

ABSTRACT

HALVERSON, K. S. A comparison of student attitudes toward physical activity in a traditional and block scheduled physical education curriculum in four Wisconsin high schools. MS in Exercise and Sport Science-Physical Education Teaching, May 2002, 72 pp. (J. Steffen)

This study was designed to determine the impact of traditional versus block scheduling of physical education on high school students' attitudes toward physical activity. The subjects surveyed were Wisconsin public high school students (N = 487) enrolled in physical education. The sample included 2 schools from a block schedule (n = 174) and 2 schools from a traditional schedule (n = 313), which consisted of a total of 253 males and 234 females. The questionnaire consisted of 6 demographic variables, 26 five-point Likert-type scale statements, and 8 open-ended questions. Subjects completed the questionnaire to examine current attitudes about student experiences in physical education, choices offered in the physical education curriculum, and the expectations students had for their participation in physical activity. Mean scores in relation to attitudes toward physical activity were 3.952 for males and 3.709 for females. Mean scores were found not to be statistically different. Results of a two-way ANOVA indicated no significant difference ($p = .916$) between the traditional and block scheduled program. However, the results indicated a significant difference ($p = .001$) between males and females involved in a traditional and block scheduled physical education program.

**A COMPARISON OF STUDENT ATTITUDES TOWARD PHYSICAL ACTIVITY IN
A TRADITIONAL AND BLOCK SCHEDULED PHYSICAL EDUCATION
CURRICULUM IN FOUR WISCONSIN HIGH SCHOOLS**

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**BY
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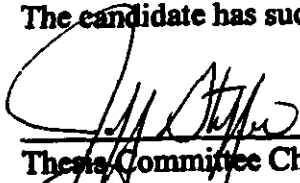
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We recommend acceptance of this thesis in partial fulfillment of this candidate's requirements for the degree:

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The candidate has successfully completed the thesis final oral defense.



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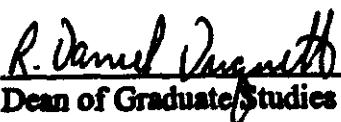


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TABLE OF CONTENTS

	PAGE
ACKNOWLEDGEMENTS.....	iii
LIST OF TABLES.....	vii
LIST OF APPENDICES.....	ix
CHAPTER	
I. INTRODUCTION.....	1
Background.....	1
Block Scheduling.....	1
Traditional Scheduling.....	2
Student Attitudes.....	3
Conclusion.....	3
Hypothesis.....	4
Assumptions.....	4
Limitations.....	4
Delimitations.....	5
Definitions.....	5
II. REVIEW OF RELATED LITERATURE.....	7
Introduction.....	7
Scheduling.....	9
Traditional Scheduling.....	9
Block Scheduling.....	10

CHAPTER	PAGE
<i>The 75-75-30 Plan</i>	11
<i>Four-Block Scheduling</i>	11
<i>Alternating Day Scheduling</i>	12
<i>Modified Block</i>	12
<i>Trimester Model</i>	12
<i>Advantages</i>	12
<i>Students</i>	13
<i>Teachers</i>	13
<i>School Climate</i>	14
<i>Disadvantages</i>	15
<i>Student Attitudes</i>	16
<i>Physical Activity</i>	20
<i>Conclusion</i>	23
III. METHODS AND PROCEDURES	25
<i>Introduction</i>	25
<i>Subject Selection</i>	25
<i>Study Design</i>	26
<i>Questionnaire</i>	26
<i>Statistical Analysis</i>	28
IV. RESULTS AND DISCUSSION	29
<i>Introduction</i>	29

CHAPTER	PAGE
Subject Descriptive Statistics.....	29
Open-Ended Questions.....	36
Discussion.....	51
V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....	58
Summary.....	58
Conclusions.....	59
Recommendations.....	59
REFERENCES.....	60
APPENDICES.....	65

LIST OF TABLES

TABLE	PAGE
1. ANOVA for the Average Score for Who Liked Physical Education in Sixth Grade (Question1).....	30
2. ANOVA for the Average Score for Who Liked Physical Education in Seventh Grade (Question 2).....	31
3. ANOVA for the Average Score for Who Liked Physical Education in Eighth Grade (Question 3).....	32
4. ANOVA for the Average Score for Who was Looking Forward to Their High School Physical Education Experience (Question4).....	33
5. ANOVA for the Average Scores for the Questions Related to Middle School (Questions 5-15).....	34
6. ANOVA for the Average Scores for the Questions Related to High School (Questions 16-26).....	35
7. Categories for Responses to Survey Question 27 during a Block Scheduling Program.....	37
8. Categories for Responses to Survey Question 27 during a Traditional Scheduling Program.....	38
9. Categories for Responses to Survey Question 28 during a Block Scheduling Program.....	39
10. Categories for Responses to Survey Question 28 during a Traditional Scheduling Program.....	40
11. Categories for Responses to Survey Question 29 during a Block Scheduling Program.....	41
12. Categories for Responses to Survey Question 30 during a Block Scheduling Program.....	42
13. Activities Participants Want or Do Not Want Offered in Physical Education during a Block Scheduling Program.....	44

TABLE**PAGE**

14. Categories for Responses to Survey Question 29 during a Traditional Scheduling Program.....	45
15. Categories for Responses to Survey Question 30 during a Traditional Scheduling Program.....	46
16. Activities Participants Want or Do Not Want Offered in Physical Education during a Traditional Scheduling Program.....	47
17. Categories for Responses to Survey Question 31 during a Block Scheduling Program.....	48
18. Categories for Responses to Survey Question 31 during a Traditional Scheduling Program.....	49
19. Categories for Responses to Survey Question 32 during a Block Scheduling Program.....	50
20. Categories for Responses to Survey Question 32 during a Traditional Scheduling Program.....	51

LIST OF APPENDICES

APPENDIX	PAGE
A. Informed Consent.....	65
B. Questionnaire.....	67

CHAPTER I

INTRODUCTION

Background

The purpose of this study was to compare students' attitudes toward physical activity in a traditional and block scheduled physical education curriculum in four Wisconsin High Schools. Professional literature in past years has shown an increase in high schools implementing block scheduling. In the past, U.S. high schools have used a traditional schedule, which consists of 40 to 60 minute class periods and six, seven, or eight period days. Claxton & Bryant (1996) reported that "15% of high school principals responding to a survey planned to adopt a block schedule which implements fewer, but longer class periods" (p. 48). The traditional Carnegie Standard is beginning to be overpowered by the block schedule. Block scheduling, also known as intensive time scheduling (ITS), could affect the students' attitudes toward physical activity in either a positive or negative way.

Block Scheduling

Some typical models of ITS include alternate day block, 4x4 semester plan, Copernican plan, or trimester plan (Canady & Rettig, 1995; Carroll, 1990). The extended time block of classes varies among the program so school districts have devised various styles that best suit the needs of the students. Bryant & Claxton (1996) reported that "changing to a block schedule allows more time for teachers and students to prepare for fewer classes and can then better prepare for assignments and tests" (p. 203). Claxton

and Bryant (1996) have suggested that “having an extended period for physical education provided a greater opportunity to meet objectives and showed an improvement in student behavior” (p. 204). Student attitudes can create a climate that can facilitate or detract from student learning (Shortt & Thayer, 1999). A key factor for many schools and administrators is that when the time in school is used well, not only does the school's climate improve, but also the opportunity for learning increases.

Traditional Scheduling

In a traditional schedule, all classes meet the same time every day for equal lengths of time. Exceptions would be courses that may meet fewer days a week such as science labs or physical education classes. Every week is the same for teachers and students. This type of scheduling is used in the majority of secondary schools as it offers simplicity (Dempsey & Traverso, 1983). Advantages to traditional scheduling include work experience programs for students are easily scheduled, there is little difficulty in scheduling part-time and shared staff, and the unchanging style of the traditional schedule offers security in that it is uncontroversial. There are three considerations in traditional scheduling that schools should consider. The first one is that teachers are limited to use those instructional strategies and techniques that fit into a fixed time slot. The second consideration is the variation in class group size (large/small) for integrated instruction is difficult because related classes may not have coinciding periods. The last consideration is there are greater restrictions on individualized instruction and independent course study by students (Dempsey & Traverso, 1983).

Student Attitudes

Student attitudes vary toward physical education, but a majority (usually 80% or more) of the students enjoy the subject (Carlson, 1995). Student apathy in physical education may seem surprising, but if one considers that the subject includes sport, games, and physical activities these all hold an important place in the lives of children and adolescents. Tannehill, Romar, O'Sullivan, England, and Rosenberg (1994) stated that "over 90% of people believed physical education to be relevant and useful later in life and that there was a need for this in the school curricula" (p. 406). There are indications that a growing percentage of students find physical education less relevant and less enjoyable (Carlson, 1995). Carlson's study investigated the feelings and actions of students identified as alienated from physical education. The consistent negative feelings experienced by students may show as one or several of three affective states: meaninglessness, powerlessness, and isolation (see definition section). In that sense, students are said to be alienated from physical education because they believe that they cannot control or change the situation. These circumstances may lead them to withdraw emotionally, mentally, or physically from physical education class (Carlson, 1995).

Conclusion

Many high schools are starting to move away from the traditional six to seven period day and change to a block schedule. Block scheduling allows for students and teachers to prepare for less classes and allows students to move ahead quickly (Canady & Rettig, 1993). For example, students could complete up to three consecutive math or science courses in one year. In traditional scheduling the classes meet the same time each

week, there is little scheduling difficulty, and it offers security. The majority of students enjoy physical education, but for those who do not it is usually because they feel they have been alienated from the rest of the class. Often students' attitudes were found to be linked to their expectations of the subject (Carlson, 1995). Mcrey and Karp (1998) found that "to have positive attitudes toward physical activity students needed to be positively socialized into physical education" (p. 89).

Hypothesis

There will be no significant difference in students' attitudes toward physical activity in a block scheduled program in comparison to a traditional scheduled program.

Assumptions

The following assumptions were made in this study:

1. All subjects that participated in the study were enrolled in a physical education curriculum during the spring semester of 2001.
2. Both male and female subjects participated in the study.
3. The researcher handed out and collected the study the same way at all four school districts.

Limitations

The limitations of the study were:

1. The researcher had no control over individual differences such as strong beliefs for or against their school's curriculum.
2. The subjects may not put forth their best effort in answering the questions to the survey.
3. The subjects may not be motivated to put forth effort in answering the questions from the survey.

Delimitations

1. Subjects surveyed represented the beliefs, opinions, and philosophies of each respective physical education teacher and the curriculum in the school's department.
2. Subjects were high school students (grades 9-12), both male and female, from either a block or traditional scheduled program.
3. The survey was handed out and collected the same month (March) from all high schools.

Definitions

Alienation - persistent negative feelings (Carlson, 1995).

Block Scheduling - at least part of the daily schedule is organized into larger blocks of time (more than 60 minutes, for example) to allow flexibility for varied instructional activities (Larson, 1996).

Exercise - planned, structured, and repetitive bodily movements done to improve or maintain one or more components of physical fitness (Corbin & Pangrazi, 1996).

Isolation - feel alone, withdraw from others; feel isolated from peers either socially or emotionally (Carlson, 1995).

Meaninglessness - no purpose in life, "lack of personal meaning" (Carlson, 1995, p. 467).

Physical Activity - any bodily movement produced by skeletal muscles that results in energy expenditure (Corbin & Pangrazi, 1996).

Powerlessness - no control over what happens, "lack of control" (Carlson, 1995, p. 467).

Traditional Scheduling - the daily schedule that consists of 40 to 60 minute class periods and six, seven, or eight period days (Canady & Rettig, 1993).

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Throughout the current decade, numerous high schools have been actively engaged in restructuring the school day. The need to increase student achievement levels, and the need to provide students with more active learning opportunities in order to meet the mandated increases in high school graduation requirements have caused schools to examine different scheduling methods (Trilling, 1997). Many high schools still cling to the bell schedules that have existed for decades (Schöenstein, 1995). In a 1998 study, Bowman noted that there is no indication in the data collected as to which aspects of the block plan contribute to the program. Bowman (1998) highlights that “actual practices, some of which may be crucial to student achievement, vary from school to school and the effects of evaluating academic achievement toward block scheduling is a difficult process” (p. 243).

According to Canady and Rettig (1993), “the traditional schedule found in most American high schools is being subjected to intense scrutiny. Structures that were once thought to be unchangeable are beginning to undergo revision” (p. 310). Major proposals for restructuring started in the 1980s when personnel in schools began questioning their effectiveness in regard to the use of time during the school day (Francka & Lindsey, 1995). This longer uninterrupted instructional time provides for fewer classes and transitions per day, and the completion of more course credits during a school year.

Teachers prepare and conduct three courses instead of five, six, or seven courses daily and are responsible for teaching and evaluating 75-80 students as opposed to 150 students. In addition, transitions between classes and lunch times are generally longer in the block schedule than in the traditional schedule (Edwards, 1993; Kruse & Kruse, 1995). The students' active role in their learning and the utilization of the school schedule as a resource to maximize learning has triggered a wide application of block scheduling at the high school level (Liu & Dye, 1997).

Morey and Karp (1998) stated that "their teacher influences students' attitudes toward each subject" (p. 89). Some studies have even demonstrated that the environment can affect attitude formation. Morey and Karp (1998) found that "students needed to be positively socialized into physical education to have a positive attitude towards it" (p. 89). If students have a positive attitude toward physical activity, sport, or exercise, individuals would then be predisposed favorably toward participation in active physical type programs throughout one's lifetime. A number of studies in physical education have demonstrated that students with positive attitudes toward physical activity generally exhibit more frequent exercise behaviors than students that have a less positive attitude toward physical activity (Mowatt, DePauw, & Hulac, 1988). Students' attitudes toward physical activity may be important in explaining exercise behavior. Further it is noted that it is important to update information in this area because of the increased interest in the participation of physical fitness (Mowatt et al., 1988).

Scheduling

Scheduling has long been the procrustean bed into which all instruction must fit (Boarman & Kirkpatrick, 1995). To relieve the problems associated with the juggling of high school students' scheduling administrators have implemented various strategies, but little has been accomplished to assist them. When it comes to dividing up the school day and assigning students to classes, so many things can go wrong at so many different levels (Jones, 1995).

Traditional Scheduling

This type of scheduling is used in a majority of secondary schools as it offers simplicity. With the traditional schedule, all classes meet the same time every day for equal lengths of time. Every week is the same for both the teachers and the students. Exceptions to this may include courses that meet fewer days a week such as science labs or physical education classes (Dempsey & Traverso, 1983). Students are assigned to six, seven, or eight daily classes for the duration of the 180-day school year with little or no deviation from those schedules. According to Buckman, King, and Ryan (1995), students would then have to report to six, seven, or eight "bosses" per day, every 40-50 minutes. They also would have to adjust to various rules and regulations, teaching styles, and classroom environments (Geismar & Pulease, 1996) where the content in each of the courses is often disconnected from other disciplines (Buckman et al., 1995).

Researchers (Carroll, 1990; Kruse & Kruse, 1995) suggested that the master schedule in most U.S. high schools has not changed over the last 50 years. Francka and Lindsey (1995) and Laurie (1994) suggested that the 1980s brought back some serious

questioning in regards to school restructuring their daily schedule to find more effective uses of the existing school day. Francka and Lindsey (1995) further suggested that the limitations of the traditional 40-50 minute period are numerous. Short time blocks do not allow students to engage in problem-solving skills or develop a higher level of thinking (Raebeck & Beegle, 1988), "to probe and, integrate and conceptualize knowledge" (Ryan, 1996, p. 65), provide for student-directed activities (Shortt & Thayer, 1995), or "allow students to concentrate on their work for longer stretches without being interrupted by a bell" (Sommerfeld, 1996, p. 9). Short time blocks seem to hurt students academically because they have "too many courses, homework assignments, or tests to juggle" (Francka & Lindsey, 1995, p. 21). According to O'Neil (1995), staff members found the shorter traditional class periods unproductive because "with 125 or more students to teach, teachers struggle to learn pupils' strengths and weaknesses and to provide individual attention" (p. 11). Cooper (1996) and Day (1995) contended that this is especially noticeable in the areas of the science where a "hurry up" atmosphere is promoted during lab activities and where limited student-teacher interaction is provided in the courses.

Block Scheduling

Block scheduling, which is referred to as a four-by-four plan, concentrated curriculum, semester plan, etc., is a reorganization of school time. Block scheduling is an alternative to the traditional six or seven period day and is being used as an educational reform across the United States (Bryant & Claxton, 1996). In exploring the flexibility of block scheduling, decision-makers have adapted various implementation strategies to best

suit the needs of administrators, staff members, and students. Researchers (Canady & Rettig, 1993; Carroll, 1990; Francka & Lindsey, 1995; Geismar & Pullease, 1996; Jones, 1995) have recommended different styles of concentrated curriculum plans. "The scheduling options multiply when schools combine different block modifications with different ways of dividing up the school year" (Jones, 1995, p. 17).

The 75-75-30 Plan

This plan is designed to meet the need of ninth-grade students having difficulty with the transition from middle school to high school. According to Canady and Rettig (1993), the school year is divided up into three blocks. There are two 75-day terms (fall and winter) and a 30-day spring term. Typically, students would take three longer block periods of up to 120 minutes and a 48-minute period that would be attended throughout the school year.

Four-Block Scheduling

Four-block scheduling is also referred to as 4x4 block and accelerated block. In four-block scheduling, the general accepted concept is that students enroll in four courses that last anywhere from 85-100 minutes (Francka & Lindsey, 1995; Jones, 1995). Students take four classes (or four credits) for the semester (two terms), which allows them to receive eight credits by the end of the school year. In some schools, this could mean that students have the opportunity to take up to four additional courses during their high school career.

Alternating Day Scheduling

The alternating day scheduling model is often called A/B or eight-block because students attend eight blocks of classes over a period of two days (Jones, 1995, p. 17). Classes are similar to that of four-block, but classes meet every other day, four on day 'A' and four on day 'B' (Sommerfeld, 1996, p. 9). Students may enroll in eight classes each semester and at the end of the semester, students receive the standard $\frac{1}{2}$ credit in each course for a total of four credits each semester (Francka & Lindsey, 1995, p. 23).

Modified Block

The modified block allows schools to vary in some degree between block and traditional scheduling. At some schools one may see a block method four days a week, and the "traditional seven or eight period day that allows electives on Fridays" (Jones, 1995, p. 17).

Trimester Model

Under this plan, "the school year is divided into three 12-week terms. All academic and most elective courses meet for a 125-minute block daily for the trimester" (Geismar & Pultease, 1996, p. 7). Some electives may meet for shorter daily sessions throughout the entire school year.

Advantages

In order to prepare students effectively for productive futures, educational institutions need to continue to respond to the changes in society. Edwards (1993) believed that the development and advances of our world's global economy has made education "the most challenging aspect of this new age to successfully educate every

student for a meaningful future" (p. 17). The power of administrators to become innovative schedulers allows them to restructure elements of educational reform. According to Cawelti (1995), in its simplest form, "restructuring means redesigning that various components of a system to produce better results" (p. 16).

Students

A variety of advantages for students exist with the implementation of block scheduling. According to Edwards (1993), "fewer classes permit students to devote more time and energy to mastering these subjects without adding to their total study time" (p. 78). With fewer courses students will have the opportunity to be involved in more in-depth study of the material. This in-depth study will greatly facilitate the student's ability to comprehend, process, apply, and relate the material. The block schedule will allow students to accelerate through courses within a particular discipline, to retake classes in which they have struggled or failed in the same year, or to catch up if they have academically fallen behind in specific discipline areas. In essence, it helps students learn at their own speed (p. 3-4). Block scheduling "provides the potential for meeting the needs of various learners and for monitoring student learning (Ryan, 1996, p. 64). Although students are still responsible for mastering the material associated with each class, carrying eight classes no longer exists under the concentrated curriculum format.

Teachers

One major advantage for teachers is the reduction of student load per term (Bruckner, 1996; Edwards, 1993). "With the elimination of two teaching periods, teachers work with three-fifths as many students, and have no more than three

preparations" (Edwards, 1993, p. 79). Although a block scheduling plan requires that teachers adjust some of their instructional strategies and teaching behavior it allows them to have more planning time each day (90 minutes as opposed to 55 minutes) (Shortt & Thayer, 1995).

School Climate

Buckman et al. (1995), defined school climate as "the enduring characteristics that describes the psychological character of a school, distinguishes it from other schools, and influence the behavior of teachers and students and the psychological 'feel' that teachers and students have for the school" (p. 13). According to Shortt and Thayer (1999), block scheduling not only improves school climate, but it also increases opportunities for learning and levels of achievement. Among the factors that create a climate that can facilitate or detract from student learning are student and staff attitudes, the learning environment, building safety and security, expectations for achievement and behavior, and the mode of communication. A positive school climate often makes the difference in improving learning opportunities, while gaining closer ties between faculty and students.

A noticeable advantage restructuring has on the school climate is a slower atmosphere within the school facilities. O'Neil (1995) suggested that the traditional high school schedule promotes students to rush from class to class in a 5 minute passing time, thus contributing to a stressful climate. Under a block schedule plan, students are given up to 15 minutes passing time. "One result of the block schedule has been a calmer place, fewer fights, less vandalism - just a slowed down pace" (O'Neil, 1995, p. 14).

Disadvantages

According to Jones (1995), "block scheduling is so new that researchers haven't had time to measure its long term success, and the early results are mixed" (p. 16). It is reasonable to justify that parents have become apprehensive about changing something that has been solidly established in the educational field (i.e., traditional scheduling). Czaja and McGee (1995) warn those who are ready to change from the block scheduling to the traditional scheduling to take time to reflect and dialogue to ensure that it fits the needs of all students, reflects the values of their community and uses the resources available (p. 37). Francka and Lindsey (1995) further suggested that unless there was some consensus reached by the staff, major restructuring of the traditional schedule should not be undertaken.

Extensive student absences are probably the biggest flaw associated with block scheduling that is yet to be corrected (Czaja & McGee, 1995; Francka & Lindsey, 1995). Kissler (1995) believed that "any significant illness can lead to such a great loss of course material that a student may find it impossible to catch up" (p. 10). A staff member who is ill, or takes professional leave, may also add to the problems associated with extensive absences. According to Czaja and McGee (1995), the in-depth teaching that is suppose to occur would be significantly hampered, while the one-on-one relationships between teachers and students could be damaged. Brett (1996) stated that the "substitute teacher must be prepared to teach a substantially more difficult and significant lesson" (p. 78-79).

Researchers (Buckman et al., 1995; Edwards, 1993; Salvaterra & Adams, 1996) have shown that students' academic performances have increased with the

implementation of intensive scheduling and some schools have actually seen the high school's failure rate increase (Jones, 1995). Although extended classes may offer the student increased contact with teacher, slower students might see the content as being presented at double speed through the block term (Brett, 1996). According to Alam and Seick (1994), "the primary concern expressed by parents was related to time lag between student's successive exposure to content areas" (p. 732). It is reasonable to anticipate that students may see extensive breaks between discipline areas, thus wondering if they will be able to pick up where they left off. Claxton and Bryant (1996) expressed that instructors of foreign languages, physical education, band, etc., worry about those significant breaks because of the need for continuity within those content areas.

Student Attitudes

It has been concluded by researchers that achievement and attitude scores were not differentially affected by the block or traditional scheduled programs (Bowman, 1998). According to the authors of the study (Van Mondfrans, Schott, & French, 1972), the only ones affected by this were high school seniors. The authors' explanation for this was that freshmen, sophomores, and juniors do not have the maturity to profit from learning requirements associated with block scheduling: self-control, self-direction, and self-motivation.

"The attitude of students toward physical education may vary, but overall the majority (usually 80% or more) of students enjoy the subject" (Carlson, 1995). Unlike many subjects taught in school, physical education often includes a substantial component of active play, which, in its individual and social forms, holds a powerful

attraction for young people. Considering these factors, research suggests that up to 20% of children not enjoying the subject is disturbing. There are indications that a growing percentage of students find physical education less relevant and less enjoyable. "The students feelings and actions were identified as being alienated from physical education" (Carlson, 1995, p. 467). Alienation is defined as the persistent negative feelings some students associate with actively aversive or insufficiently meaningful situations in the gymnasium setting.

According to the literature, several factors may contribute to alienation from physical education. For example, boredom, repetition, and lack of meaningful work have been cited as being instrumental in producing dislike of the subject. Studies suggest that the competitive class environment results in some students disliking physical education or some aspects of it. Most of these alienated students would rather be anywhere other than physical education class. "Their noninvolvement and lack of interest are often sources of frustration to teachers who frequently expend disproportional amounts of time to involve these alienated students" (Carlson, 1995, p. 468).

Research on adolescents' with negative attitudes toward physical education has been limited. "Students did not regard physical education in the same way as they do many of their other classes such as math or geography" (Morey & Karp, 1998, p. 89). Students' attitudes were often linked to their expectation of the subject. The students expressed that they found physical education as a break from their other classes and not as important as other subjects. Morey and Karp (1998) found that "students needed to be positively socialized into physical education to have a positive attitude towards it"

(p. 89). Students often base their attitude from influences around them. "In early adolescence they are primarily influenced by their parents but as they mature during adolescence they tend to be more influenced by teachers, coaches, and peers." (Morey and Karp, 1998, p. 89). Figley (1985) states that teachers influence their students' attitudes toward the subject they teach. Some students have demonstrated that environment can affect attitude formation.

Many factors seem to influence attitude formation (Morey & Karp, 1998). Langer and Warheit (1992) provide an inclusive framework of how attitudes are formed. Their model incorporates a myriad of biopsychosocial factors (biological, psychological, and social factors) that influence attitude formation. These biopsychosocial factors interact to determine the knowledge and beliefs that each individual student has. They believe that there is no set prescription for attitude formation as each individual will have their own unique experiences based on the interaction of their biopsychosocial factors and their unique perception of what different events mean to them (Morey & Karp, 1998).

"The interest in this research area has stemmed from the idea that if one's attitudes are positive toward physical activity, sport or exercise, individuals then would be predisposed favorably toward participation in active physical type programs throughout one's life time" (Mowatt et al., 1988, p. 103). On the other hand, if attitudes are unfavorable, then the hope is that strategies and changes could be instigated in programs for purposes of influencing positive changes in attitude. "A number of studies in physical education demonstrated that individuals with positive attitudes toward

exercise generally exhibit more frequent and/or more intense exercise behaviors than persons having less positive attitudes toward exercise” (Mowatt et al., 1988, p. 103).

In a recent study, Carlson (1994) examined high school students’ attitudes toward physical education, factors that influenced these attitudes, and the link between behavior and attitude. Factors found to impact the development of these attitudes were cultural (gender, idolizing sport figures, and body and mind distinctions), societal (family, media, sport and physical education experiences, skill level and perception of fitness, and peers), and school (teachers). Luke and Sinclair (1991) examined potential determinants of adolescent attitudes toward physical education. They identified five main factors that can be controlled by the teacher: curriculum content, teacher behavior, class atmosphere, student self-perceptions, and facilities.

Tannehill et al. (1994) noted that “90% of respondents believed physical education to be relevant and useful later in life and that there was a need for physical education in school curricula” (p. 406). Data from a study examining parental views of physical education from a multicultural perspective revealed similar findings. Respondents believed that physical education should be included in school curriculum, should emphasize physical fitness, and should contribute to students’ confidence and self-esteem through membership, cooperation, and teamwork. Furthermore, the evidence suggests that the more actively involved parents are with teachers and administrators, the more favorable parental attitudes become toward the quality of their children’s education (Tannehill et al., 1994).

Physical Activity

“In the U.S., the prevalence of vigorous or frequent physical activity of the adult population is estimated at 10%” (Vanden Auweele, Rzewnicki, & Van Mele, 1997, p. 151). In the context of the public health issue one could argue that since moderate leisure-time and occupational activities are associated with increased health and fitness, figures concerning organized involvement in vigorous physical activity during leisure time are less relevant than figures regarding the other end of the spectrum (Vanden Auweele et al., 1997). “Some reports suggest that leisure-time physical activity has increased over the past 20 years, however, most researchers estimate the proportion of sedentary individuals at between 30 and 60% of the general population” (p. 151). If the health benefits of physical activity were not so widely understood by both professionals and the public, there would be no reason to treat these figures with alarm, or to examine the reasoning behind them. “Many well-documented studies show that exercise has clear benefits, both physiological and psychological, for middle-aged to older individuals” (Vanden Auweele et al., 1997, p. 152).

Many recent impressive studies found that aerobic programs are associated with higher levels of health and well-being. Carlson (1982) has shown other health and physiological benefits of regular physical exercise and activity. Some physiological benefits include: help to stay lean and avoid obesity, aid digestion and elimination, improve posture, improve the threshold and tolerance for pain, stabilize and lower systolic and diastolic blood pressure, stimulate bone marrow by increasing resistance to illness, aid blood circulation and increase the number of red corpuscles, and increase

physical endurance (Akande, Van Wyk, & Osagie, 2000). There are also psychological gains of regular physical activity. Psychological benefits are as follows: helps eliminate undesirable behaviors; improves sharpness of the five senses; a mental release; relieves depression; fun; helps vitamins fight off disease; acts as an energy source that motivates a person to action; improves self-esteem and self-regard; improves self-confidence, self-concept, and assertiveness; and improves reaction time and gives greater ability to concentrate (Akande et al., 2000). To get the full health and psychological benefits of nutrition and exercise or sport, people need to continue doing healthful levels of physical activities or being very active in their normal lifestyles throughout their lives.

The new recommendation from the U.S. Centers for Disease Control and Prevention (CDC) and the American College of Sports Medicine (ACSM) concisely stated that “every U.S. adult should accumulate 30 minutes or more of moderate intensity physical activity on most, preferably all, days of the week” (Corbin & Pangrazi, 1996, p. 33). Researchers showed that more than 40 years ago moderately active people had lower rates of heart disease than sedentary people. By the late 1980s, it was clear that moderate physical activity was beneficial in reducing the risk of heart disease (Corbin & Pangrazi, 1996). “In recent years, evidence has also suggested that moderate physical activity can reduce the risk of other diseases, including diabetes, obesity, high blood pressure, osteoporosis, and some form of cancers, and can also improve the quality of life” (p. 34). As professionals, we use the activity recommendations to give our students and client’s guidelines to follow. However, guidelines should not be so rigid that they

prevent us from meeting the needs of those who may need help the most- the inactive (Corbin & Pangrazi, 1996).

People who are already active can achieve greater benefits by increasing either the duration or intensity of activity. "The panel purposefully called for 'physical activity' rather than 'exercise' because most people can incorporate moderate intensity activities into their daily routines" (p. 126). The recommended dose of exercise is an accumulated 30 minutes of moderate intensity activity such as brisk walking, gardening, cycling, or swimming. The recommendation may not, however, be specific enough for people interested in enhancing their activity pattern (Powell & Pratt, 1996). Studies suggest that increasing one's activity reduces the risk of coronary heart disease even if the recommended dose is not achieved. Researchers are learning more about what makes individuals decide to be more active and are refining guidelines to help practitioners shape and target their counseling. People are more likely to stick with an activity that they enjoy, and activities of moderate and vigorous intensity offer a wider range of enjoyable options than vigorous activity alone. "As a result, an active life will be less miserable not only because it is healthier but also because the activities are fun" (Powell & Pratt, 1996, p. 126).

In order for more adults to adopt and maintain exercise, it is necessary for them to understand the exercise involvement. "Most exercise literature to date has referred to the exercise involvement process as an 'all-or-none' phenomenon" (Biddle & Smith, 1991, p. 39). Adopting exercise is likely to be related to beliefs about health benefits, although the motivation behind continuing this involvement is more likely to be related to

feeling of well being and enjoyment. According to Biddle and Smith (1991), adopting exercise routines may also be related to the individuals perceived chances of success in such settings. "The mental health benefits of exercise, such as feelings of relaxation, anxiety reduction, and mood elevation, are likely to strongly influence continued involvement" (p. 40). A person's attitude toward exercise will best predict his or her intension to participate. Informing adults of the benefits of activity can influence these attitudes. "Positive changes in motivating adults toward exercise are possible with careful planning and appropriate educational and behavioral change programs" (p. 43). The adoption and adherence rate will then be sufficient enough to give the majority of adult's health and well-being through exercise and physical activity (Biddle & Smith, 1991).

Conclusion

Prior to the educational concept of block scheduling, teachers sometimes found themselves under immense pressure to accomplish the impossible in one-hour time frames. Students look at small segments of instruction as unrelated fragments with little or no continuity between what is learned in one class, with that in another. Schools that have implemented the restructuring process of block scheduling properly, have found numerous advantages over the traditional scheduling process. Block scheduling is said to enhance student attitudes, raise student achievement, increase the number of concepts taught, and result in fewer classroom management problems. Like many educational reform movements of the past, the willingness of those so closely associated with the change, that is, teachers, will determine the fate of the block scheduling movement.

Teachers and administrators must not be resistant to change curriculum to meet the needs and interests of students. Although the two forms of scheduling may not differentially affect student attitudes, block scheduling allows more flexibility and more time for individualized instruction. Theoretically, block scheduling impacts the quality/focus of instruction and improves student achievement. Block scheduling plays an active role in changing curriculum and instructional approaches as teachers adapt to maintain student interest and attention over longer periods of time. The restructured schedule also asserts an improved school climate in which teachers and students are more relaxed due to improved relations and a moderately paced day.

It is important to determine that students will enjoy their physical education classes if we as educators are to encourage continued participation in activity throughout life. Block scheduling allows students more time to dress in and out for class as well as to shower after activity. It also allows more time for class, which means more physical fitness can be covered during a single class period. Physical activity can improve flexibility, build muscular strength, and increase endurance. The mental health benefits of exercise, such as feelings of relaxation, anxiety reduction, and mood elevations, are likely to strongly influence continued involvement.

CHAPTER III

METHODS AND PROCEDURES

Introduction

This study was conducted to compare students' attitudes toward physical activity in a traditional and block scheduled physical education curriculum in four Wisconsin High Schools. The methods and procedures of this study are outlined in this chapter under the following headings: subject selection, study design, questionnaire, and statistical analysis.

Subject Selection

Subjects surveyed were Wisconsin public high school students ($N = 487$) enrolled in physical education class and were a part of either the block ($n = 174$) or traditional scheduled program ($n = 313$). All individuals who were enrolled in physical education during the spring semester of 2000-2001 school year are represented in the study. The criteria for selecting these individuals to participate were to find two school districts from each of the programs interested in conducting this study and finding out the results. The two schools chosen for the block schedule were Holmen High School and Viroqua High School and the two schools chosen for the traditional schedule were Sparta High School and Tomah High School. The researcher received permission from the principal and the cooperating physical education teacher of each school district. The participants had the choice if they wanted to participate in this study. If they chose not to

it did not affect their grade at all. The size of school population was not taken into consideration.

Study Design

A questionnaire relating to student attitudes toward physical activity was delivered by the researcher to the four schools involved in the study. The questionnaire was delivered in the month of March to two schools on a traditional scheduled program and two schools on a block scheduled program. An informed consent form (see Appendix A) was sent home with all subjects to have the parents read and sign for their child to participate in the study. The researcher delivered this form and allowed two weeks for subjects to return the signed informed consent form. The researcher asked the physical education teacher of each school to collect the informed consent forms and place in an envelope and record who has returned the form. The researcher then allowed only those subjects who had returned their forms to participate in the study.

The researcher explained the questionnaire (see Appendix B) to the subjects and answered any questions they may have had. The researcher then had the subjects fill out the questionnaire and when finished place in an envelope for the researcher to collect. The researcher then took the questionnaires with her and placed them in a secure place at Holmen High School where only the researcher saw the results of each questionnaire.

Questionnaire

The purpose of this study was to determine the impact of traditional versus block scheduling of physical education on high school students. The purpose of this project was to examine current attitudes about student experiences in physical education, choices

offered in the physical education curriculum, and the expectations students had for their participation in physical activity. The questionnaire included demographic information, questions to be answered on a 5-point Likert scale, and open-ended questions.

The design of the survey was based on a review of the literature that included information about students likes and dislikes, choice and attitudes, and perceptions toward physical education (Browne, 1992; Carlson, 1995; Chen, 1996; Cockerill & Hardy, 1987; Tjeerdsma, Rink, & Graham, 1996). Content and face validity of the questionnaire was determined in a school not involved in the study with students that were currently enrolled in physical education. The questions were then edited based on the pilot. Results from the Likert scale questions on the survey are reported using descriptive statistics. Responses to the open-ended questions were analyzed using constant comparative analysis. The analysis was done to determine what categories emerged in the responses.

The students were given the questionnaire (Stanne, 1999) on attitudes in physical education class and were asked to answer the questions to the best of their knowledge. The original Stanne (1999) instrument was used in the study, but the researcher modified the open-ended questions to relate to the study. The researcher dropped three open-ended questions from the original instrument and added two questions that related to block and traditional scheduling.

The survey was designed into three sections. In the first section, six variables were obtained: teachers name (which will be kept confidential), class period, school,

gender, grade level, and whether or not the student has been in the school district since 6th grade.

The second section of the survey consisted of twenty-six questions. Those questions dealt with students' attitudes toward physical education in either a block or traditional schedule program. Students were instructed to approximate their perception of the statement by circling the corresponding item. The items were rated using the following 5-point Likert scale:

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

The third section of the survey included eight open-ended questions where students were asked to provide additional comments regarding their experiences in physical education, likes and dislikes of physical education, and type of scheduling involved in.

Statistical Analysis

The two-way ANOVA test was used to analyze the data. Analysis of variance was used to compare the standard deviation of the responses from the questionnaire. This determined if there were significant differences in students' attitudes toward physical activity in a traditional or block scheduled program. A content analysis was used for the open-ended questions of the survey.

CHAPTER IV
RESULTS AND DISCUSSION

Introduction

The purpose of this study was to compare students' attitudes toward physical activity in a traditional and block scheduled physical education curriculum in four Wisconsin High Schools. Four hundred and eighty-seven subjects participated in this study. Three hundred and thirteen subjects were involved in the traditional scheduling program either from Sparta High School in Sparta, Wisconsin or Tomah High School in Tomah, Wisconsin. One hundred and seventy-four subjects were involved in the block scheduling program either from Holmen High School in Holmen, Wisconsin or Viroqua High School in Viroqua, Wisconsin. This chapter contains descriptive statistics, tests of hypothesis, and a discussion of the results.

Subject Descriptive Statistics

Table 1 contains descriptive statistics related to the analysis of variance for the average scores for who liked physical education in sixth grade (Question 1). All subjects were high school students male ($n = 253$) or female ($n = 234$) and involved in either the block ($n = 174$) or traditional ($n = 313$) scheduling program. A two-way ANOVA was used to determine if significant differences existed between the groups, genders, or both. No significant difference was found between the traditional and block group ($p = .628$). The block group had a mean of 3.671 and a standard error of .080. The traditional group had a mean of 3.719 and a standard error of .059.

A significant difference was found between genders ($p = .000$). Males had a mean of 3.994 and a standard error of .069. Females had a mean of 3.395 and a standard error of .071.

There was no significant interaction ($p = .544$). Males in the block group had a mean of 4.000 and a standard error of .111. Females in the block group had a mean of 3.341 and a standard error of .114. Males in the traditional group had a mean of 3.988 and a standard error of .082. Females in the traditional group had a mean of 3.450 and a standard error of .086.

Table 1: ANOVA for the Average Score for Who Liked Physical Education in Sixth Grade (Question 1)

Source	df	F	p-value
Group	1	0.235	0.628
Gender	1	36.327	0.000
Group * Gender	1	0.369	0.544

Table 2 contains descriptive statistics related to the analysis of variance for the average scores for who liked physical education in seventh grade (Question 2). No significant difference was found between the block and traditional group ($p = .293$). The block group had a mean of 3.618 and a standard error of .080. The traditional group had a mean of 3.723 and a standard error of .060.

A significant difference was found between genders ($p = .000$). Males had a mean of 4.013 and a standard error of .070. Females had a mean of 3.328 and a standard error of .072.

There was no significant interaction ($p = .567$). Males in the block group had a mean of 3.989 and a standard error of .112. Females in the block group had a mean of 3.247 and a standard error of .115. Males in the traditional group had a mean of 4.037 and a standard error of .082. Females in the traditional group had a mean of 3.409 and a standard error of .087.

Table 2: ANOVA for the Average Score for Who Liked Physical Education in Seventh Grade (Question 2)

Source	df	F	p-value
Group	1	1.106	0.293
Gender	1	46.926	0.000
Group * Gender	1	0.328	0.567

Table 3 shows the analysis of variance for the average scores for who liked physical education in eighth grade (Question 3). A significant difference was found between the block and traditional group ($p = .027$). The block group had a mean of 3.554 and a standard error of .081. The traditional group had a mean of 3.778 and a standard error of .060.

A significant difference was found between genders ($p = .000$). Males had a mean of 4.042 and a standard error of .070. Females had a mean of 3.290 and a standard error of .073.

There was no significant interaction ($p = .786$). Males in the block group had a mean of 3.944 and a standard error of .113. Females in the block group had a mean of 3.165 and a standard error of .116. Males in the traditional group had a mean of 4.140 and a standard error of .083. Females in the traditional group had a mean of 3.416 and a standard error of .087.

Table 3: ANOVA for the Average Score for Who Liked Physical Education in Eighth Grade (Question 3)

Source	df	F	p-value
Group	1	5.600	0.027
Gender	1	63.105	0.000
Group * Gender	1	0.074	0.786

Table 4 shows the analysis of variance for the average scores for who was looking forward to their high school physical education experience (Question 4). No significant difference was found between the block and traditional group ($p = .835$). The block group had a mean score of 3.317 and a standard error of .092. The traditional group had a mean score of 3.293 and a standard error of .068.

A significant difference was found between genders ($p = .000$). Males had a mean of 3.792 and a standard error of .080. Females had a mean 2.817 and a standard error of .082.

There was no significant interaction ($p = .912$). Males in the block group had a mean of 3.798 and a standard error of .128. Females in the block group had a mean of 2.835 and a standard error of .131. Males in the traditional group had a mean of 3.787 and a standard error of .095. Females in the traditional group had a mean of 2.799 and a standard error of .099.

Table 4: ANOVA for the Average Score for Who was Looking Forward to Their High School Physical Education Experience (Question 4)

Source	df	F	p-value
Group	1	0.044	0.835
Gender	1	72.516	0.000
Group * Gender	1	0.012	0.912

Table 5 contains descriptive statistics on the analysis of variance for the average scores for all the questions related to middle school (Questions 5-15). No significant difference was found between the block and traditional group ($p = .388$). The block group had a mean of 3.721 and a standard error of .056. The traditional group had a mean of 3.660 and a standard error .042.

A significant difference was found between genders ($p = .000$). Males had a mean of 3.844 and a standard error of .049. Females had a mean of 3.537 and a standard error of .050.

There was no significant interaction ($p = .293$). Males in the block group had a mean of 3.838 and a standard error of .079. Females in the block group had a mean of 3.604 and a standard error of .080. Males in the traditional group had a mean of 3.851 and a standard error of .058. Females in the traditional group had a mean of 3.470 and a standard error of .061.

Table 5: ANOVA for the Average Scores for the Questions Related to Middle School (Questions 5-15)

Source	df	F	p-value
Group	1	0.746	0.388
Gender	1	19.167	0.000
Group * Gender	1	1.109	0.293

Table 6 contains descriptive statistics on the analysis of variance for the average scores for all the questions related to high school (Questions 16-26). No significant difference was found between the block and traditional group ($p = .916$). The block group had a mean of 3.827 and a standard error of .057. The traditional group had a mean of 3.835 and a standard error of .043.

A significant difference was found between genders ($p = .001$). Males had a mean of 3.952 and a standard error of .050. Females had a mean of 3.709 and a standard error of .051.

There was no significant interaction ($p = .429$). Males in the block group had a mean of 3.920 and a standard error of .080. Females in the block group had a mean of 3.734 and a standard error of .082. Males in the traditional group had a mean of 3.984 and a standard error of .059. Females in the traditional group had a mean of 3.685 and a standard error of .062.

Table 6: ANOVA for the Average Scores for the Questions Related to High School (Questions 16-26)

Source	df	F	p-value
Group	1	0.011	0.916
Gender	1	11.570	0.001
Group * Gender	1	0.627	0.429

Upon analysis of this study, there were no significant difference based on whether the students were involved in a block or traditional scheduling program, nor was there an interaction between groups and gender. However, there were significant differences between male and female responses.

Open-Ended Questions

Students were asked to provide comments regarding their perceptions of physical education in relation to the type of scheduling they experienced. A content analysis was used for the open-ended questions and the findings from the questions were categorized (see Tables 7-20). In Tables 11-16 about 50% of the students responded to these questions so the numbers are lower than expected.

Students involved in a block scheduling program were asked to "Think about any of the experiences you have had in past physical education classes. What have you liked the most about physical education and why" (Question 27)? Fifty-three (29%) identified a specific sport, forty-seven (26%) said they liked being with their friends, twenty-four (13%) liked the health and fitness aspect, sixteen (9%) liked the break from the classroom, while fifteen (8%) liked that they got to choose the classes they wanted to take. Nine (5%) liked that physical education involved no homework, six (3%) like that they got to go outside for class and also the social interaction that physical education provided. Four (2%) liked the competition that physical education provided. Four (2%) also stated that they like nothing about physical education (Table 7).

Table 7: Categories for Responses to Survey Question 27 during a Block Scheduling Program

Categories	Number of Responses	Percentage
Identified a specific sport	53	29.0
Friends	47	26.0
Health and fitness	24	13.0
Break from classroom	16	9.0
Choose classes	15	8.0
No homework	9	5.0
Outside	6	3.0
Social interaction	6	3.0
Competition	4	2.0
Nothing don't like P.E.	4	2.0
Total	184	100.0

Students involved in a traditional scheduling program were asked the same question (Table 8). Eighty (27%) identified a specific sport, forty-one (14%) said they liked their teacher, while thirty-nine (13%) liked having their friends in the same class. Twenty-nine (10%) stated that physical education is fun, twenty-eight (9%) liked the variety of activities they were involved in, while twenty-six (8%) liked the health and fitness aspect. Twenty (7%) liked the competitiveness, fifteen (5%) liked the break from classes, twelve (4%) liked that they got to learn new activities, while eight (3%) liked that there was no homework involved in physical education. In comparing past physical education classes in a block and traditional scheduled program it shows that both

scheduling programs identified a specific sport as the most liked in their physical education class.

Table 8: Categories for Responses to Survey Question 27 during a Traditional Scheduling Program

Categories	Number of Responses	Percentage
Identified a specific sport	80	27.0
Teacher	41	14.0
Friends	39	13.0
Fun	29	10.0
Variety of activities	28	9.0
Health and fitness	26	8.0
Too competitive	20	7.0
Break from classes	15	5.0
Learn new activities	12	4.0
No homework	8	3.0
Total	298	100.0

Students involved in a block scheduling program were asked to “Think about any of the experiences you have had in past physical education classes. What have you disliked the most about physical education and why” (Question 28)? Thirty-seven (30%) disliked the health and fitness unit, twenty-one (17%) disliked an activity or specific skill, fifteen (12%) stated that the attitude of peers was discouraging, while twelve (10%) dislike test-taking in physical education. Ten (8%) disliked the conditions that they were involved in during class, eight (6.5%) disliked wearing a uniform and also thought

physical education was too competitive. Seven (6%) disliked that the teachers got to decide on the activities, three (2%) thought that some activities were too repetitive, while three (2%) also disliked the grading policy (Table 9).

Table 9: Categories for Responses to Survey Question 28 during a Block Scheduling Program

Categories	Number of Responses	Percentage
Health and fitness	37	30.0
Activity or specific skill	21	17.0
Attitude of peers	15	12.0
Testing	12	10.0
Conditions of/in the class	10	8.0
Wearing required uniform	8	6.5
Too competitive	8	6.5
Teachers decide on activities	7	6.0
Activities repetitive	3	2.0
Grading policy	3	2.0
Total	124	100.0

Students involved in a traditional scheduling program were asked the same question (Table 10). Thirty-eight (17%) disliked the health and fitness aspect, thirty-three (15%) disliked the attitude of their peers, while twenty-nine (13%) thought physical education was too competitive. Twenty-six (12.7%) disliked changing, twenty-three (10.3%) thought some activities were too repetitive, while twenty-one (9%) disliked the basic skills of sport units. Eighteen (8%) disliked that physical education involved

testing and also thought class time was not long enough. Ten (4%) disliked the grading policy and seven (3%) thought the units were too long. In comparing block and traditional scheduling programs it showed that both disliked health and fitness as a part of their past physical education class. The number one reason they did not pick health and fitness is because they did not like it.

Table 10: Categories for Responses to Survey Question 28 during a Traditional Scheduling Program

Categories	Number of Responses	Percentage
Health and Fitness	38	17.0
Attitude of peers	33	15.0
Too competitive	29	13.0
Changing	26	12.7
Repetitive activities	23	10.3
Basic skills of sport	21	9.0
Testing	18	8.0
Class time not long enough	18	8.0
Grading	10	4.0
Units too long	7	3.0
Total	223	100.0

Students involved in a block scheduling program were asked to "List three activities that you would like to take in physical education and state why" (Question 29). Thirty-five (20.7%) liked the activities, twenty-three (13.6%) wanted to learn how to play the activities, while twenty (11.8%) enjoyed health and fitness. Eighteen (10.7%) wanted

to play and also felt competent in the activities. Sixteen (9.5%) thought that the activities were easy, fifteen (8.9%) liked the competitiveness, while twelve (7.1%) liked individual or team sports. Seven (4%) liked the current program and five (3%) liked activities that were new (Table 11).

Table 11: Categories for Responses to Survey Question 29 during a Block Scheduling Program

Categories	Number of Responses	Percentage
Like the activity	35	20.7
Want to learn	23	13.6
Enjoy health and fitness	20	11.8
Want to play	18	10.7
Feels competent in activity	18	10.7
Activity is easy	16	9.5
Competitive	15	8.9
Sport type (individual or team)	12	7.1
Like current program	7	4.0
Activity is novel	5	3.0
Total	169	100.0

Students involved in a block scheduling program were asked to "List three activities you do not want to take in physical education and state why" (Question 30). Forty-one (25.2%) did not like the activity, thirty-three (20.2%) did not like the conditions of the skill or class, and twenty-two (13.5%) had a lack of skill or competence for the activities. Eighteen (11%) did not want to learn the activity, the skills involved, or

the fitness acquisition. Fifteen (9.2%) did not like competing with boys, twelve (7.4%) did not like the sport type (team), and nine (5.5%) only wanted to watch during class. Seven (4%) thought the activity was too long, three (2%) had a lack of cooperation skills, and three (2%) identified nothing (Table 12). In comparing why students wanted or did not want to take specific activities during a block scheduling program, the results show that about one fifth of the students wanted to take an activity because they liked it and about one fourth of the students did not want to take specific activities because they did not like the activity.

Table 12: Categories for Responses to Survey Question 30 during a Block Scheduling Program

Categories	Number of Responses	Percentage
Don't like it	41	25.2
Conditions of the skill or class (running, tests)	33	20.2
Lack of skill or competence	22	13.5
No learning, skill, fitness acquisition	18	11.0
Competing with boys	15	9.2
Sport type (team)	12	7.4
Only want to watch	9	5.5
Activity too long	7	4.0
Lack of cooperation skills	3	2.0
Nothing identified	3	2.0
Total	163	100.0

Students involved in a block scheduling program listed the following activities that they like to take during physical education class (Table 13). Forty (23.7%) wanted bowling to remain offered, thirty-five (20.7%) badminton, twenty (11.8%) basketball, and nineteen (11.2%) tennis. Fifteen (8.9%) would like to see floor hockey continue to be offered, twelve (7.1%) soccer, and ten (5.9%) softball. Eight (4.7%) wanted volleyball, five (3%) wanted football, and five (3%) wanted weight training to remain offered during physical education class.

Students involved in a block scheduling program listed the following activities they did not want offered during physical education class (Table 13). Forty-four (26%) did not want track and field, thirty-seven (21.9%) did not want dance, and twenty-five (14.8%) did not want basketball. Seventeen (10%) did not like softball, fifteen (8.9%) swimming, twelve (7.1%) football, and eight (4.7%) soccer. Six (3.6%) did not want volleyball, three (1.8%) aerobics, and two (1.2%) archery. When comparing what students want and do not want offered in physical education during a block scheduling program about one fourth of the students wanted bowling offered and did not want track and field offered.

Table 13: Activities Participants Want or Do Not Want Offered in Physical Education during a Block Sceduling Program

Activities Wanted	Responses	Percentage	Activities Not Wanted	Responses	Percentage
Bowling	40	23.7	Track and Field	44	26.0
Badminton	35	20.7	Dance	37	21.9
Basketball	20	11.8	Basketball	25	14.8
Tennis	19	11.2	Softball	17	10.0
Floor Hockey	15	8.9	Swimming	15	8.9
Soccer	12	7.1	Football	12	7.1
Softball	10	5.9	Soccer	8	4.7
Volleyball	8	4.7	Volleyball	6	3.6
Football	5	3.0	Aerobics	3	1.8
Weight Training	5	3.0	Archery	2	1.2
Total	169	100.0		169	100.0

Students involved in a traditional scheduling program were asked to "List three activities that you would like to take in physical education and state why" (Question 29). Forty-eight (19%) liked the activity, thirty-one (12.2%) wanted to learn more about the activities, and thirty (11.8%) enjoyed health and fitness. Twenty-nine (11%) wanted to play and twenty-seven (10.6%) felt competent in playing the activities. Twenty-six (10.2%) thought the activities were easy and twenty-two (9%) liked to see new activities being offered. Nineteen (7.5%) liked the competitiveness, seventeen (6.7%) liked to play individual or team sports and five (2%) liked the current program (Table 14).

Table 14: Categories for Responses to Survey Question 29 during a Traditional Scheduling Program

Categories	Number of Responses	Percentage
Like the activity	48	19.0
Want to learn	31	12.2
Enjoy health and fitness	30	11.8
Want to play	29	11.0
Feels competent in the activity	27	10.6
Activity is easy	26	10.2
Activity is novel	22	9.0
Competitive	19	7.5
Sport type (individual or team)	17	6.7
Like current program	5	2.0
Total	254	100.0

Students involved in a traditional scheduling program were asked to “List three activities you don’t want to take in physical education and state why” (Question 30). Forty (25%) did not like the activities, twenty-four (15.3%) did not like the conditions of skill or class (running, tests), and twenty-three (14.6%) felt they lack the skill or competence. Eighteen (11%) did not want to learn the activity, the skills involved, or the fitness acquisition. Twelve (8%) did not like competing with boys, eleven (7%) sport type (team), and eleven (7%) also stated they only wanted to watch during physical education class. Nine (6%) thought the activity was too long, five (3.1%) felt they lack in cooperation skills, and four (3%) identified nothing (Table 15). In comparing why students want or do not want to take specific activities in physical education during a

traditional scheduling program about one fifth of the students wanted the activity because they like it and about one fourth of the students did not want the activity because they do not like it.

Table 15: Categories for Responses to Survey Question 30 during a Traditional Scheduling Program

Categories	Number of Responses	Percentage
Don't like it	40	25.0
Conditions of skill or class (running, tests)	24	15.3
Lack of skill or competence	23	14.6
No learning, skill, fitness acquisition	18	11.0
Competing with boys	12	8.0
Sport type (team)	11	7.0
Only want to watch	11	7.0
Activity too long	9	6.0
Lack of cooperation skills	5	3.1
Nothing identified	4	3.0
Total	157	100.0

Students involved in a traditional scheduling program listed activities that they liked to take during physical education (Table 16). Fifty-eight (19.5%) liked basketball, fifty-five (18.5%) football, fifty (17%) soccer, and forty-one (14%) tennis. Thirty-two (11%) liked floor hockey, twenty (6.7%) volleyball, eighteen (6%) softball, twelve (4%) bowling, and eight (2.3%) archery. Three (1%) would like to see rollerblading offered as a new activity.

Students involved in a traditional scheduling program listed activities they do not want offered during physical education class (Table 16). Sixty-eight (26.5%) did not want fitness offered, fifty (19.5%) basketball, forty-six (18%) football, and thirty-one (12%) soccer. Twenty-two (9%) did not like golf, fifteen (6%) tennis, eleven (4%) dance, and six (2%) floor hockey. Six (2%) did not want track and field offered and two (1%) did not want softball offered. In comparing what students wanted or did not want offered in physical education during a traditional scheduling program about one fifth wanted to see basketball offered and about one fourth did not want fitness offered.

Table 16: Activities Participants Want or Do Not Want Offered in Physical Education during a Traditional Scheduling Program

Activities Wanted	Responses	Percentage	Activities Not Wanted	Responses	Percentage
Basketball	58	19.5	Fitness	68	26.5
Football	55	18.5	Basketball	50	19.5
Soccer	50	17.0	Football	46	18.0
Tennis	41	14.0	Soccer	31	12.0
Floor Hockey	32	11.0	Golf	22	9.0
Volleyball	20	6.7	Tennis	15	6.0
Softball	18	6.0	Dance	11	4.0
Bowling	12	4.0	Floor Hockey	6	2.0
Archery	8	2.3	Track and Field	6	2.0
Rollerblading	3	1.0	Softball	2	1.0
Total	297	100.0		257	100.0

Students involved in a block scheduling program were asked, "What do you like about the type of scheduling, whether block or traditional, you are involved in"

(Question 31)? Thirty-nine (34.5%) said they liked the longer class time to work, thirty-six (31.9%) said they were able to concentrate on classes more, and twenty-one (18.6%) liked that they had less homework. Eleven (9.7%) stated that the days go by faster and six (5.3%) liked the variety of classes from which they get to choose (Table 17).

Table 17: Categories for Responses to Survey Question 31 during a Block Scheduling Program

Categories	Number of Responses	Percentage
Longer class time to work	39	34.5
Able to concentrate on classes more	36	31.9
Less homework	21	18.6
Day goes faster	11	9.7
Variety of classes to choose from	6	5.3
Total	113	100.0

Students involved in a traditional scheduling program were asked the same question (Table 18). Fifty-seven (46%) liked the short class periods, thirty (24%) said the time period was long enough for the classroom, and twenty-seven (22%) liked the variety of classes they attend each day. Nine (7%) stated that the day goes fast and one (1%) thought the time period was not long enough for physical education. In comparing what students like about the type of scheduling they are involved in, students in a block schedule liked the longer class time to work and students in a traditional schedule liked the shorter class periods.

Table 18: Categories for Responses to Survey Question 31 during a Traditional Scheduling Program

Categories	Number of Responses	Percentage
Short class periods	57	46.0
Time period long enough for classroom	30	24.0
Variety of classes to attend each day	27	22.0
Day goes fast	9	7.0
Not long enough for physical education	1	1.0
Total	124	100.0

Students involved in a block scheduling program were asked, "What do you dislike about the type of scheduling, whether block or traditional, you are involved in" (Question 32)? Eighty (76%) thought class time was too long, fifteen (14%) thought they had too much sit time during class, and seven (7%) did not like how fast the classes filled up during registration. Two (2%) thought school started too early and one (1%) thought they had too much homework assigned for classes (Table 19).

Table 19: Categories for Responses to Survey Question 32 during a Block Scheduling Program

Categories	Number of Responses	Percentage
Class time too long	80	76.0
Too much sit time	15	14.0
Classes fill up fast	7	7.0
Early in morning	2	2.0
Too much homework	1	1.0
Total	105	100.0

Students involved in a traditional scheduling program were asked the same question (Table 20). Fifty-six (44%) thought they did not have enough work time during class, twenty (15.7%) said too much play time was lost during physical education, and seventeen (13%) thought they had too much homework in classes. Fifteen (11.8%) thought class time was not long enough for physical education and seven (5.5%) thought they did not have enough time to change for physical education class. Five (4%) thought they had too many classes each day to concentrate on and five (4%) also do not like the idea of having the same classes all year. Two (2%) said that there was not enough student/teacher ratio time. In comparing what students dislike about the type of scheduling they are involved in, students in a block schedule thought class time was too long and students in a traditional schedule thought there was not enough work time during class.

Table 20: Categories for Responses to Survey Question 32 during a Traditional Scheduling Program

Categories	Number of Responses	Percentage
Not enough work time during class	56	44.0
Too much play time lost	20	15.7
Too much homework	17	13.0
Not long enough for physical education	15	11.8
Not enough time to change for P.E.	7	5.5
Too many classes each day	5	4.0
Same classes all year	5	4.0
Not enough student/teacher time	2	2.0
Total	127	100.0

Discussion

The purpose of this study was to compare students' attitudes toward physical activity in a traditional and block scheduled physical education curriculum in four Wisconsin High Schools. The results of the study indicate that there were no significant differences in students' attitudes toward physical education based on the type of scheduling. However, the results do show that there is a significant difference between male and female students in their attitudes toward physical education.

The two-way ANOVA indicated no significant difference between the students' attitudes and which scheduling program they were involved in. The data show that the type of scheduling students were involved in was not a factor when dealing with attitudes toward physical education. The data also show that there was no significant interaction

between the type of scheduling and gender. However, the data do show that gender was a factor when looking at the attitudes of students that participate in physical education.

Based on the results obtained from the analysis of variance, the hypothesis that there would be no significant difference in students' attitudes toward physical activity in a block scheduled program in comparison to a traditional scheduled program failed to be rejected. According to the statistical analysis, these results show that student attitudes vary toward physical education between males and females. These results correspond with the study done by Carlson (1995), who found that more females dislike physical education than males. Carlson (1995) referred to females as the alienated group. Often students' attitudes were found to be linked to their expectations of the subject (Carlson, 1995). Carlson (1995) stated that even though student attitudes vary, a majority (usually 80% or more) of the students enjoy the subject. Morey and Karp (1998) found that "to have a positive attitude toward physical activity students needed to be positively socialized into physical education" (p. 89). The researcher believes this could be the reason why there is a difference between male and females who participate in physical education. The researcher also believes that females tend to isolate themselves from physical education because males make fun of and do not include females during physical education class. It is apparent that students come to physical education class to have fun. Carlson (1995) also found corresponding results, that students see physical education as a break from their more important academic subjects. However, many physical education teachers have different expectations in that they want their students to learn skills and improve the effectiveness of their physical performance. This conflict in

student/teacher expectations influences the attitudes of students towards physical education because they are not receiving the content they desire.

The results conclude that students' attitudes toward physical activity have no relation to the type of scheduling program they experienced. These findings correspond with the study done by Bowman (1998), who found that there is no indication as to which aspects of the block plan contribute to the program. These findings also correspond with Calvery, Sheets, and Bell (1998), who found that the students' perceptions do not significantly favor the use of block scheduling. Many students showed an interest in the block scheduling, but majority of the students in this survey did not wish to continue with the block schedule. Bowman (1998) highlights that "actual practices, some of which may be crucial to student achievement, vary from school to school and the effects of evaluating academic achievement toward block scheduling is a difficult process" (p. 243). Professional literature in past years has shown an increase in high schools implementing block scheduling and showing whether it has a positive or negative correlation on the students' attitudes toward physical education. In the past, U.S. high schools have used a traditional schedule, but it is beginning to be overpowered by the block schedule (Cawelti, 1994).

According to the researchers results, the comparison of block and traditional scheduled programs are similar in many ways. In looking at what students have liked most about physical education and why (Question 27), students in both scheduling programs identified a specific sport. When asked what they disliked about physical education and why (Question 28), students in both scheduling programs said health and

fitness. In Question 29, the students were asked to list three activities that they would like to take in physical education and why. Both block and traditional scheduling program students said they would take the activities because they like it. In Question 30, the students were asked to list three activities they do not want to take in physical education and why. Both groups of students said they would not take the activity because they do not like it. The difference in questions 29 and 30 is seeing what the students want or do not want offered in physical education. In the block schedule, the activity the students wanted offered more was bowling and in the traditional schedule the activity was basketball. The activity the students do not want offered in a block schedule is track and field and in a traditional schedule is fitness. In Question 31, the students were asked what they liked about the type of scheduling they were involved in. The block scheduling students liked the idea of having longer class time to work, where as the traditional scheduling students liked the short class periods. The students were also asked what they disliked about the type of scheduling they were involved in (Question 32). The block scheduling students thought class time was too long and the traditional scheduling students thought there was not enough work time during class.

In comparing block and traditional scheduling programs it shows that both dislike health and fitness as a part of their past physical education class. The number one reason they do not pick health and fitness is because they do not like it. The researcher believes either the students do not like to work hard during physical education class or the program needs to be looked at and changed in getting students to like health and fitness.

As a physical educator this is an important aspect in maintaining a healthy active lifestyle.

Carlson's study (1995) was to investigate the feelings and actions of students identified as alienated from physical education. The researcher believes this may be the reason some females may not involve themselves in physical education class. The negative feelings experienced by students may show as one or several of three affective states: meaninglessness, powerlessness, and isolation. In that sense, students are said to alienate themselves from physical education because they believe they cannot control or change the situation. These circumstances may lead them to withdraw emotionally, mentally, or physically from physical education class (Carlson, 1995). According to the literature, several factors may also contribute to alienation from physical education. For example, boredom, repetition, and lack of meaningful work have been cited as being instrumental in producing dislike of the subject. Studies suggest that the competitive class environment results in some students disliking physical education or some aspects of it.

Physical education teachers ($N = 81$) in Wisconsin's public and private secondary educational institutions were surveyed to determine perceptions of the impact of block scheduling on curriculum and instruction (Trilling, 1997). The results indicated that the relationship between physical education teachers changing their instructional methods and length of class periods was significant ($p < .047$), as was the relationship between physical education teachers introducing more in-depth content and length of class periods ($p < .045$). Trilling (1997) concludes that a majority of physical education teachers'

methods of instruction change in a concentrated curriculum because it warrants it. Although it is possible to spread 45 minutes of material over a 90 minute block of instruction, teachers and students will find it quite boring with little or no challenges involved. Progressive school districts that implement the block schedule will provide staff development so that teachers incorporate new and dynamic methods to their instruction. The majority of physical education teachers are also presenting more in-depth content under the concentrated curriculum simply because of the time allowed. Some teachers may struggle the first year, but with experience, they will gain better *perception on what, how in-depth, and how much content can be presented to the students.*

The researcher believes this study could help in deciding which scheduling program is better when dealing with curriculum and standards. The scheduling program a school is involved in is important when it comes to deciding how much curriculum is being covered and also if the standards are being met. Many schools do not like to undergo change, but if it means one scheduling program is better in teaching the curriculum and covering the standards schools may be more willing to undergo this change. Teachers may find the first year a challenge, but through staff development it will get easier. The students may also find it a challenge to change over but will benefit in the long run.

It has been concluded by past researchers that achievement and attitude scores were not differentially affected by the block or traditional scheduled programs (Bowman, 1998). According to this study, the results do not indicate which scheduling program is

better. The researcher believes that change in any professional organization can only occur with the fullest support of those affected by the change. It is not uncommon for individuals within a profession to question the validity of major restructuring if, in fact, the current system works. Block scheduling is not for all secondary schools. Before making a major decision in switching over, administrators should first thoroughly examine and research the advantages and disadvantages block scheduling may have on their respective institution.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to compare students' attitudes toward physical activity in a traditional and block scheduled physical education curriculum in four Wisconsin High Schools. Four hundred and eighty-seven students participated in the study. One hundred and seventy-four students participated from a block scheduling program and three hundred and thirteen students participated from a traditional scheduling program.

All subjects completed a twenty-six question survey with six open ended questions. The average scores were calculated for each type of scheduling program and also for gender within each scheduling program. Data were collected from all four schools and statistically analyzed to determine if there was a significant difference in student attitudes toward physical education based on the type of scheduling.

The two-way ANOVA indicated no significant difference between the types of scheduling when comparing student attitudes toward physical education ($p > .05$). Although not a purpose of the study originally, there were statistically different attitudes toward physical activity based on gender. Analysis of covariance indicated a significant difference when male and female attitudes toward physical education were compared to each other independent of the type of scheduling in which they were involved ($p < .05$).

Conclusions

According to the statistical analysis of the data of this study, the following conclusions were reached:

1. There was no significant difference in students' attitudes toward physical activity in a block scheduled program in comparison to a traditional scheduled program.
2. There was a significant difference in attitudes between males and females when compared to each other in the two scheduling programs.

Recommendations

Based on the conclusions of this study, the following recommendations for future studies were presented:

1. Conduct a study using middle and high school students and compare them to each other.
2. Repeat the study using only females as subjects.
3. Repeat the study using only males as subjects and compare it to the "female only" study.
4. Conduct a similar study in a different geographical location (i.e. Midwest versus West, or urban versus rural).

REFERENCES

- Akande, A., Van Wyk, C. De W., & Osagie, J. E. (2000). Importance of exercise and nutrition in the prevention of illness and the enhancement of health. Education, 120(4), 758-772.
- Alam, D., & Seick, R. E., Jr. (1994). A block schedule with a twist. Phi Delta Kappan, 75, 732-733.
- Biddle, S., & Smith, R. A. (1991). Motivating adults for physical activity: Towards a healthier present. Journal of Physical Education, Recreation, and Dance, 62, 39-43.
- Boarman, G. L., & Kirkpatrick, B. S. (1995). The hybrid schedule: Scheduling to the curriculum. NASSP Bulletin, 79(571), 42-52.
- Bowman, R. F. (1998). If block scheduling is the answer, what is the question? The Clearing House, 71(4), 242-44.
- Brett, M. (1996). Teaching extended class periods. Social Education, 60, 77-79.
- Browne, J. (1992). Reasons for the selection or nonselection of physical education studies by year 12 girls. Journal of Teaching in Physical Education, 11, 402-410.
- Bruckner, M. M. (1996). Changing the high school schedule: A test of Fallan's lesson. Planning and changing, 27(1/2), 115-123.
- Bryant, J. G., Jr, & Claxton, D. B. (1996). Physical education and the four-by-four schedule. Physical Educator, 53(4), 203-09.
- Buckman, D. C., King, B. B., & Ryan, S. (1995). Block scheduling: A means to improve school climate. NASSP Bulletin, 79(571), 9-18.
- Calvery, R., Sheets, G., & Bell, D. (1998). Student's perceptions of block scheduling practices in a selected Arkansas high school. Paper presented at the Annual Meeting of the Mid-South Educational Research Association, New Orleans, LA.
- Canady, R. L., & Rettig, M. D. (1993). Unlocking the lockstep high school schedule. Phi Delta Kappan, 75, 310-14.
- Canady, R. L., & Rettig, M. D. (1995). The power of innovative scheduling. Educational Leadership, 53(3), 4-10.

Carlson, J. (1982). The multimodal effect of physical exercise. Elementary School Guidance, 16, 304-309.

Carlson, T. B. (1994). Why students hate, tolerate, love gym: A study of attitude formation and association behaviors in physical education (Doctorial Dissertation, University of Massachusetts, 1994). Dissertation Abstracts International, 55, 502A.

Carlson, T. B. (1995). We hate gym: Student alienation from physical education. Journal of Teaching in Physical Education, 14(4), 467-77.

Carroll, J. M. (1990). The Copernican plan: Restructuring the American high school. Phi Delta Kappan, 71(5), 358-65.

Cawelti, G. (1994). High school restructuring: A national study, Arlington, VA: Educational Research Service.

Cawelti, G. (1995). High school restructuring: What are the critical elements? NASSP Bulletin, 79(569), 1-15.

Chen, A. (1996). Student interest in activities in a secondary physical education curriculum: An analysis of student subjectivity. Research Quarterly for Exercise and Sport, 67, 424-432.

Claxton, D., & Bryant, J. G., Jr. (1996). Block scheduling: What does it mean for physical education? Journal of Physical Education, Recreation, and Dance, 67(3), 48-50.

Cockerill, S. & Hardy, C. (1987). The attitudes of fourth year girls towards the secondary school physical education curriculum. The Bulletin of Physical Education, 23(1), 6-12.

Cooper, S. L. (1996). Blocking in Success. The Science Teacher, 62(6), 28-31.

Corbin, C. B., & Pangrazi, R. P. (1996). How much physical activity is enough? Journal of Physical Education, Recreation, and Dance, 67(4), 33-36.

Czaja, M., & McGee, J. (1995). Block scheduling: Learning boom or bust? American Secondary Education, 23(4), 37-39.

Day, T. (1995). New class on the block. The Science Teacher, 62(6), 28-30.

Dempsey, R. A., & Traverso, H. P. (1983). Scheduling the secondary school. Reston, VA: National Association of Secondary School Principals.

- Edwards, C. M., Jr. (1993). Restructuring to improve student performance. NASSP Bulletin, 77(553), 77-88.
- Francka, I., & Lindsey, M. (1995). Your answers to block scheduling. American Secondary Education, 24(1), 21-28.
- Geismar, T. J., & Pullease, B. G. (1996). The trimester: A competency based model of block scheduling. NASSP Bulletin, 80(581), 95-105.
- Goldman, J. J. (1983). Flexible modular scheduling: Results of evaluations in its second decade. Urban Education, 18, 191-228.
- Jones, R. (1995). Wake up! The Executive Educator, 17(8), 15-18.
- Kissler, D. K. (1995). Invited papers. The Science Teacher, 62(4), 10.
- Kruse, C. A., & Kruse, G. D. (1995). The master schedule and learning: Improving the quality of education. NASSP Bulletin, 79(571), 1-18.
- Langer, L. M., & Warheit, G. J. (1992). The pre-adult health decision making model: Linking decisions, making directedness/orientation to adolescent health related attitudes and behaviors. Adolescence, 27(108), 942-991.
- Larson, C. (1996). High school block scheduling in Wisconsin. (Available from the University of Wisconsin-Eau Claire, Brewer Hall 55, Eau Claire, WI 54702-4044).
- Laurie, J. (1994). A report from the Millard West High School block schedule research. (Available from Hillcrest High School, 3319 North Grant, Springfield, MO 65803-1036).
- Liu, J., & Dye, J. F. (1997). Teacher and student attitudes toward block scheduling in a rural school district. American Secondary Education, 26(3), 1-7.
- Luke, M. D., & Sinclair, G. D. (1991). Gender differences in adolescents' attitudes toward school physical education. Journal of Teaching in Physical Education, 11, 31-46.
- Morey, R. S., & Karp, G. G. (1998). Why do some students who are good at physical education dislike it so much? Physical Educator, 55(2), 89-100.
- Mowatt, M., DePauw, K. P., & Hulac, G. M. (1988). Attitudes toward physical activity among college students. Physical Educator, 45(2), 103-108.

- O'Neil, J. (1995). Finding time to learn. Educational Leadership, 53(11), 11-15.
- Powell, K. E., & Pratt, M. (1996). Physical activity and health. British Medical Journal, 313(7050), 126-127.
- Raebeck, B. S., & Beegle, C. W. (1988). The secondary school synthesesystem: A new organizational model. NASSP Bulletin, 72(512), 32-48.
- Ryan, F. J. (1996). Intensive scheduling: When less is more. Momentum, 27(1), 62-65.
- Salvaterra, M., & Adams, D. (1995). Departing from tradition: Two schools' stories. Educational Leadership, 53(3), 32-35.
- Schoenstein, R. (1995). The new school on the block. The Executive Educator, 17(8), 18-21.
- Shortt, T. L., & Thayer, Y. V. (1995). What can we expect to see in the next generation of block scheduling? NASSP Bulletin, 79(571), 53-62.
- Shortt, T. L., & Thayer, Y. V. (1999). Block scheduling can enhance school climate. Educational Leadership, 56(4), 76-81.
- Sommerfeld, M. (1996). Time warp: Block scheduling catches on. Teacher Magazine, 7, 8-9.
- Stanne, K. V. (1999). The effect of a varied and choice curriculum on the participation, perceptions and attitudes of females in physical education. University of South Carolina, DAI, 60, no. 12A: p. 4365. Unpublished Dissertation.
- Tannehill, D., Romar, J., O'Sullivan, M., England, K., & Rosenberg, G. (1994). Attitudes toward physical education: Their impact on how physical education teachers make sense of their work. Journal of Teaching in Physical Education, 13, 406-20.
- Tjeerdsma, B. L., Rink, J. E., & Graham, K. C. (1996). Student perceptions, values, and beliefs prior to, during, and after badminton instruction. Journal of Teaching in Physical Education, 15, 464-476.
- Trilling, P. F. A survey of lead physical education teachers' perceptions of the impact of block scheduling on curriculum and instruction. MS in Exercise and Sport Science-Pedagogy, August 1997, 86 pp. (J. Steffen).

Van Mondfrans, A. P., Schott, J. L., & French, D. G. (1972). Comparing block scheduling and traditional scheduling on student achievement and attitudes. Paper presented at the annual convention of the American Educational Research Association, Chicago, IL.

Vanden Auweele, Y., Rzewnicki, R., & Van Mele, V. (1997). Reasons for not exercising and exercise intentions: A study of middle-aged sedentary adults. Journal of Sports Sciences, 15, 151-165.

APPENDIX A
INFORMED CONSENT

**Informed Consent Form
University of Wisconsin – La Crosse
Department of Exercise and Sport Science**

Student attitudes toward traditional and block scheduled physical education.

INFORMED CONSENT

I _____, the parent/guardian of _____, voluntarily consent to allow my son/daughter to participate in a research study to compare student attitudes toward physical activity in a traditional or block scheduled program. I consent to the presentation and/or publication of the study results so long as the information is confidential so that no personal identification can be made.

I have been informed that the questionnaire will take about 15 minutes and will be done at the beginning of physical education class. I have been informed that the questionnaire asks a number of different questions relating to physical activity and my son/daughter will answer to the best of his/her knowledge. I have been informed that the questionnaire will be of no harm to my child. I have also been informed that my child may withdraw from this study at any time and for any reason without penalty.

I have been informed that there are no immediate benefits to the students.

I have been informed that the results will be kept confidential and will be locked in a secure place.

Any concerns or questions may be directed towards Kara S. Halverson (Researcher) (608) 784-5736 and Jeff Steffen (Thesis Chairperson) (608) 785-6535. Questions regarding the protection of human subjects may be addressed to Dr. Dan Duquette, Chair, UW-La Crosse Institutional Review Board for the protection of human subjects (608) 785-8161.

(please cut along the dotted line and return bottom portion to your physical education teacher)

Participant _____ Date: _____

Parent/Guardian _____ Date: _____

Researcher _____ Date: _____

**Kara S. Halverson
Holmen High School
Physical Education Instructor**

APPENDIX B
QUESTIONNAIRE

Student Attitudes Toward Physical Education Survey

Your name will not be used in any analysis of this survey. Only the person giving you the survey will know how you personally responded to the questions.

Teacher: _____ School: _____

Class Period: _____ Circle Gender: M F Grade: 9 10 11 12

Have you been in this school district since 6th grade: Yes No

Some of the questions relate to your experiences as you remember them and others for the way you feel currently. Please answer all questions as honestly as you can. Circle your response to each statement on this sheet. (a) Read each statement carefully, and (b) circle the number that best expresses your feeling about the statement. After reading a statement you will know at once, in most cases, whether you agree or disagree with the statement. If you agree, then decide whether to place a circle on (5) "Strongly Agree" or (4) "Agree." If you disagree, then decide whether to circle (2) "Disagree" or (1) "Strongly Disagree." In case you are undecided (or neutral) concerning your feeling about the statement, circle (3) "Undecided." Try to avoid circling "undecided" in many instances. This is not a test, but simply a survey to compare student attitudes toward physical education class. There are no right or wrong answers. Be sure to respond to every statement. The questions are answered in the following manner.

5	4	3	2	1
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

1. I liked physical education in 6th grade.

5 4 3 2 1

2. I liked physical education in 7th grade.

5 4 3 2 1

3. I liked physical education in 8th grade.

5 4 3 2 1

4. I was looking forward to my high school physical education experience.

5 4 3 2 1

I liked physical education in the middle school for the following reasons:

5	4	3	2	1
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

5. I enjoyed team sports (i.e. basketball, soccer).

5 4 3 2 1

6. It was fun.

5 4 3 2 1

7. It made me fit and healthy.

5 4 3 2 1

8. I liked the social activity (being with friends).

5 4 3 2 1

9. I liked boys and girls playing together.

5 4 3 2 1

10. I liked getting better at sports.

5 4 3 2 1

11. I liked choosing what I wanted to take.

5 4 3 2 1

12. There were lots of different activities.

5 4 3 2 1

13. I liked how everyone cooperated.

5 4 3 2 1

14. I had lots of chances to learn the activity.

5 4 3 2 1

15. I enjoyed competition.

5 4 3 2 1

I like physical education in the **high school** for the following reasons:

5	4	3	2	1
Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree

16. I enjoy team sports.

5 4 3 2 1

17. It's fun.

5 4 3 2 1

18. It makes you fit and healthy.

5 4 3 2 1

19. I like the social activity (being with friends).

5 4 3 2 1

20. I like boys and girls playing together.

5 4 3 2 1

21. I like getting better at sports.

5 4 3 2 1

22. I can choose what I want to take.

5 4 3 2 1

23. There are lots of activities to choose from.

5 4 3 2 1

24. I like how everyone cooperates.

5 4 3 2 1

25. I have lots of chances to learn the activity.

5 4 3 2 1

26. I enjoy competition.

5 4 3 2 1

Please answer the following questions as fully as you can.

27. Think about any of the experiences you have had in past physical education classes. What have you liked the most about physical education and why?

28. Think about any of the experiences you have had in past physical education classes. What have you disliked the most about physical education and why?

29. List 3 activities that you would like to take in physical education and state why.

1. _____ why _____

2. _____ why _____

3. _____ why _____

30. List 3 activities you don't want to take in physical education and state why.

1. _____ why _____

2. _____ why _____

3. _____ why _____

31. What do you like about the type of scheduling, whether block or traditional, you are involved in?

32. What do you dislike about the type of scheduling, whether block or traditional, you are involved in?

Stanne, Kathryn V. (1999). The effect of a varied and choice curriculum on the participation, perceptions and attitudes of females in physical education. University of South Carolina, DAI, 60, no. 12A: p. 4365. Unpublished Dissertation.