullan, 1993). The involvement of teachers as leaders who are known from research to be most enthusiastic about teaching in longer blocks of time should give the practitioner valuable insight in how to manage this change process.

<u>Years of Experience at School</u>

The research conducted in this study showed that teachers with 8-15 years of experience and those with 26+ years of experience were more positive about the alternating day block schedule on the subscales of staff development and student achievement. This finding was not only surprising, but very enlightening.

Experienced educators and researchers who deal with the particular obstacles encountered when attempting to implement change in an institution will generally agree that the older staff members may be more difficult to change. Yet, this was not the case in the research conducted for this study.

Perhaps this can best be explained by Evans (1996) when he theorized that in many cases veteran staff members have assimilated a particular reform and found their own meaning in it. They have worked out a reformulation process of purposes and practices that make sense to them.

Similarly, younger staff members, in this research those with 4-7 years of experience, have not had the opportunity to make the same journey their experienced colleagues have made. Quite simply it appears that they have not had the same breadth

and depth of experiences. Teachers with 4-7 years of experience may be at a place in their career where they feel "at home" in their own classroom. Teaching plans and course objectives have been tried and tested. Classroom management has been refined and structured. Supplemental and enrichment curriculum materials have been sought out and incorporated into the syllabus of the class. In many cases these teachers have achieved tenured status and are able to breathe a sigh of relief that they now have some semblance of job security. Why then would they want to change anything when they have just reached a point where they have confidence in what they are doing in the classroom? This and other questions are ones that school leaders must deal with if they are to successfully implement an alternating day block schedule in their school.

The readiness to accept a new viewpoint has much less to do with the validity of that idea than it does with one's readiness to consider any alternatives, whatsoever. Few of us are open to change if we are satisfied with our current performance (Evans, 1996). Consequently, teachers may need to find an unhappiness with the status quo in order to be ready for a change. By utilizing the most experienced staff members in a building to assist with the staff development and in service training of the younger, less experienced teachers may greatly enhance the likelihood for the successful implementation of a block schedule.

Shared Decision Making

As the implications for practice unfolded from this research it became very evident that all of the implications for practitioners were part of an interlocking scheme, i.e., one component relied on another in order for implementation to be successful. Such is the case with the concept of shared decision making.

Understanding that the most experienced staff members in a school are those that

may be some of the best supporters of a change to block scheduling could prove to be a great asset to a building leader. Likewise, discovering that certain departments in a school have a greater likelihood to embrace a particular change may assist the practitioner in developing a plan of shared decision making.

Using veteran teachers and those from the curricular areas of English and Career and Technical Education to assist in the study, development, and implementation of a block schedule would appear from this research to be the most effective method of implementation. Helping others "experience the journey" and discover the benefits this schedule has to offer students are essential in shared decision making.

As Evans (1996) states, "build a critical mass of supporters...commitment from a critical mass of supporters is one of the most important goals change agents can set for themselves" (p. 69). Using those who have the greatest affinity to teach in a block schedule as the primary "movers and shakers" in the shared decision making process would certainly appear to be a positive step toward implementing a change. A change in the basic organizational structure of a school that allows teachers to become part of self-directed teams is necessary. Using teacher leaders who are trained to focus on improvement activities may be the surest strategy to gain faculty support for a change. This, along with providing regular opportunities (time) for teachers to seek imaginative solutions through shared decision making, may be the most beneficial way for a school to implement a change to block scheduling (Cawalti, 1997).

Staff Development

"Most researchers have concluded that intensive in-service training (as distinct from single workshops or pre-service training) is an important implementation strategy" (Joyce et al., 1983, p. 72). Throughout this research the implication that staff

development is a necessary component of successfully implementing a block schedule became evident. As previously stated, shared decision making, must also be a crucial part of the staff development process.

Although master teachers, those outstanding educators that each school possesses, may take responsibility for their own "staff development," the average teacher does not. As one teacher so aptly put it, "I believe that a teacher should find the means necessary to be an effective teacher regardless of training. We have a very important job and cannot go year after year blaming someone or something for our inefficiencies." Yet training teachers to be effective in the classroom, especially when teaching in a new and different time schedule, is not only important, but imperative.

There is evidence that teachers' level of satisfaction with block scheduling is affected by how and when they are involved in the change process. Teachers who were involved at the beginning and throughout the planning and implementation process were significantly more satisfied with the change than teachers who were less involved. In addition, teachers with a greater degree of involvement in the change process reported a higher degree of instructional change ("Block Scheduling," 2001, p. 2).

Staff development through the shared decision making process before, during, and after the implementation of block scheduling in a school is without a doubt an essential part of the change process.

Leadership

"No reform effort, however worthy, survives a principal's indifference or opposition. His involvement legitimizes the effort' (Evans, 1996, p. 202). Throughout this research study it became clear that any change, especially that of changing the

schedule in a school to one that utilizes longer blocks of time, begins with strong and effective leadership. Whether this leadership comes from members of the faculty or staff or from a more formal leader such as a principal, it is essential. Effective leaders understand that building on individuals' strengths by maximizing what they do well while at the same time minimizing their weaknesses is one of the key components of implementing a successful change in any organization.

Leaders must understand the stages through which teachers progress and understand that teachers with similar experiences and backgrounds may respond to change in much different ways. "To try to restructure an organization without first confronting its underlying cultural assumptions is usually futile" (Evans, 1996, p. 17). When a leader understands the interpersonal differences among staff members, he/she is more able to develop a plan and structure implementation strategies to these needs. Careful assessment of the needs of a school, not only those of the students, but those of the staff, can make the difference in successful implementation of a block schedule.

In order to successfully implement a change, leaders must also understand that it is essential they develop trust and credibility with the staff they are leading. Contrary to respect, which many times is a function of the position one occupies, trust and credibility are developed over time between leaders and the organization they lead. Personal interaction with members of the organization, decisions that are made, policies that are developed, and support that is given are all part of the mix that gives members of an organization the feeling that a leader is trustworthy and credible. This feeling may take months and even years to develop, and leaders should understand that to attempt any change prior to the establishment of this trust is tempting failure. When change is proposed by people who are trusted, respect is more credible and credibility is especially

important when values, beliefs, deeply held assumptions, and long standing practices are challenged in a school (Evans, 1996). As Evans (1996) so aptly states, "Principals are widely seen as indispensable to change" (p. 202).

Implications for Research

Student Achievement

Very little research is available on the topic of block scheduling and its effect on student achievement. Although a body of evidence can be found that block scheduling improves students' scores on criterion-referenced assessments, especially those defined and administered at the local level, minimal research is available about students' achievement on nationally norm-referenced examinations (Howard, 1998; Lawrence & McPherson, 2000).

It is very difficult to attempt to establish a cause and effect relationship between block scheduling and achievement scores on objective examinations. There are many variables operating that can distort even the best results. The very circumstance of a school being involved in restructuring efforts implies that there is a heightened interest in making changes to improve the school learning climate. While working to implement block scheduling, schools may be incorporating numerous other strategies to promote student success. It is impossible to attribute a school's improvement to any one change (Lybbert, 1998).

Yet, this research reported that student achievement was the one subscale that teachers consistently perceived as improving. It is evident that in schools where block scheduling is working the teaching staff perceives it as a strategy to improve student achievement. In many cases it may be said that perception is reality.

While teachers perceive an increase in student achievement as a result of block

scheduling, more study on this topic should be conducted. Researchers must try to isolate those factors that influence academic achievement and then conduct studies to determine if the factors are more prevalent in block scheduled schools than they are in schools with a traditional six, seven, or eight period day. Additionally, research should be conducted on the effects of block scheduling on student achievement and norm-referenced assessments. Likewise, researchers need to attempt to isolate and study those factors that impact academic achievement.

Leadership in Shared Decision Making

Much has been written about the effects of leadership in regard to the change process in organizations. Schools like many institutions do not change at the organizational level until individuals change. The interpersonal relationships that make up any school are at the heart of the change process. When a sufficient number of people are convinced that a change is beneficial and will improve their working conditions, institutional change will result.

It is necessary for leaders to understand how shared decision making can influence the change process in any school. This research indicated that there are certain groups within a school who view block scheduling as a more beneficial method of delivering the curriculum than the traditional six, seven, or eight period day. What is unclear from this research is just how influential these groups are when interacting with other members of the staff.

Additional research on the topic of leadership and shared decision making in regard to the implementation of a block schedule in a school would give practitioners insights into developing such a schedule at their school. If a school leader had the knowledge that a teacher of a particular curriculum area favored the block schedule, in-

service training could be tailored to take advantage of this. Likewise, a veteran teacher may have the respect and credibility necessary to work effectively with younger staff members when change strategies are being considered. According to Joyce et al. (1983), "The more thoroughly one understands something, the more likely one is to master it and become committed to using it" (p. 71).

Summary

This research examined teachers' perceptions of the effectiveness of an alternating day block schedule in their school. Understanding how teachers perceive the effectiveness of a block schedule, along with various important demographic factors such as teaching area, experience, and size of school, may enhance the ability of practitioners to successfully implement such a schedule in their school.

Understanding what influences a teacher's decision to embrace a change such as block scheduling is only one part of the successful change process. Clearly, without talented and skillful leadership in a culture of shared decision making, the chances for successful implementation are slight.

A good study may bring up as many questions as answers. This study certainly accomplished that goal, but "the goal is a healthy school improvement outcome, not a picture perfect process. A good process usually produces a good outcome, and ignoring the process can surely damage the outcome" (Evans, 1996, p. 223).

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APPENDIX A

Institutional Review Board

Approval for Exempt Educational, Behavioral and

Social Science Research

N UNIVERSITY OF
Nebraska
Medical Center

NEBRASKA'S HEALTH SCIENCE CENTER

Institutional Review Board (IRB)
Office of Regulatory Affairs (ORA)

May 9, 2005

Steven P. Shanahan
Superintendent, Blair Community Schools
140 South 16th Street
Blair, NE 68008

IRB#: 156-05-EX

TITLE OF PROTOCOL: Teachers' Perceptions of the Effectiveness of Block Scheduling in Nebraska High Schools

Dear Mr. Shanahan:

The IRB has reviewed your IRB Application for Exempt Educational, Behavioral, and Social Science Research on the above-titled research project. According to the information provided, this project is exempt under 45 CFR 46:101(b), category 2. You are, therefore, authorized to begin the research.

It is understood this project will be conducted in full accordance with all applicable sections of the IRB Guidelines. It is also understood that the IRB will be immediately notified of any proposed changes that may affect the exempt status of your research project.

Please be advised that the IRB has a maximum protocol **approval period of three years** from the original date of approval and release. If this study continues beyond the three year approval period, the project must be resubmitted in order to maintain an active approval status.

Sincerely,

Ernest D. Prentice, Ph.D.
Co-Chair, IRB

EDP/kje

APPENDIX B

Survey Instrument

Teacher Perception Survey

Block Scheduling

May 9, 2005   **IRB - #156-05-EX**

Dear Colleague,

I would like to introduce myself to you and ask for your help in gathering information as part of my doctoral dissertation on "Teachers' Perceptions of the Effectiveness of Block Scheduling in Nebraska High Schools." My name is Steve Shanahan and I am currently serving as the Superintendent of Schools in Blair, Nebraska, where I have been an administrator since 1982.

I am undertaking this study to determine if schools operating on a block schedule using the A/B Alternating Day format feel this is schedule improves the school in 6 key areas: Staff Development, Curriculum, Teaching Methods, Student Class Work, Student Achievement, and School Climate. I believe that my study will give practitioners valuable information on teachers' perceptions of block scheduling and how these perceptions lead to an improved learning atmosphere for both students and staff.

This survey should take no longer than 10 minutes to complete and is **not** being required of you to complete by your principal. Your participation is completely voluntary. No school or individuals will be identified in the survey analysis and all data will be reported in aggregate form.

Thanks so much for your help and please feel free to call me at school (402-426-2610), home (402-426-4660) or by e-mail at sshanahan@esu3.org. if you have any questions regarding this survey. Please do not hesitate to call on me if I can ever help you in a similar situation.

Sincerely,

Steven P. Shanahan
Superintendent, Blair Community Schools

Teacher Perception Survey
Block Schedule

Directions: This survey has been prepared to examine the attitudes and perceptions of teachers in regard to the effectiveness of the Block Schedule. You are asked to respond honestly, making sure you consider your own personal experience and not how other staff members might perceive a question. Take your time and consider each question. The results will be most valuable if you respond to the statements as they relate to you and your classroom setting. No individual staff member will be identified and the results of this survey will not indicate either school or individual participation. **This survey should take no longer than 10 minutes** to complete. Thank you for your willingness to share.

I teach the majority of my courses in:
- □ English Department
- □ Mathematics Department
- □ Science Department
- □ Social Studies Department
- □ Foreign Language Department
- □ Career and Technical Education Department
- □ Physical Education Department
- □ Fine Arts Department (music, speech, drama)
- □ Special Education Department
- □ Other

I have taught at this school:

[____] (indicate years here)

I have been in education:

[____] (indicate years here)

My level of education is:
- □ Bachelor Degree
- □ Master Degree
- □ Specialist Degree
- □ Doctor Degree

The schedule I used prior to block scheduling was:
- □ none (this is my first teaching position)
- □ 6 period day
- □ 7 period day
- □ 8 period day
- □ Other (any other schedule)

The block schedule at this school was:
- □ implemented during the time I was teaching under a different schedule
- □ already implemented when I came to this school

Staff Development	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
1. I received adequate training and information in order to prepare me to teach in a block schedule.					
2. I was (am) kept informed of changes in this schedule that affect me.					
3. Communication between the administration and teachers appeared sufficient to allow this schedule to be successful.					
4. I believe the staff development received for teaching in the block schedule has made me a more versatile teacher.					
5. This schedule provides me with the opportunity to collaborate more with colleagues on teaching strategies.					

Curriculum	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
6. I am able to cover the needed material in the curriculum in the block schedule.					
7. Because of this schedule, I am allowed to cover the material in greater depth.					
8. Students have a better understanding of the basic concepts of the curriculum due to instruction in longer blocks of time.					

Teaching Methods	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
9. I used new teaching strategies as a result of this schedule.					
10. I have incorporated teaching methods that deal with cooperative learning because of this schedule.					
11. Due to the block schedule I have incorporated teaching methods that deal with multiple intelligences in my classroom.					
12. This schedule encourages more active learning in my class.					
13. This schedule allows me to lecture less often in my class.					
14. Block scheduling requires spending more time on lesson planning.					
15. I am better able to individualize instruction in my classroom because of the block schedule.					

Student Class Work	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
16. Students in my classroom are better prepared for daily class sessions using a block schedule.					
17. Students in my classroom understand the course content better because of this schedule.					
18. A higher percentage of students are completing homework assignments because of this schedule.					
19. Extended periods of time allow students to demonstrate their understanding of concepts before they leave the classroom.					
20. Longer blocks of class time encourage students to think analytically and critically.					

Student Achievement	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
21. Block scheduling gives me the opportunity to use different methods of assessing student achievement.					
22. Students with learning difficulties achieve at a higher level because of the block schedule.					
23. High ability learners are able to be challenged satisfactorily with this schedule.					
24. Student performance has improved in my class because of this schedule.					
25. Fewer students are failing my classes, in part because of the block schedule.					
26. I feel that a block schedule improves a student's academic achievement.					

School Climate	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
27. The climate in this school has improved due to the block schedule.					
28. I have been able to collaborate more with colleagues on teaching strategies because of this schedule.					
29. Because of this schedule students have more opportunities to take classes they have been unable to take in the past.					
30. Students like this schedule.					
31. Student behavior in the school building is better because of this schedule.					
32. Longer blocks of time allow me to know my students better.					

Satisfaction	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
33. Overall, I am happy with the present block schedule					
34. I feel the block schedule best fits the needs of our students.					

Please use the bottom of this page and the back of this survey to make any comments you would like. Thank you for your time.