TEACHING IN THE BLOCK: PERCEPTIONS FROM AN AGRICULTURAL EDUCATION CLASSROOM

by

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ABSTRACT

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A relatively new initiative called block scheduling is being used in high schools all over the country. Several schools are investigating and adopting block schedules to replace traditional schedules. Block scheduling has several benefits to educators, for example, the larger blocks of class time allow for a variety of teaching methods and activities. The purpose of the study was to research the teachers' attitudes of the effectiveness of block scheduling design. The study focused on four questions (1) What are agricultural education teachers' perceptions of the overall effectiveness of block scheduling? (2) Have teaching methods in agricultural education changed in response to block scheduling? (3) Has enrollment in agriculture classes changed as a result of the block schedule? (4) What are important benefits and drawbacks of block scheduling specific to agricultural education classrooms?

Surveys were distributed to Wisconsin Agricultural Education Instructors at the end of the 2002 school year. The survey consisted of demographic information, 30 Likert

type items, and a comment section. A total of 48 surveys were mailed to participants and thirty-two (67%) were returned.

Results show that many teachers feel overall that block scheduling is effective for their agricultural education programs. Many participants stated advantages to block scheduling such as hands-on and lab activities, more time for fieldtrips, and the opportunity to have more individualized contact with students. However, participants also mentioned disadvantages such as challenges with FFA recruitment and member involvement.

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Chapter 1

Introduction

Education is a great career to be involved in. Administration, teachers, and support staff have the opportunity to be engaged in the lives of students. Education, like anything else must keep up with societal trends and children's needs, therefore, educators are always changing and trying to improve the way and means that children receive and become equipped with tools for life after their educational experience.

Researchers often remind the community of practitioners that a lapse of time is a fundamental variable to consider when studying instruction, curriculum, and student learning in schools. (Fischer & Berliner, 1985)

Many schools strive to deliver a more effective educational program. Schools operating on a traditional six, seven, or eight period schedule find that excessive time is lost each day transitioning from one class to another. Teachers see a large number of students each day, and there is little time for teacher-student interaction during 45 or 50-minute periods. This causes the school program to be relatively impersonal. Additionally, time is limited for complex projects and in-depth activities. Because of the limitations of a traditional schedule, many schools are examining or utilizing some form of a block schedule. (Irmsher, 2001)

One of the newest policies in educational reform is block scheduling. In a book titled Teaching in the Block: Strategies for Engaging Active Learners, Michael D. Rettig

and Robert Lynn Canady estimate that "more than 50 percent of high schools in the United States are either using or considering a form of block scheduling."

In contrast with the traditional daily, six-, seven-, or eight-period schedule, a block schedule consists of three or four daily longer periods. There are several forms of block scheduling, but some of the most widely used forms of block scheduling are the alternate-day schedule, the 4/4 semester plan, and the trimester plan.

In the alternate-day schedule students and teachers meet every-other-day for extended time periods rather than meeting every day for shorter periods. It is commonly called an A/B Schedule. In the 4/4 semester plan students complete four "yearlong" courses that meet for about 90 minutes every day during a 90-day semester. Students receive two or three courses every 60 days in a trimester plan to earn six to nine credits per year. Many schools work with schedules that are variations or combinations of these plans. (Cromwell, 1997)

Traditional school schedules have motivated middle and high schools across the United States to implement change in use and organization of time in a school setting. Canady and Rettig (1996) state several criticisms of the traditional high school schedule. Some of them include: fragmented instruction, impersonal environment, discipline problems, limited instructional possibilities, and limited learning time for students.

The criticism of the traditional school schedule has led to a nationwide study of current scheduling practices and a search for new and better ways to meet the needs of teachers and students. Some of the goals of the high school scheduling reform movement are the following:

* Reduce the number of students for and with whom teachers must prepare and interact each day and/or each term;

* Reduce the number of classes, and the assignments, tests, and projects, that students must address during any one day of the term;

*Reduce the fragmentation in single-period schedules, a complaint that is especially pertinent to classes requiring extensive practice and laboratory work such as science, agriculture, and technology courses;

*Provide teachers with blocks of teaching time that allow and encourage the use of active teaching strategies and greater student involvement; and

*Allow students variable amounts of time for learning , without lowering standards, and without punishing those who need more or less time to learn.

Block scheduling attempts to put to rest some of the problems with the traditional schedule and to achieve the goals of high school reform. (Canady & Rettig, 1995).

Statement of the Problem

The purpose of this study is to discover teachers' attitude towards the effectiveness of a block scheduling design as perceived by Wisconsin Agricultural Education instructors teaching in a block. A survey's purpose is to measure attitudes of teachers at various secondary schools with Agricultural Education programs in Wisconsin schools.

The subjects in this investigation were all of the Agricultural Education instructors that teach in the State of Wisconsin in a school with block scheduling. A list of those teachers was provided by Dean Gagnon, the Agricultural Education Consultant at the

Wisconsin Department of Public Instruction (DPI). There are approximately 306 Agricultural Education instructors in the State of Wisconsin. There are 69 high schools in the state which use block scheduling, of those there are 38 which have Agricultural Education programs. There are a total of 48 Agricultural Education instructors possible subjects in the study.

Surveys were distributed to teachers in the Spring of 2002 by the researcher. Teachers were told that the survey was voluntary and confidential. In addition, teachers were informed on the cover page that the information provided on the surveys would be used by the researcher for a master's thesis.

The research questions for this study are:

1. What are agricultural education teachers' perceptions of the overall effectiveness of block scheduling?
2. Have teaching methods in agricultural education changed in response to block scheduling?
3. Has enrollment in agriculture classes changed as a result of the block schedule?
4. What are important benefits and drawbacks of block scheduling specific to agricultural education classrooms?

Definition of Terms

Block Scheduling-the breaking up of school time into blocks or units of classroom time. It is a type of scheduling in which students meet for fewer periods, such as three or four with lengthened classroom time.

Carnegie Unit-a standard unit to measure high school work 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 to 40 weeks each year-earns for the student one "unit" of high school credit.

Copernican Plan-a plan developed by Joseph Carroll in 1983 to focus effective instruction. The plan is the basis for the most common block schedule design used in schools.

Educational Reform- designing changes in learning experiences in schools to improve teacher and student performance.

Agricultural Education- an elective course of study which prepares students for successful careers and informed choices in the global agriculture, food, fiber, and natural resources systems.

Limitations of the Study

Some limitations of this study identified by the researcher are:

1. The sample is only agricultural education instructors from several Wisconsin communities.
2. The sample may not reflect the attitudes of all the teachers that are involved in the block schedule.
3. Some of the schools involved have two agricultural education instructors and only one may respond.
4. Confidentiality is assured, but not anonymity so participants may not respond.
5. The survey not tested to be reliable and cannot be valid.

Chapter 2

Literature Review

Introduction

This literature review will examine the following topics: historical information about block scheduling and agricultural education, what is block scheduling and agricultural education, concerns of block scheduling, and an evaluation of block scheduling.

History of High School Reform and Scheduling

Education has always come under intense scrutiny from all segments of society. Looking at how students and teachers spend their time in the classroom is very important in discovering the effectiveness of our educational system.

Prior to the early 1900's school scheduling was very flexible with two, three, or four-day a week schedules offered. Classes were also offered with very flexible schedules.

In 1892, the report of the Committee of Ten was the beginning of the rigidly structured high school schedule of today. It was encouraged that every high school center the work of each student upon five or six academic areas in each of the four high school years. Each subject would be taught separately by a different teacher (Marshak, 1997.)

Soon after in 1906, the Carnegie Foundation for the Advancement of Teaching established what came to be known as the Carnegie Unit. "The development of the "Carnegie Unit" in the 20th century, the every-day-period became standardized:

The Carnegie Foundation proposed a standard unit to measure high school work 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 to 40 weeks each year-earns for the student one "unit" of high school credit with "The Carnegie Unit," became a convenient, mechanical way to measure academic progress throughout the century." (Canady & Rettig, 1995).

The Carnegie structure allows schedules to consists of a seven or eight period day with each class lasting approximately fifty minutes. Students must prepare for between five to eight subjects a day and adjust to the same amount of classrooms and teachers. "Students report to a different boss every fifty minutes and adjust to several different sets of rules and expectations" (Finn, 1997).

During the 1960's and 1970's, flexible modular scheduling was the education reform plan. J. Lloyd Trump is credited with the original design of the flexible modular schedule. The Trump Plan, consisted of varied class period lengths, for example, some classes would meet 20, 40, 60, or 80 minutes depending on the need of students and subjects. Students would spend their time in a wide variety of instructional methods; large group, small group, and individual study. It is estimated about 15 percent of American high school were utilizing modular scheduling. (Canady & Rettig, 1995). However, most schools returned to traditional schedules because of several problems related to discipline of students. A large portion of time was given each day for students to work on individual projects and independent study. This led to schools returning to the traditional schedules resulting in less discipline problems in schools.

By the late 1980's and early 1990's schools were bombarded with reports on the inefficient and infective use of school time. Again high schools were forced into re-examining their scheduling practices.

A report, entitled, " A Nation at risk" issued by the National Education Commission in April of 1983 dealt with many topics including the use of time. The following questions were posed: How do we use time? How do we allocate time? The Commission pushed for seven hour school days and two hundred and twenty day school years. (Finn, 1997). The report called for a sweeping reform in the nation's schools. Educators felt time needed to be researched to achieve more effective student learning experiences (Ellis & Fouts, 1994). Many educators were resistant and suggested that extension of school time was not necessarily a solution and would be very costly.

Also in 1983, John Goodlad's important book, "A Place called School", furnished its widespread readership with a clear and graphic description of curriculum and teaching in American schools. The study involved thirteen school districts and thirty-eight schools. Goodlad pointed out many of the shortcomings of our school system (Ellis & Fouts, 1994). He also offered solutions to those shortcoming such as smaller schools, increased parental involvement, and curricular offerings that led to lifelong learning.

In 1983, Carroll presented "The Copernican plan: A concept paper concerning the restructuring of secondary education at the Masconomet Regional School District" to the staff of the district. The Copernican plan was named after Nicolaus Copernicus who was a 16th century astronomer. He assumed that the sun, rather than the earth, was the center of the universe. He had a difference in perspective similar to Carroll, who also saw a difference in perspective and challenged long held beliefs about the high school schedule and how students learn (Finn, 1997).

The Copernican plan proposes that each student enroll in one, four hour class each

day for thirty days. Another alternative situation would be to take two, two hour classes for a period of sixty days. The plan also proposes included seminars and classroom work time as a part of the regular school day (Carroll, 1990).

The most recent addition to the school time controversy came in the report issued by the National Education Commission on Time and Learning. On of the Commission's recommendations which turned heads was that the academic day should be nearly doubled. Other recommendations of that commission included reinventing schools' learning, not time, redesigning education so that time becomes a factor supporting learning, providing additional academic time by reclaiming the school day for academic instruction, and allowing teachers professional time and opportunities to do their jobs better (Ellis & Fouts, 1994). Professionals would agree that time is an issue on the recommendations of the Commission.

Calwelti (1994) in High School Restructuring: A National Study, provides a national picture of the overall high school restructuring movement and the new innovation known as "block scheduling" within the movement. In that study, five major areas of high school reform were identified: curriculum/teaching, school organization, community outreach, technology, and monetary incentives.

Block scheduling is the newest of educational reform. Block scheduling is designed to provide students with large blocks of time where classes meet on a consistent basis, so little of any unscheduled time is available for students. Although the use of block scheduling has been increasing, it remains a highly controversial educational reform (Slate & Jones, 2000).

Block Scheduling

In its most basic definition, block scheduling is the breaking up of school time into blocks or units of classroom time. It is a type of scheduling in which students meet for fewer periods, such as three or four with lengthened classroom time, for example, a ninety minute session (www.netaxs.com). Based on national surveys, it is estimated that over fifty percent of high schools in the United States are either currently operating or are studying some form of block scheduling (Canady & Rettig, 1996).

There are four basic types of block scheduling, with variations on each type being implemented around the country. The alternate-day schedule; the 4/4 semester plan; trimester plans; and various reorganizations of the 180-day school year, such as the 75-75-30 plan (Canady & Rettig, 1996).

The alternating day or A/B Block is where students take three courses on two alternating days or six in all for the entire school year. The fourth period in each day is available for study, extra help from teachers, and extra curricular activities such as clubs and band (Phillips, 1997). Also teachers often use their prep period to provide extra help to students or to serve as an adviser to students activities.

There are several advantages recognized with the alternating day or A/B Block. One example would be teachers benefiting from increased instructional time. With fewer transitions, less time is lost with class openings and closing thus instructional time is increased. Another advantage is that students have fewer classes, quizzes, tests, and homework assignments on any one day. And finally, teachers are able to prepare lessons for extended periods of time. Students are able to view and entire movie in a short

amount of time, take a fieldtrip, or complete a lab accurately (Canady & Rettig, 1999).

However, there are some concerns that arise with this type of schedule. They are related to maintaining students attention over the block, adjusting the schedule to unplanned school closings, and dealing with the concern by many educators that a large amount of review may have to occur when classes that met on Thursday don't meet until Monday (Canady & Rettig, 1999).

The most common model is the "Four by Four". Student attend at four academic courses daily, spending about ninety minute in each class (American Teacher, 1999). The 4/4 or semester block allows students to take four courses that are equivalent to a full credit or year of instruction. Students earn eight credits each year or thirty two credits over four years, compared to the twenty four credits students would earn in the traditional six credit per year schedule (Phillips, 1997). Teachers have three classes to teach daily each semester and a daily planning period.

The 4/4 semester plan offers the following advantages over a traditional day. Teachers and students have many opportunities with this type of schedule. Teachers work with fewer students during any one semester therefore, providing an opportunity for personalized instruction and increased teacher-student relationships. Preparation time for teachers is usually more meaningful; preparing for only three classes in a given day (Phillips, 1997). Students can concentrate on only four course per semester and retake a failed course in the second semester if needed. And finally, students have more opportunities for accelerated classes (Canady & Rettig, 1999).

Concerns of the 4/4 semester plan include retention of learning due to longer

periods of time between courses, covering of curriculum and material, and student participation in elective programs, such as band, choir, and agriculture where meet both semesters greatly increases the productivity of the program (Canady & Rettig, 1996).

Additional scheduling models that have been implemented around the country offer shorter, more intense courses of instruction. Some schools, are operating under trimester plans, in which students take two or three courses every sixty days to earn six to nine credits per year. For example, in a modified trimester plan students take two, two-hour classes, in addition, two sixty minute extended learning periods are provided for students who need more time to learn the designated course material (Canady & Rettig, 1996).

Benefits of Block Scheduling

As with any new idea, educators are looking to search out the advantages to the block schedule. Those who support block scheduling advocate students have better grades, less stress, and more time for student-teacher interaction. Educators support this type of schedule for several reasons. They attempt to accomplish the following benefits: allow students variable amounts of time for learning, reduce the number of courses for which teachers must prepare each day, and allow teachers to use active teaching methods that increase student participation (Canady & Rettig, 1996).

In Wilson and Stokes, (1999) teachers involved in block scheduling believed that block scheduling is more effective than traditional scheduling due to more time on task, a more positive school atmosphere, and improved feeling toward their school.

Powell, (2000), stated that when a school employs a model of block scheduling that aligns with student needs, staff strengths, and curriculum demands, many benefits will

be realized. The advantages discussed fall into the following categories:

Student Involvement

Teacher Planning

Instructional Methodology

Curricular Demands

Assessment

Academic Achievement

Management Issues

Affective Considerations

School Climate

Longer blocks of time are used to promote student involvement in their own learning. Strategies include activities that encourage discovery learning, cooperative projects, and a variety of interactive processes (Powell, 2000). In a school day with only four classes, students have fewer adjustments to make and the opportunity to experience things rather than be told.

Block scheduling also provides its teachers with the opportunity for more planning time, thus more prepared and challenging lesson plans. Teachers have time to plan for longer classes and create more imaginative ways to learn.

Instructional methodology appears to boast the most benefits. Implementing block scheduling allows for varied learning experiences, which may include portfolios, projects, role-play, simulation, and cooperative learning (Powell, 2000). Instruction is less fragmented, with greater time for serious discussions, cooperative activities, lab work, and

group work (American Teacher, 1999). Teacher may also try a variety of teaching strategies such as discovery learning, case studies, and inquiry learning (Henson, 1993).

With the flexibility of block scheduling, curricular needs may be more easily met. Larger blocks of time promote a more complete cycle of teaching and learning (Powell, 2000). It is possible to teach a concept, lead students into topics on a related problems, conduct a lab, and then discuss the results.

Traditional paper and pencil tests, can be a thing of the past with block scheduling. Students are able to be assessed on more practical simulations.

In evaluating academic achievement, teachers are given more opportunity to observe student progress, evaluate it, and give appropriate feedback to the student. There is also more time for students to begin homework assignments (Powell, 2000).

A major advantage cited by many educators is student discipline. The number of times that students are released into narrow hallways is reduced with fewer class changes, thus cutting down on discipline problems, noise, and stress (American Teacher, 1999).

Block scheduling also facilitates stronger student-teacher relationships. The number of students each teacher works with daily is decreased, while the time the teacher has with those students is lengthened (Fleming et al., 1997). These two factors encourage students to connect with a strong adult role model; the teacher.

When students are involved in their own learning, when teachers plan active lessons based on creatively designed curriculum, discipline problems are kept to a minimum, and student-teacher relationships grow; school climate will increase.

Challenges of Block Scheduling

On the opposite side, there are critics of the block scheduling reform. Some of the possible problems reported were the following: grade inflation; gaps of time between sequential subjects of up to a year; loss of study halls to get extra help, and problems with mainstreaming special education students.

Block schedule presents some problems for teachers. Keeping students motivated for ninety minute blocks can be challenging for many teachers. This may be especially challenging to teachers in their first year of the block schedule. Sadowski (1996), reports that one teacher went through a week's worth of lesson plans in the first session. Teachers must adapt to the new experience. Along with that, facilitating a class running the gamut of academic interests and achievement level is a major challenge. Finally, curricular adjustments must be made to accommodate the demands of new and varied pacing (Powell, 2000). Curriculum decisions are generally based on scope, focus, and sequence.

Students may also have unique challenges in the block schedule format. Block scheduling diminishes the opportunities for review, especially where year long courses are compressed into a single semester. Another challenge of the block schedule is student absence. If a student misses one day of school under the block it is like missing almost a week under traditional scheduling. For students who miss a week due to illness or other problems, catching up on work is almost impossible (American Teacher, 1999)

Studies regarding effectiveness of the Block Schedule

Gig Harbor High School in Gig Harbor, Washington, was one of the first schools in Washington State to move to a block schedule. Student complete six classes per semester. They use an alternate day schedule with each class lasting 100 minutes. The study was designed to look at effectiveness of learning activities in block periods as perceived by students and teachers. It was found that activities in which students had a more active role were more effective for student learning (Marshak, 1997).

Cedarcrest High School in Duvall, Washington, operates under a slightly different schedule called the Cedarcrest Plan. A daily schedule that requires students to take only three classes per nine week term. With 100 minute classes, a semester's work is completed in nine weeks. Students are also assigned a 37 minutes daily advisory period. Students stated that the school structure works well. Student involvement in classroom activities was a major strength noted in the study (Marshak, 1997).

The MacIntosh Academy is a combined middle and high school in Georgia. This school uses the four by four block schedule. Students say their teachers seem to know them better and give them more individual attention. Teachers are teaching only three classes a day and have a daily planning period. At the same time, the satisfaction of parents within their school district is at an all-time high (Phillips, 1997).

Block Scheduling in Agricultural Education Classrooms

Typically high schools require students to take roughly one half of their credits as required classes. Therefore, students must select the other half of their credits in elective classes such as agriculture, home economics, technology, art, and music. There are

several schools that are teaching agricultural education classes on some form of the block schedule. It is important to consider if block scheduling affects the study of agriculture in agricultural education classrooms.

Importance of Agriculture to Wisconsin

Agriculture is a field expanding in many ways to become more technical and scientific in nature. To meet the needs of students and employers, agriculture instructors must change their curriculum offerings. Agriculture is our nation's largest employer. Today's graduates in the field can expect a high demand for people in biotechnology, international marketing, genetics, engineering, veterinary science, and much more (Ag career, 2001). According to a recent U.S. Department of Agriculture study, the average annual demand for university and technical college graduates with experience in agriculture will exceed the expected supply by thirteen percent over the next several years (Gagnon & Keith, 1989).

In Wisconsin, agriculture is a basic industry that helps other sectors of the state's economy. More than twenty-seven billion is invested in land, crops, livestock, and machinery. Cash receipts from the sale of products total more than five billion dollars annually (Gagnon & Keith, 1989). Additional billions of dollars are generated through agribusiness. The large amount of agricultural products moving from Wisconsin farms provides employment to thousands of workers who transport, process, and market food products.

Diversity is also important in Wisconsin agriculture. Dairying by far is the largest generator of agricultural income. But Wisconsin produces a variety of animal and crop

food products in large quantities. Wisconsin is the leading state in the production of cheese, butter, whey products, mink pelts, corn for silage, green peas, snap beans, and hay. Until recently, Wisconsin was the leading state in milk production, but now is second to California. Wisconsin is in the top ten in production of cranberries, maple syrup and several other products (Gagnon & Keith, 1989).

A History of Agricultural Education

Agriculture has come a long way from its first beginning which was farmers sharing information with others in the business. In fact, agriculture programs in the high school began after the development of postsecondary programs. Colleges or schools of agriculture were organized after the passage of the Morrill Act in 1862. Farm Short Course in 1886 and Dairy School in 1892 were two additional efforts in agricultural education. Agriculture education in Wisconsin high schools was first reported in 1910 (Gagnon & Keith, 1989). The Smith-Hughes Act of 1917 provided the first vocational education funds for high school students to participate in agriculture education programs. In 1928, the youth organization, FFA got its start with 33 members. Wisconsin chartered an FFA chapter one year later, in 1929. The FFA membership nationally today is over 500,000 members (National FFA, 2001).

Agricultural education is an elective course of study which prepares students for successful careers and informed choices in the global agriculture, food, fiber, and natural resources systems.

The Agricultural Education Mission is to prepare and support individuals for careers, build awareness, and develop leadership for the food, fiber and natural resource

systems (National FFA, 2001). This mission is accomplished through a balanced intracurricular program of classroom/laboratory instruction, FFA activities, and SAE or Supervised Agricultural Experience programs (Boone, 2002).

Agriculture is vital to Wisconsin's existence. Wisconsin has a strong tradition of hard working people and producing excellent products. In order to keep this tradition, Wisconsin agricultural education instructors must prepare to meet the future challenges of people entering the field (Gagnon & Keith, 1989).

The Future of Agricultural Education

Teaching methods used in agriculture education during those early years had a strong impact on the methods used in curriculum today. The teachers were given the opportunity to link the teaching of agriculture much more closely to the home practices of the students, primarily production oriented. Curriculum has developed from its primary instructional emphasis on production to business management, technical specialization, and agricultural career opportunities. According to the National FFA Center (Ag Career, 2001) there are approximately 200 rewarding and challenging careers in agriculture.

Students in districts with an agricultural education program have the opportunity to have a comprehensive experience. Classroom learning, workplace learning, and activities learned through the student youth group FFA connect the first two components with their community. There are almost 17,000 members of the FFA organization in the State of Wisconsin (National FFA, 2001). There are also opportunities for entrepreneurship through this approach (Fortier et al., 1998).

Students find the opportunity for hands-on work is something that draws them into

the program. They are able to learn, design, and compete on a classroom based activity.

One of the concerns in an elective program like agricultural education, technology education, and others is enrollment. According to Dean Gagnon (2002), Agricultural Education Consultant, Wisconsin currently has 318 agricultural education instructors in 261 agricultural education programs. Teachers must constantly be concerned with budget and electives are usually the first to go in a money crunch. The National FFA estimates there are approximately 800,000 students enrolled in agricultural education (Egan, 1996). Currently, there are 29,655 students enrolled in agriculture education in grades 7-12. Of those students only 5697 students live on farms (Gagnon, 2002). New and innovative ways of teaching agricultural sciences are part of the change needed to keep enrollment high. Scheduling can also be a issue for agriculture departments around Wisconsin. Agricultural education instructors are teaching on several schedules from traditional eight period days to four period blocks.

Agricultural Education and Block Schedule Design

Agricultural education is an elective program that could be effected by block schedule design. Boone (2002), has been researching block scheduling and student involvement in FFA activities and SAE programs. In 1997, led by Moore, Kirby, and Becton, all North Carolina agricultural education teachers who were involved with block scheduling were surveyed. Teachers were asked to rate the overall quality of the instructional program, FFA program, and SAE program prior to and after the implementation of the block schedule. They found that block scheduling had little impact on instruction, a slight negative impact on supervised agricultural experience programs,

and a substantial negative impact on the FFA program (Moore et al, 1997).

At Eleva-Strum Central High School in Strum, Wisconsin, Warren Behm Eleva-Strum Agriculture instructor has been on the block schedule for three years. Behm operates under a four by four or semester block schedule. He believes his exposure has been to more students than before; students who may not have been able to take an agriculture class before. Behm also doesn't see block scheduling as a detriment to FFA (Egan, 1996).

John Sharber (National FFA,1997) agriculture instructor at Supulpa High School in Sapulpa, Oklahoma has increased their enrollment of 80 students to 312 students in just five years. Supulpa uses the four by four block schedule. With this schedule students can earn eight credits per year. These extra credits allow students a chance to take course they didn't feel they could afford before--courses in agriculture (Egan, 1996).

The National FFA (1997) gives agricultural education instructors several suggestions to make block scheduling work for their classrooms:

1. Approach block scheduling as an exciting alternative
2. Use a variety of student learning activities to stimulate student thinking
3. Enhance communication efforts to keep all FFA members updated about chapter activities
4. Take advantage of extra class time to take more field trips away from school
5. Spur creativity by encouraging students to research and present information in non-traditional ways

In looking at block scheduling, regarding agricultural education, some benefits are

more time for labs and advanced topics, more time for teacher planning, and more time for off-site work experience programs which commonly associated with this discipline. There are concerns for agricultural education teachers: enrollment, level of student involvement in FFA, and academic success (Gagnon, 2002). This research attempts to discover the answers to the following questions: What are agricultural education teachers' perceptions of the overall effectiveness of block scheduling? Are there important benefits and drawbacks of block scheduling specific to agricultural education classrooms? How does block scheduling affect enrollment in agricultural education classes? Have teaching methods in agricultural education changed in response to block scheduling?

Chapter 3

Methodology

Introduction

The purpose of this study was to discover teachers' attitudes towards the effectiveness of block scheduling design as perceived by Wisconsin agricultural education instructors teaching a block. This section includes a description of sample selection, instrumentation, research procedures used, data analysis, and limitations of the study.

Subjects

The subjects for this study were Wisconsin agricultural education instructors who are teaching in a block schedule class design. Subjects were asked what form of the block schedule their school implemented, for example, the 4x4 plan. Participants were selected from a Directory of Wisconsin Agricultural Education Instructors provided by the Department of Public Instruction. The DPI also furnished a list of schools that used block scheduling. With these two pieces of information, the research was then a cluster sample. There are 48 agricultural education instructors that teach in the block.

Research Questions

The research questions for this study were:

1. What are agricultural education teachers' perceptions of the overall effectiveness of block scheduling?
2. Have teaching methods in agricultural education changed in response to block scheduling?

3. Has enrollment, in agriculture classes changed as a result of the block schedule?

4. What are important benefits and drawbacks related to block scheduling specific to agricultural education classrooms?

Instrument

A survey that measures teachers' attitude toward block scheduling was mailed to the participants. The survey consisted of thirty questions that were derived from separate studies that measure teachers' attitudes toward the effectiveness of block scheduling, along with questions developed by the researcher. In a study titled, Students Perspectives on Block Scheduling: Reactions Following a Brief Trial Period, students' reactions were surveyed following a one-week period during which a 4 X 4 block schedule was implemented on a trial basis (Slate & Jones, 2000). In the other study, A Study of Teachers Perceptions of the Effectiveness and Critical Factors in Implimenting and Maintaining Block Scheduling by Wilson and Stokes (1999), teachers' were surveyed to determine the overall effectiveness of block scheduling. The instruments were modified with specific questions developed by the researcher.

The following demographic information was also collected: gender, age, highest level of education, years of teaching experience, years of teaching experience, years of teaching in the block schedule, block schedule design, classroom enrollment, and FFA enrollment.

The purpose of the survey was to discover teachers' attitude towards the effectiveness of a block scheduling design as perceived by Wisconsin agricultural

education instructors. The survey specifically looked at block scheduling and its affect on issues such as classroom enrollment, FFA involvement, teacher performance, and student behavior. Participants gave information which includes demographic information, behavior information, and attitudes or opinions regarding the effects of block scheduling on agricultural education programs. Information was collected through a variety of ways: multiple choice questions, short answer, and Likert type items. A copy of the survey and cover letter are found in the appendix.

This research is of utmost importance for those in the agricultural field. According to Dean Gagnon (2002), DPI consultant, enrollment of students in agricultural education has increased due to the addition of students in grades six through eight in required introduction classes. However, our FFA enrollment in Wisconsin has been decreasing consistently each year. There are concerns that students are forced into required classes instead of electives. Another issue is the methods teachers are using with extended amounts of time (Gagnon, 2002). Teachers are looking for ways to keep students interested and involved in agricultural education classes.

The survey was reviewed by several educators in a school with block scheduling, the researcher's thesis advisor, and one person in the sample. Those instructors gave a critique of the survey on ease of completion and question understanding. Instructors were randomly asked to critique the survey. Various ages and years of teaching experience were considered in the pilot test.

Reliability was not tested and therefore, will be considered a limitation of the study. Because reliability cannot be established, only content validity can be found in the

study.

Procedure

Surveys were mailed to selected agricultural education instructors in the spring of 2002. Participants were given a postage paid envelope to mail back the response. Data was collected within two weeks of initial mailing. Demographics were taken and organized, while Likert type items were put into means. Both items were placed into table form. Short answer responses were used in the discussion and results section.

A coded number survey aided in the quickness of follow-up. Participants were given another survey and postage paid envelope to respond in. They were asked to respond within two weeks. A follow-up survey was sent and email reminders were sent after the two week period.

Data Analysis

Data analysis for this study was frequencies and percentages, along with means.

Limitations of the Study

Some limitations of this study identified by the researcher are:

1. The sample is only agricultural education instructors from several Wisconsin communities.
2. The sample may not reflect the attitudes of all the teachers that are involved in the block schedule.
3. Some of the schools involved have two agricultural education instructors and only one may respond.
4. Confidentiality is assured, but not anonymity so participants may not

respond.

5. The survey not tested to be reliable and cannot be valid.

Chapter 4

Results and Discussion

The findings of the survey on teachers' attitudes towards the effectiveness of block schedule in agricultural education classrooms, along with demographic information collected in the survey will now be presented. When reporting the results of this study, it is important to review the research questions.

The research questions for this study were:

1. What are agricultural education teachers' perceptions of the overall effectiveness of block scheduling?
2. Have teaching methods in agricultural education changed in response to block scheduling?
3. Has enrollment in agriculture classes changed as a result of the block schedule?
4. What are important benefits and drawbacks related to block scheduling specific to agricultural education classrooms?

Demographic Information

The data collected for this study from Wisconsin agricultural education teachers teaching in a block schedule identified the similarities and differences in teachers perceptions towards the effectiveness of block scheduling in relationship to gender, age, level of education, years of teaching experience, years of teaching in the block schedule, type of block schedule, enrollment in agriculture classes, and total FFA enrollment. With

thirty-two of a possible forty-eight teachers participating in the study, the response rate was sixty-six percent. This data will now be reported and discussed in Tables 1.A to 1. H.

Gender Information on Agricultural Education Instructors

Table 1. A

Gender	Frequency	Percentage
Male	26	81.3%
Female	6	18.8%

Gender

Table 1.A indicates the gender of the participants in the study. Of the 32 participants in this study, eight-one percent were males and nineteen percent were females.

Age Information of Agricultural Education Instructors

Table 1.B

Age	Frequency	Percentage
21-30 years	8	25.0%
31-40 years	13	40.6%
41-50 years	6	18.8%
51 or older	5	15.6%

Age

Table 1.B reports the ages of the participants involved in the study. Approximately 8 of the participants (25%) were in the twenty-one to thirty age bracket, while 13 of the participants (40.6%) were thirty-one to forty years of age. Almost nineteen percent (18.8%) of the participants were forty-one to fifty years of age, and close to sixteen percent (15.6%) are fifty-one years or older.

Education Information of Agricultural Education Instructors

Table 1.C

Education	Frequency	Percentage
B.S.	**6**	**18.8%**
B.S. + credits	**11**	**34.4%**
M.S.	**10**	**31.3%**
M.S. + credits	**5**	**15.6%**

Highest Level of Education Completed

Table 1.C shows the highest level of education completed by teachers in the study. Six of the teachers (18.8%) have their bachelors degree while 10 of the participants (31.3%) have their masters degree. Of the remaining fifty percent, 11 of the participants (34.4%) have a bachelors plus credits, while 5 of the teachers (15.6%) have a masters degree plus credits.

Years of Teaching Experience of Agricultural Education Instructors

Table 1.D

Teaching Experience	Frequency	Percentage
0-2 years	5	15.6%
3-5 years	3	9.4%
6-10 years	7	21.9%
11-15 years	6	18.8%
16-20 years	2	6.3%
21-24 years	4	12.5%
25 years or more	5	15.6%

Years of Teaching Experience

Table 1.D indicates years of teaching experience of those that participated in the study. The years of teaching experience varied from one year to twenty-five years or longer. Five of the participants (15.6%) had less than two years of experience, three of the participants (9.4%) had three to five years of experience, and seven participants (21.9%) had six to ten years of experience. The remaining participants had the following years of experience: six participants (18.8%) had eleven to fifteen years of experience, two teachers (6.3%) had sixteen to twenty years of experience, four teachers (12.5%) had twenty-one to twenty-four years of experience, and five teachers (15.6%) had twenty-five years or more experience.

Total Years of Teaching in Block Schedule for Agricultural Education Instructors

Table 1.E

Teaching Experience	Frequency	Percentage
0-2 years	9	28.1%
3-5 years	14	43.8%
6-10 years	9	28.1%

Total Years Teaching in a Block Schedule

Table 1.E indicates the years of teaching experience in the block. Roughly twenty-eight percent (28.1%) of the participants stated that they had been teaching in a block system for zero to two years. Fourteen participants (43.8%) had three to five years experience, while nine participants (28.1%) had six to ten years experience in the block system.

Type of Block Scheduling Used by Agricultural Education Instructors

Table 1.F

Schedule Used	Frequency	Percentage
4 X 4 Plan	27	84.4%
Alternate Day	4	12.5%
Other	1	3.1%

Type of Block Scheduling Used

Table 1.F reports the type of block schedule that was used in the teachers'

districts. Twenty-seven participants (84.4%) stated their district was using the 4 X 4 plan, while four participants (12.5%) were teaching on the alternate day schedule. Only one participant (3.1%) stated they used some other form of schedule, while no participants stated they used a trimester plan.

Enrollment in Agriculture Classes Reported by Agricultural Education Instructors

Table 1.G

Enrollment	Frequency	Percentage
0-75 students	11	34.4%
76-150 students	15	46.9%
151-225 students	5	15.6%
226 + students	1	3.1%

Enrollment in Agriculture Classes

Table 1.G indicates the total enrollment in agriculture classes reported by instructors in the study. Teachers were asked to report the total enrollment of their agriculture classes per nine weeks. Eleven participants (34.4%) had enrollment of 0-75 students, and fifteen participants (46.9%) had an enrollment of 76-150 students. Roughly sixteen percent (15.6%) of the participants had enrollments of 151-225 students, while a little over three percent (3.1%) had student enrollments of 226 students or more.

FFA Membership Reported by Agricultural Education Instructors

Table 1.H

FFA Membership	Frequency	Percentage
0-25 members	2	6.3%
26-50 members	13	40.6%
51-75 members	8	25.0%
76-99 members	4	12.5%
100 + members	5	15.6%

FFA Membership

Table 1.H indicates FFA membership reported by agricultural instructors in the study. Participants were asked to report the total enrollment of their FFA chapter for the year. Of the 32 participants, two participants (6.3%) had an enrollment of 0-25 members, 13 participants (40.6%) had an enrollment of 26-50 members, 8 participants (25.0%) had an enrollment of 51-75 members, and 4 participants (12.5%) had an enrollment of 76-99 members. The remaining 5 participants (15.6%) had an enrollment of 100 members or more.

Research Question 1

What are agricultural education teachers' perceptions of the effectiveness of block scheduling? Survey items one through ten attempted to answer this question. The following issues were considered when determining teachers' perceptions of the effectiveness of block scheduling:

1. Ability to learn more about students in the classroom.

2. Increased teaching effectiveness.
3. Decrease in on-task time.
4. Improvement in student grades.
5. Improvement in classroom atmosphere.
6. Use of daily teacher planning.
7. Increased use of hands-on activities.
8. Use of multi-activity lessons in one period.
9. Group learning in the classroom.
10. Major ideas and concepts take precedent over facts.

The following results in regards to teachers' responses to the above items are presented in Table 2.

Teachers' Perceptions of the Effectiveness of Block Scheduling

Table 2

Survey Items 1-10	Strongly Disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %
Tend to learn more about students	0%	25.0%	28.1%	46.9%	0%
Increase in Teaching Effectiveness	0%	15.6%	21.9%	43.8%	18.8%
Decrease in On-task time	15.6%	37.5%	21.9%	21.9%	3.1%
Student Grade Improvement	0%	18.8%	46.9%	21.9%	12.5%
Improved Classroom Atmosphere	0%	18.8%	34.4%	34.4%	12.5%
Use of Daily Teacher Planning	3.1%	0%	25.0%	59.4%	12.5%
Increased Use of Hands-on Activities	0%	6.3%	9.4%	59.4%	25.0%
Use of Multi-activity lessons in one period	0%	0%	0%	71.9%	28.1%
Group Learning in Classroom	0%	3.1%	12.5%	56.3%	28.1%
Major idea has precedence over facts	0%	0%	28.1%	59.4%	12.5%

Approximately forty-six percent (46.9%) of the participants agreed that they tend

to learn more about their students because of the block schedule, while roughly twenty-eight percent (28.1%) were neutral on the issue, and (25%) of them disagreed. As one teacher stated, "It (block scheduling) may strengthen the learning of the students you have in class due to individual attention and hands on experiences."

When asked if teachers have increased teaching effectiveness in part to the block schedule approximately sixty-three percent (62.6%) of the participants agreed or strongly agreed, while roughly twenty-two percent (21.9%) were neutral on the issue, and sixteen percent (15.6%) of the participants disagreed. Some comments regarding teaching effectiveness were also given. One teacher stated, "block scheduling makes me a better teacher by allowing me to adapt to the needs of the students."

Over half of the participants (53.1%) involved disagreed or strongly disagreed that there is a decrease in on-task time due to the block schedule, while approximately twenty-two percent (21.9%) were neutral on the issue and twenty-five (25%) of the participants agree or strongly agree.

Almost half of the teachers (46.9%) were neutral or felt that the block schedule had little effect on grade improvement, (34.4%) agreed or strongly agreed, and 6 of the participants (18.8%) disagreed.

Fifteen of the participants (46.9%) agreed or strongly agreed that classroom atmosphere has increased, while (34.4%) were neutral on the issue and 18.8% disagreed. The following comment regarding classroom atmosphere in support of block scheduling was given by a participant, "From a purely educational view the four period day is head and shoulders better than our old nine period day with forty minute periods. The

atmosphere is more relaxed, and I can spend more time with difficult concepts."

Approximately seventy-two percent (71.9%) of teachers agreed or strongly agreed that they are able to use their daily teacher planning time well, while only 1 participant (3.1%) disagreed and (25%) were neutral on the issue. An additional comment from a teacher involved in the study was "three preps versus six preps per semester- a lot less stress on the instructor's life. I would dread to go back."

Almost eight-five percent (84.4%) of the participants agreed or strongly agreed they have increased use of hands-on activities in the classroom because of the block schedule, while (100%) of participants agreed and strongly agreed that they use multi-activity lessons in one period. As stated by another teacher, "As an active learning/hands on area of study, agriculture is served well by longer periods of class time. Labs and field trips are more easily planned and completed in one period."

Roughly eighty-four percent (84.4%) of teachers agree or strongly agreed that group learning is important their classroom, while 4 of the participants (12.5%) were neutral on the issue, and (3.1%) disagreed.

Lastly, (71.9%) of the participants agreed or strongly agreed that when teaching in the block schedule major concepts take precedence over learning of facts, while 9 of the teachers (28.1%) were neutral on the issue.

An analysis of the data indicates that teachers responded to the overall effectiveness with a high level of agreement or disagreement on the following issues:

* Increased teaching effectiveness (62.6% agreement)

* Use of daily teacher planning (71.9% agreement)

* Increased use of hands-on activities (84.4% agreement)

* Use of multi-activity lessons in one period (100% agreement)

* Group learning in the classroom (84.4% agreement)

* Major ideas and concepts take precedent over facts (71.9% agreement)

The remaining issues; tending to learn more about students, a decrease in on-task time, improvement in student grades, and improvement of classroom atmosphere generated responses that were evenly distributed between agreement, neutrality, and disagreement. This leads the researcher to believe that learning more about students, the amount of time that students are on task, improvement in student grades, and improvement of classroom atmosphere are not perceived by participant to be important factors in the effectiveness of block scheduling and are not perceived to be critical factors to maintaining a block schedule design. The amount of responses that were neutral were few and far between so it appears that most teachers do have an opinion on the effectiveness of block scheduling.

The statistical data collected and written feedback given by the participants led the researcher to the following conclusions:

1. Overall, the agricultural education teachers that responded to the study have a positive perception of the effectiveness of block scheduling.

2. Agricultural education instructors see the use of hands-on activities and multi-activity lessons as essential components to block scheduling.

3. Teachers used group learning in their classroom as a means to make curriculum more relevant to students.

4. In the block schedule, major concepts and ideas take precedence over facts due to agricultural education classes lasting only nine weeks in a block schedule.

5. Longer teacher planning time is an advantage to agricultural education instructors and is used to prepare activities such as labs and fieldtrips.

Research Question 2

Have teaching methods in agricultural education changed in response to block scheduling? Survey items eleven through fifteen addressed this question. The following issues were considered when determining if and how teaching methods have changed in response to the block schedule:

1. Use of different teaching methods in one period.
2. Adequate planning time.
3. Less instructional time due to semester classes being held in nine weeks
4. Use of more lab type activities.
5. Ability to give more individual attention to students.

The results of teachers responses to teaching method questions are shown in Table 3.

Teachers' Perceptions of Teaching Methods in Response to Block Scheduling

Table 3

Survey Items 11-15	Strongly Disagree %	Disagree%	Neutral %	Agree %	Strongly Agree %
Several Methods in One Period	0%	0%	0%	71.9%	28.1%
Adequate Planning Time	6.3%	28.1%	9.4%	43.8%	12.5%
Less Instructional Time	9.4%	40.6%	28.1%	18.8%	3.1%
More Lab Type Activities	0%	3.1%	6.3%	65.6%	25.0%
More Attention to Individual Students	3.1%	12.5%	12.5%	56.3%	15.6%

One hundred percent of teachers agreed or strongly agreed that they use several different teaching methods in one period. One participants in the study stated, "Block scheduling is set up to allow teachers to try a variety of methods in the course of one day."

Approximately sixty-six percent (66.3%) of the participants agreed or strongly agreed that the block schedule allowed for adequate planning time, while (34.4%) disagreed or strongly disagreed and (9.4%) were neutral on the issue.

Fifty percent of teachers disagreed or strongly disagreed that they have less instructional time, while (28.1%) were neutral and (21.9%) agreed or strongly agreed. A teacher in the study stated, "Less material is covered in block schedule than in conventional scheduling. Nine weeks is too short for covering a class; you feel as if you are being rushed."

When asked about having more time for lab type activities 29 of the participants (80.6%) agreed or strongly agreed. Another participant in the study explained, " I am restructuring the program to incorporate more hands on and lab type activities. The block allows ample time for labs and fieldtrips."

Lastly, (71.9%) of participants agreed or strongly agreed that they were able to give more individual attention to students because of the block schedule while 4 of the teachers (12.5%) were neutral and (15.6%) disagreed or strongly disagreed.

An analysis of the data shows that the majority of the teachers have changed their teaching methods in response to block scheduling. A majority of teachers use several different teaching methods in one period (100% agreement), are able to have more lab type activities (80.6% agreement), and are able to give more individual attention to students (71.9% agreement). While over half of the teachers felt they had adequate planning time, (34.4%) of teachers disagreed on the issue. It was surprising that only fifty percent of teachers felt that they had more instructional time when the basic definition of block scheduling allows for more time in class.

The statistical data collected and written feedback given by the participants led the researcher to the following conclusions:

1. All agricultural education instructors use several different methods of instruction during one period.

2. Teachers felt that they were able to have more laboratory activities, and they were able to focus their attention on each individual student more easily in a block schedule.

3. Half of the teachers felt that they did not have more classroom instructional time due to teaching a semester course in nine weeks.

4. Most teachers felt that they had an adequate amount of planning time, such as ninety minutes per day.

Research Question 3

Has enrollment in agriculture classes changed as a result of the block schedule? Survey items sixteen through twenty attempted to answer this research question. The following issues were considered when determining if enrollment in agriculture classes has changed as a result of the block schedule:

1. Increase in enrollment in agriculture courses.
2. Block schedule affects enrollment.
3. Limited enrollment due to required courses.
4. Increase in FFA membership.
5. Block scheduling affects contact with FFA members and officers.

Table 4 indicates the results reported by agricultural education instructors in response to questions on the effect of block scheduling on enrollment.

Teachers' Perceptions of Enrollment in Agriculture Classes as a Result of the Block Schedule

Table 4

Survey Items 16-20	Strongly Disagree %	Disagree%	Neutral %	Agree %	Strongly Agree %
Increase in Ag Course Enrollment	0%	15.6%	46.9%	18.8%	18.8%
Block Schedule Affects Enrollment	0%	6.3%	28.1%	43.8%	21.9%
Required Courses Limit Ag Enrollment	9.4%	12.5%	15.6%	50.0%	12.5%
Increase in FFA Membership	6.3%	43.8%	40.6%	6.3%	3.1%
Affects FFA Member and Officer Contact	0%	6.3%	6.3%	31.3%	56.3%

Approximately forty-seven percent (46.9%) of teachers responded neutrally and (37.6%) agreed or strongly agreed when asked if enrollment in agriculture courses has increased as a result of the block schedule.

Twenty-one of the participants (75.7%) agreed or strongly agreed that block scheduling affects their classroom enrollment, while (28.1%) were neutral on the issue.

Roughly sixty-three percent (62.5%) of teachers agreed or strongly agreed that required courses limit student enrollment in agriculture courses, while (21.9%) disagreed or strongly disagreed and (15.6%) were neutral on the issue. "The block schedule causes

students to have to make tough choices for elective classes, thus I am not able to recruit some key populations to the agriculture program" explained one participant.

Over half of the participants (50.1%) disagreed or strongly disagreed when asked if FFA membership had increased due to the block schedule, while (40.6%) were neutral on the issue. An example of this was mentioned by one teacher, "Block schedule strengthens the program overall, but FFA membership dropped from 100 to 80 members."

Twenty-eight participants (87.6%) agreed or strongly agreed that block scheduling affects how often they see their FFA members and officers. Several teachers discussed this as a major disadvantage to the block schedule. For example, one teacher stated, "In the agricultural education model, of the three components; Classroom, SAE, and FFA, only FFA has been hurt. It takes a lot of work to keep members informed and activities going."

The data reveals the majority of the teacher agreed or strongly agreed that block scheduling affects enrollment in agriculture classes (75.7% agreement) and whether the teacher has more or less contact with FFA members and FFA officers (87.6% agreement). Teachers also had a high level of agreement (62.5%) when asked if required courses limit student enrollment in agriculture classes. However, teachers varied in their responses to the two questions that dealt with an increase of enrollment of agriculture courses (46.9% neutrality, 37.6% agreement) and an increase in FFA membership (50.1% disagreement, 40.6% neutrality).

The statistical data collected and written feedback given by the participants led the researcher to the following conclusions:

1. All agricultural education instructors felt that classroom enrollment and FFA membership did not increase much or remained the same because of the block schedule.

2. A majority of teachers discussed the impact of required courses on agriculture classes enrollment. Although enrollment is always a concern in elective courses.

3. Most instructors believed that block scheduling does affect enrollment in their courses, and also affects the amount of contact a teacher has with FFA members.

Research Question 4

What are important benefits and drawbacks related to block scheduling specific to agricultural education classrooms? Survey items twenty-one through thirty addressed this question. The following issues were considered when determining important benefits and drawbacks of block scheduling, specific to agricultural education classrooms:

1. Students have more trouble paying attention.
2. Students have less opportunity to take elective courses.
3. Teachers fail more students.
4. Teachers cram in information to students.
5. Teachers have more behavior problems.
6. Students are more productive.
7. Students perform better on classroom tests.
8. Teachers have fewer behavior problems.
9. Teachers have more time to prepare for classes.
10. Students are more involved in their own learning.

Table 5 indicates what teachers viewed as possible advantages and disadvantages

of the block schedule.

Teachers' Perceptions of the Benefits and Drawbacks of Block Scheduling

Table 5

Survey Items 21-30	Strongly Disagree %	Disagree %	Neutral %	Agree %	Strongly Agree %
More Trouble Paying Attention	6.3%	34.4%	21.9%	28.1%	9.4%
Elective Opportunities are less	6.3%	34.4%	21.9%	18.8%	18.8%
Increase in Student Failure	3.1%	53.1%	28.1%	12.5%	3.1%
Increase in Cramming Information	9.4%	53.1%	6.3%	25.0%	6.3%
More Behavior Problems in Class	21.9%	34.4%	34.4%	9.4%	0%
More Productive Students	3.1%	6.3%	34.4%	50.0%	6.3%
Better Performance in Classroom	0%	15.6%	53.1%	28.1%	3.1%
Fewer Behavior Problems	0%	18.8%	40.6%	25.0%	15.6%
More Preparation Time	9.4%	28.1%	15.6%	31.3%	15.6%
Increased Student Involvement	3.1%	6.3%	31.3%	43.8%	15.6%

In determining if students have more trouble paying attention in the block

schedule, participants were split on this issue. Approximately forty-one percent (40.7%) disagreed or strongly disagreed while (37.5%) agree or strongly agreed.

Very similar results were recorded when teachers were asked if students have less opportunities to take electives in a block schedule. Thirteen participants (40.7%) disagreed or strongly disagreed and (37.6%) agreed or strongly agreed. One teacher discussed the influence of the block schedule based on grade level. They stated, "For juniors and seniors it's a plus. For freshman and sophomores it is very hard to take an ag class due to the scheduling of required and having a class opposite of choir and band."

Approximately fifty-six percent (56.2%) of teachers disagreed or strongly disagreed that they fail more students, while (28.1%) were neutral and (15.6%) agreed or strongly agreed.

Twenty of the participants (62.5%) disagreed or strongly disagreed that they had to cram in information, while (31.3%) agreed or strongly agreed. Over fifty-five percent (55.3%) of teachers disagreed or strongly disagreed that they have more behavior problems because of the block schedule and (34.4%) were neutral about the issue. For example, one participant stated, "Discipline is easier and students seem to have fewer problems in a block schedule."

Over half of the participants (56.3%) agreed or strongly agreed that students were more productive than usual, while (34.4%) were neutral and (9.4%) disagreed or strongly disagreed.

Approximately fifty-three percent (53.1%) of teachers were neutral on the issue of students performing better on classroom tests, while (31.2%) agreed or strongly agreed.

Roughly forty-one percent (40.6%) of participants agreed or strongly agreed that teachers have fewer behavior problems with students, and the same amount (40.6%) were neutral on the issue.

Almost half of the teachers (46.9%) agreed or strongly agreed that they have more time to prepare for their classes, (37.5%) disagreed or strongly disagreed and (15.6%) were neutral. One participant in the study explained, "I finally have enough time to introduce descriptive activities. I would not teach in anything but block!"

Finally, approximately sixty-nine percent (69.4%) agreed or strongly agreed that students were more involved in their own learning, while (31.3%) were neutral and (9.4%) disagreed or strongly disagreed.

An analysis of the data indicates the teachers responded to possible benefits and drawbacks of block scheduling with a high rate of agreement or disagreement on the following issues:

* Students are involved in their own learning. (69.4% agreement)

* Teachers had to cram in information. (62.5% disagreement)

* Students were more productive than usual (56.3% agreement)

The remaining issues; students have more trouble paying attention, students have less opportunity to take elective courses, students perform better on classroom tests, teachers fail more students, teachers increase or decrease of behavioral problems, and teacher preparation time that addressed teachers' perceptions of the benefits and drawbacks toward block scheduling generated responses that tended to be evenly distributed between agreement, neutrality, and disagreement. The number of neutral responses were

unexpectedly high. It was assumed that more teachers would have had established opinions on the benefits and drawbacks of block scheduling.

The statistical data collected and written feedback given by the participants led the researcher to the following conclusions:

1. Block scheduling allows teachers to have fewer behavioral problems and less discipline required.

2. A majority of teachers felt they had plenty of preparation time and did not have to cram information into their courses.

3. Instructors also felt that students were more involved in their own learning which can lead to better classroom performance and more focus during class.

4. Instructors involved in the study felt students have less opportunity to take elective courses of study due to the block schedule.

Chapter 5

Summary, Conclusions, Limitations, and Recommendations

An overview of the noteworthy findings of this study will be provided. A summary of the purpose, along with conclusions, limitations, and recommendations for future study are included.

Summary

The purpose of this study was to discover teachers' attitude towards the effectiveness of a block scheduling design as perceived by Wisconsin Agricultural Education instructors teaching in a block. The survey, untitled Block Scheduling Research Data Collection was used to achieve an overall understanding of teachers' view on block scheduling. Wisconsin Agricultural Education instructors teaching in a block schedule, were given a survey that collected demographic information and include thirty items that attempted to answer the following research questions:

1. What are agricultural education teachers' perceptions of the overall effectiveness of block scheduling?
2. Have teaching methods in agricultural education changed in response to block scheduling?
3. Has enrollment in agriculture classes changed as a result of the block schedule?
4. What are important benefits and drawbacks of block scheduling specific to

agricultural education classrooms?

Conclusions

The Wisconsin agricultural education instructors involved in this block scheduling study are a group of professional and hardworking individuals. Agricultural education instructors are responsible for teaching a purely elective curriculum, advising a local FFA chapter, and are often required to coach other extracurricular activities such as volleyball, basketball, or track.

The purpose of this study was to discover teachers' attitude towards the effectiveness of a block scheduling design as perceived by Wisconsin agricultural education instructors teaching in a block. More specific issues were: the overall effectiveness of the block schedule, changes in teaching methods, enrollment in classroom and FFA, and benefits and drawbacks of block scheduling. Teachers were allowed space to write any final comments on the topic of block scheduling. Many of these themes were identified and incorporated into chapter four and will be discussed here as well.

An analysis of the data and comments of participants to determine their perceptions of the overall effectiveness of block scheduling, the following conclusions were drawn:

1. Overall, the agricultural education teachers that responded to the study have a positive perception of the effectiveness of block scheduling.

2. Agricultural education instructors see the use of hands-on activities and multi-activity lessons as essential components to block scheduling.

3. Teachers used group learning in their classroom as a means to make curriculum

more relevant to students.

4. In the block schedule, major concepts and ideas take precedence over facts due to agricultural education classes lasting only nine weeks in a block schedule.

5. Longer teacher planning time is an advantage to agricultural education instructors and is used to prepare activities such as labs and fieldtrips.

After analyzing the data and comments of teachers to determine if teaching methods in agricultural education have changed in response to block scheduling, the following conclusions were drawn:

1. All agricultural education instructors use several different methods of instruction during one period.

2. Teachers felt that they were able to have more laboratory activities, and they were able to focus their attention on each individual student more easily in a block schedule.

3. Half of the teachers felt that they did not have more classroom instructional time due to teaching a semester course in nine weeks.

4. Most teachers felt that they had an adequate amount of planning time, such as ninety minutes per day.

In analyzing the data and comments of agricultural education instructors to determine if enrollment in agriculture classes has changed as a result of the block schedule, the following conclusions were drawn:

1. All agricultural education instructors felt that classroom enrollment and FFA membership did not increase much or remained the same because of the block schedule.

2. A majority of teachers discussed the impact of required courses on agriculture classes enrollment. Although enrollment is always a concern in elective courses.

3. Most instructors believed that block scheduling does affect enrollment in their courses, and also affects the amount of contact a teacher has with FFA members.

And finally, after analyzing the data and comments of participants to determine important benefits and drawbacks of block scheduling specific to agricultural education classrooms, the following conclusions were drawn:

1. Block scheduling allows teachers to have fewer behavioral problems and less discipline required.

2. A majority of teachers felt they had plenty of preparation time and did not have to cram information into their courses.

3. Instructors also felt that students were more involved in their own learning which can lead to better classroom performance and more focus during class.

4. Instructors involved in the study felt students have less opportunity to take elective courses of study due to the block schedule.

Overall, agriculture education instructors felt that block scheduling design strengthened their agricultural education program. Instructors identified several reasons why they enjoyed teaching in the block schedule and advantages to the students and the teacher. The following are positive comments about block schedule design:

1. Allows more time for lab activities, fieldtrips, and school-to-work programs.

2. Promotes a relaxed classroom atmosphere.

3. Teachers have less classes to prepare for and more time for individualized help.

4. Teachers have less discipline problems.

5. Hands-on activities are able to be varied.

However, teachers did discuss a few of the disadvantages to a block schedule. The following are negative comments about block schedule design:

1. FFA recruitment and keeping members informed is difficult.

2. Students absence leaves little time for make-up options.

3. Students must make tough choices in elective classes.

Nevertheless, some teachers gave personal comments on how to make the block schedule effective for students and teachers. Here are a few of their comments:

"The success of the block schedule depends on the ability of the teacher to change from traditional teaching methods."

"I feel teachers can adjust to a schedule and that the good teachers will make it work."

"Block scheduling makes me a better teacher and my students more diversified learners."

It is reasonable to conclude that teachers have to adjust to change on any given day. For example, on any given night students could get into an accident or win the conference championship. In either event, the teacher will probably have to adjust their schedule because of an all school assembly. Block scheduling is a change from the traditional schedule, however, it seems that teachers are professionals that generally adapt well to change. According to the agricultural educations instructors surveyed, block

scheduling is a change that they feel is a welcome addition to agriculture programs and are happy with it overall. Out of all participants surveyed only two stated that the block scheduling design hurts their agricultural education program in all areas.

Limitations

After reviewing the data and written feedback given by teachers it appears that one question on the survey, question number 18, may have confused some of the participants. Many teachers felt that required courses limit student enrollment in agriculture courses, however, it was unclear if taking required courses in the block schedule caused more or less problems in selecting agriculture courses. Another recommendation would be to select individuals with over two years of teaching experience in the block schedule. A few participants said they could not determine if the block schedule affected, for example, enrollment because they had not been employed at the district long enough. Finally, it is important that any researcher send out their survey early in a new semester when the likelihood of response is better. Teachers have several responsibilities near the end of a school year.

Recommendations

This survey has been centered on teachers' perceptions of the effectiveness of block scheduling. It would also be advantageous to explore how students feel about the effectiveness of block scheduling. Do students feel comfortable in the block schedule? Are they forming strong relationships with their teachers? Are students able to seek individualized help needed for academic success? And finally, is the block schedule preparing students for life after high school?

In addition, further research should be conducted in this area to have a true understanding of what block scheduling can do for a school system. In schools, it is important that all members involved administration, faculty and staff, parents, students, and community members have an understanding of how the school is run and become active participants in the school. Improvement cannot be made unless an entire school system is informed.

It would also be interesting to compare and contrast the differences in the perceptions of block scheduling with the type of block schedule in place. A researcher could determine which type of schedule was used most frequently and which schedule seemed to work effectively.

Education is our largest and most important investment. Teachers, administration, children, parents, and the community are what makes a school work effectively. All people involved in raising a children have the opportunity to influence their choices. Education should be a top priority for all people involved. Therefore, we continue as educators, to improve the system in which children receive and make decisions on information. Block scheduling is an education innovation that is meant to improve the educational experience for children.

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Appendix

Block Scheduling Introductory Letter and Survey

Elizabeth Spoelstra
1 Pine Street P.O. Box 108
Nicollet, MN 56074

Spring, 2002

Dear Fellow Educators:

Hi, my name is Elizabeth Spoelstra, and I am in my fourth year of teaching agriculture; three years at Elk Mound High School and one year at Nicollet Public School in Nicollet, MN. In pursuit of a master's degree in Guidance and Counseling, I have decided to choose a topic for my thesis that is near and dear to my heart and yours--Agricultural Education. The focus of my study surrounds the perceptions of the effectiveness of block scheduling on agricultural education programs. As agricultural education instructors, we are constantly concerned about keeping our programs current to the needs of our communities. Student enrollment and FFA involvement are of utmost importance. In the following questionnaire, I will be asking you questions regarding those issues. I am very excited by this study and feel its outcome will result in significant benefits for both individual students and secondary instructors.

The Wisconsin Department of Public Instruction (DPI) was very helpful in identifying agriculture teachers which currently operate in a block schedule. You are part of a cluster sampling of ag teachers selected to participate in this study. I believe that you offer the best opportunity to obtain reliable insight into the everyday workings of agricultural education in Wisconsin.

I am asking you to complete the enclosed survey. Your participation is voluntary. You can be assured that all information reported on your survey will be kept confidential. I will not identify you or your school unless you give me explicit permission to do so. You should be able to complete this survey in approximately fifteen minutes. Please return the survey in the postage paid envelope within two weeks.

If you have any questions contact me by phone at (507) 232-3461 or by email at espoelstra@isd507.k12.mn.us. You may also call my advisor, Hector Cruz at (715) 232-0509. Thank you for helping me.

Sincerely,

Elizabeth Spoelstra, Nicollet Agriculture Instructor

CODE_____

Block Scheduling Research Data Collection

Demographics (Please circle your answer.)

1. Gender
   a. male b. female

2. Age
   a. 21-30 c. 41-50
   b. 31-40 d. 51 and above

3. Highest Level of Education
   a. B.S. in _____ c. M.S. in _____
   b. B.S. plus credits d. M.S. plus credits

4. Years of Teaching Experience
   a. 0-2 years e. 16-20 years
   b. 3-5 years f. 21-24 years
   c. 6-10 years g. 25 & up or more
   d. 11-15 years

5. Total Years of teaching in the block schedule
   a. 0-2 years c. 6-10 years
   b. 3-5 years d. 11 or more years

6. What type of block scheduling design does your school have?
   a. 4x4 plan c. trimester plan
   b. alternate day d. other _____

7. Total Enrollment in Agriculture classes (per 9 weeks)
   a. 0-75 students c. 151-225 students
   b. 76-150 students d. 226 or more students

8. Total FFA Enrollment
   a. 0-25 students d. 76-99 students
   b. 26-50 students e. 100 students or more
   c. 51-75 students

Directions: Please circle your level of agreement to the following statements.

SD=Strongly Disagree
D =Disagree
N =Neutral
A =Agree
SA=Strongly Agree

Attitude Toward Block Scheduling's Effectiveness

1. I tend to learn more about my students.	SD	D	N	A	SA
2. I have increased teaching effectiveness.	SD	D	N	A	SA
3. There is a decrease in on-task time.	SD	D	N	A	SA
4. Students grades have shown improvement.	SD	D	N	A	SA
5. Classroom atmosphere has improved.	SD	D	N	A	SA

Factors Critical in Maintaining Block Scheduling

6. I use daily teacher planning.	SD	D	N	A	SA
7. I have increased the use of hands-on activities.	SD	D	N	A	SA
8. I use multi-activity lessons in one period.	SD	D	N	A	SA
9. Group learning is important in my classroom.	SD	D	N	A	SA
10. Major concepts and ideas take precedent over facts.	SD	D	N	A	SA

Teacher Behavior in the Block Schedule

11. I use several different teaching methods in one period.	SD	D	N	A	SA
12. I have adequate planning time.	SD	D	N	A	SA
13. I have less instructional time.	SD	D	N	A	SA
14. I use more lab type activities.	SD	D	N	A	SA
15. I am able give more individual attention to students.	SD	D	N	A	SA

Enrollment in the Block Schedule

16. My enrollment in ag courses has increased.	SD	D	N	A	SA
17. The block schedule affects my enrollment.	SD	D	N	A	SA
18. Required courses are limiting					

student enrollment in ag courses.	SD	D	N	A	SA
19. My FFA membership has increased.	SD	D	N	A	SA
20. Block scheduling affects how often I see my FFA members and officers.	SD	D	N	A	SA

Potential Difficulties in the Block Schedule

21. Students have more trouble paying attention.	SD	D	N	A	SA
22. Students have less opportunity to take elective courses.	SD	D	N	A	SA
23. I fail more students.	SD	D	N	A	SA
24. I had to cram in information to students.	SD	D	N	A	SA
25. I have more behavior problems.	SD	D	N	A	SA

Possible Advantages to the Block Schedule

26. Students were more productive than usual.	SD	D	N	A	SA
27. Students performed better on classroom tests.	SD	D	N	A	SA
28. I have fewer behavior problems with students.	SD	D	N	A	SA
29. I have more time to prepare for my classes.	SD	D	N	A	SA
30. Students were more involved in their own learning.	SD	D	N	A	SA

Final Comments

Overall, does the block scheduling design hurt or strengthen your agricultural education program?