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Block Scheduling and its Effect on the
Academic Performance of Students with Learning Disabilities.

by
Paul J. Blass

A Thesis

Submitted in partial fulfillment of the
Masters of Arts Degree
Of
The Graduate School
at
Rowan University
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Approved by _____
Professor

Date Approved 5/2/2002

Abstract

Paul J. Blass
Block Scheduling and its Effect on the
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Spring 2002
Dr. Joy Xin, Thesis Advisor
Special Education Program

This study surveyed the professionals from one middle school in southern New Jersey regarding their perceptions of block scheduling as well as their views on its effectiveness with students who have learning disabilities. The survey indicated that the participants favored teaching under the block schedule format. They felt that they can address the students' needs more effectively and that the quality and quantity of student work has improved. Some questions were directed only to special education teachers, and they also agreed that the time allocated using the block format helped them work more effectively with their students.

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This study surveyed the professionals from one middle school in southern New Jersey regarding their perceptions of block scheduling as well as their views on its effectiveness with students who have learning disabilities. A total of 34 surveys were distributed and 21 were returned. The first series questioned both regular and special education teachers about how block scheduling affected their teaching strategies, their personalization of lessons, how the needs of students are met, and their perceptions of block scheduling in general. Special education teachers were given an additional survey, which focused only on students with learning disabilities. A majority of the participants enjoy teaching under the block scheduling format. They feel as though the advantages of such a system include the potential to really learn their students' abilities so that lessons and their assessment can be more personalized. The teachers feel that the quality and quantity of student work has increased under the block format. Despite this the special education teachers gave a neutral score when asked if students retained information better. The most cited disadvantage of block scheduling was the increased amount of make up work caused by absences. Additionally, 80% of the special education teachers indicated that they would not like to return to a traditional schedule.

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Chapter 1

Introduction

Statement of the Problem

For more than a decade, many school districts throughout the country, in an attempt to revamp their classroom productivity, have adopted block scheduling. Block scheduling is hailed by its proponents as a much needed change that will increase active learning and, therefore, critical thinking (e.g., Canady & Rettig, 1995).

Restructuring plans such as block scheduling are not new. Their foundation is rooted in late nineteenth century high schools and Latin grammar schools. Their increased popularity arises from the Reagan Administration's National Commission on Excellence in Education and one of its reports, *A Nation at Risk* (1983).

A Nation at Risk concluded that the decline in educational performance resulted largely from the "disturbing inadequacies in the way the educational process itself is often conducted" (www.ed.gov/pubs/NatAtRisk/findings). The findings centered on four aspects of the educational process: content, expectations, time, and teaching. The sections on content and expectations resulted in many states adapting statewide curricula as well as statewide assessments. The section on time stated that not only do American students spend less time in school as other developed nations, but also the time spent in the classroom is often used ineffectively. From that statement arose a re-evaluation of classroom time and the revamping of school schedules to try block scheduling.

The changes involving the restructure of classroom time have occurred at the same time as changes in the discussion on how special education programs are implemented. The Education for All Handicapped Children Act (1975) mandated a free

and appropriate public education for children with disabilities; however, the interpretation of what constitutes an appropriate education has expanded. During the past ten to fifteen years the inclusion of special education students with their non-disabled peers has been advocated. This inclusion movement has had a significant impact on schools because of the increased number of students with disabilities in schools (Weller & McLeskey, 2000). The placing of students with disabilities into regular classrooms provides pressure upon regular classroom teachers to handle the challenges presented by these students. Frequently a special education teacher is assigned to a classroom to provide services in the room, or students are removed to a special education classroom for part of the day. Regardless, regular education teachers need to know how to work with students with learning disabilities and to understand the services to which these student are entitled. Only with positive communication and collaboration between teachers can any educational reforms that affect special education be expected to work effectively.

One way to solve the problem is to use block scheduling. School districts must realize that in addition to changing time, their scheduling changes affect special education and possibly how it is provided. Teachers can utilize the larger block of time to fit student needs rather than have the students adjust to fit the schedule. For example, teachers could divide a class into smaller groups where a teacher, or in some cases teachers, can personalize instruction to meet the varying needs of their students. Similarly, teachers can use the larger chunk of time for follow up activities that enhance the lesson objectives and actively involve students in the learning process.

Unfortunately, block scheduling is not viewed by everyone as the salvation of the educational system. Critics caution that block scheduling can be detrimental to the students in need of the most help (Santos & Rettig, 1999). Clearly, further investigations on the effectiveness of block scheduling are needed.

Since the mid 1980s the use of block scheduling has been steadily gaining acceptance throughout the country as a possible method for enhancing educational performance throughout the United States. On a daily basis with this method of scheduling, there are fewer classes of longer duration that may last for a semester or a full year (Canady & Rettig, 1995). At present, educational research is being conducted to determine the effects of this type of scheduling. However, there is little empirical evidence as to what impact this scheduling may have on students with disabilities.

Significance of the Study

With the increased call for educational reform issued by the George W. Bush administration, more schools will be changing to block scheduling. Because teachers are the ones who implement scheduling changes, their unique insights need to be assessed (e.g., Tenney, 1998, Vermillion, 1999). The idea of reform is good but implementing change for the sake of change is irresponsible, especially to the students with special needs who most need help.

While there are numerous articles on the positives and negatives of block scheduling, as well as studies on teachers' reactions, there is little research on how it actually affects students (e.g., Canady & Rettig, 1995; Hurley, 1997). The answer is not clear to date what students benefit or suffer from scheduling changes.

Of particular interest are the students who struggle the most in school with any change. Students with learning disabilities usually require a very structured learning environment that simultaneously adjusts to their learning style. Does block scheduling, which usually has a smaller course load, benefit these students? Is the extended time of each class too long for these students? These questions are not answered. The present study will investigate both regular education and special education teachers' attitudes toward block scheduling and how this schedule affects students with learning disabilities.

Purpose of the Study

The primary purpose of this study was to determine what impact block scheduling had on the academic achievement of students with learning disabilities in a middle school setting. Additionally, a goal of this study was to determine faculty perceptions regarding block scheduling and its impact on the academic achievement of students with learning disabilities. Because these students need more assistance and services, it was wondered whether the redefinition of time under block scheduling inadvertently created more obstacles for them. The findings in this study would be useful in providing a basis for evaluating the potential efficacy of block scheduling in middle schools and may provide guidance for making changes in the future.

Research Questions

1. Does block scheduling reflect positively on student performance?
2. Under block scheduling, are there any demands placed on learning disabled students that affect them more significantly than their non-disabled peers?
3. What are the regular and special education teachers' attitudes toward block scheduling?
4. Has block scheduling affected instructional techniques, classroom management, or the teaching of critical thinking skills?
5. Does the extended time granted by block scheduling help with the implementation of IEP objectives?

Definition of Terms

In this study, the following terms are defined and listed below:

1. Block Schedule refers to a form of school scheduling where classes meet for a block of sixty minutes or more.
2. Child Study Team (C.S.T.) refers to a multidisciplinary group of personnel who work most closely with students with learning disabilities: special education teachers, social workers, school psychologists, and learning disability consultants.
3. In-class Support refers to a support program in which an aide or special education teacher provides services directly in a regular classroom. Typically, this involves collaborative teaching between the regular and special education teachers.
4. Student with Learning Disabilities (L.D.) refers to those who have been officially classified as being eligible for special education services by the criteria set forth by the New Jersey Department of Education.
5. Regular Education Teachers are teachers whose certification issued by the New Jersey Department of Education is for a specific content area or a more generalized certificate based on the specific grade level.
6. Special Education Teachers are teachers who are certified by the New Jersey Department of Education as “Teacher of the Handicapped”.
7. Support Services are any supplementary services that assist students with special needs. Services can be provided by an aide, a specialist, or a teacher and are accomplished with an in-class support or a pull-out program.
8. Traditional Schedule refers to a six to eight period daily schedule with instructional periods lasting less than 60 minutes (Tanner, 1996).

Chapter 2

Literature Review

History of Block Scheduling

The typical American high school schedule, described by Canady and Rettig (1995a) as rigid and inflexible, was not always so structured. Before the report by the Committee of Ten of the National Education Association (NEA) in 1892, Latin Grammar Schools and high schools of that era incorporated flexibility into their scheduling practices (Gorman, 1971). According to Gorman (1971), students enrolled in subjects on a two to four day a week schedule. The Committee of Ten's report decreed that a rigidly structured high school schedule be established (Gorman, 1971). It seems the colleges of the era were using their influence in the NEA to help standardize high schools, which differed greatly in their offerings (Langworthy, 1990). Each high school was encouraged to focus the work of each student upon five or six academic areas in a standardized four years.

According to Boyer (1983), in 1909 the Carnegie Foundation proposed a standard unit to measure high school performance based on time. "One unit of high school credit would be earned with a total of 120 hours in one subject, meeting four or five times a week, for 40 to 60 minutes for 36 to 40 weeks a year" (p. 60). Boyer (1983) stated that the Carnegie Unit became a convenient, mechanical way to measure academic progress across the country. This standardized system coincided with a dramatic increase in high school attendance as the population grew and as child labor laws and school attendance laws worked to put children into schools.

The Carnegie system has always had critics, which have led to isolated reform movements without much success. Canady and Rettig (1995a) noted "most high schools returned to traditional schedules primarily because of a number of problems with flexible modular scheduling - most related to student discipline" (p. 14). According to Canady and Rettig (1995a) and Goldman (1983), flexible modular scheduling presented two major concerns. The first concern was centered on unscheduled student time. Students would typically spend 30 to 40 percent of the school day in independent study and individualized tutoring; thus, there was an increase in discipline issues because students lack of supervision during that time. The second concern focused on teacher behavior, primarily methodology, because teachers had difficulty adjusting their instruction to irregular lengths of class time (Goldman, 1983). As noted by Canady and Rettig (1995a), the experience with flexible modular scheduling faded by the late 1980s and early 1990s. At the same time, however, they noted that schools began to revisit high school scheduling practices with the intention of eliminating or reducing the dependency on the standardized, single-period schedule (Canady & Rettig, 1995a).

In 1994, Carroll (1994b) proposed the introduction of a new scheduling model, named the Copernican Plan, challenging the notion that all schedules should be centered on the Carnegie unit. The plan was based on the premise that more effective instruction could take place if the use of instructional time by teachers and students accommodated better instructional practices (Carroll 1994a). Carroll (1994a) indicated that high schools based on the Carnegie Unit prevented effective instruction by teachers and effective learning by students. Conversely, he thought that the Copernican Plan might challenge the Carnegie Unit. For example, in a high school with a Copernican schedule, students

typically were taught in 75 to 100 minute classes. Carroll (1994b) conducted a four-year study in a high school that used the Copernican model. He indicated that the Copernican plan led to a new thinking of the way in which time played a role in the school schedule. This plan led to further experimentation with new scheduling ideas.

Forms of Block Scheduling

The term block scheduling includes an array of different types of schedules, frequently adjusted to fit a special concern by a district. Two models, however, have emerged as the most common approaches: the eight-block alternating day (A-B schedule) and 4 x 4 semester models (Shortt & Thayer, 1997; Pliska, Harmston, & Hackmann, 2001). In the alternated day (A-B) schedule, classes meet every other day for the entire academic year. These classes typically last for ninety minutes. In a 4 x 4 model, students have the same four classes each day for an entire semester, with classes usually lasting ninety minutes. At the end of the first semester, students take four new classes, using the same four class, ninety-minute format. Under both systems, students have eight classes a year, similar to a traditional schedule; however, the implementation of the time is different. The overall pupil contact time is the same, but the time for instruction is given in larger periods. This allows teachers to use these larger chunks of time to implement different instructional strategies, which augment lessons and provide activities that help make students active learners.

Advantages of Block Scheduling

There are numerous articles, or portions of articles, that favor the revamping of schools to some form of block scheduling (e.g., Canady & Rettig, 1995b, Snell, Lowman, & Canady, 1996). It is indicated that traditional schedules do not use time constructively (Canady & Rettig, 1995a). Traditional, assembly-line classes allow little time for critical thinking tasks. For example, when a class starts several minutes are spent on getting settled and administrative tasks, such as taking attendance and collecting assignments. More time is spent to change classes, as much as eight minutes a period, is wasted. In addition, students move from room to room as many as eight or nine times a day to take classes. Each classroom setting presents different teachers with different expectations using different methodologies. Students are expected to adjust to a new “boss” every forty or fifty minutes, something many adults would find challenging (Buckman, King, & Ryan, 1995). Block scheduling limits the number of teachers to which students must adjust. Similarly, it would be easier for teachers to develop consistent routines for students. Regular routines and consistency would assist students with disabilities.

Canady and Rettig are the current leaders in the push for block scheduling. Since the mid 1990s, they have promoted the idea of block scheduling as being the central component in school restructuring. Their research touts the benefits of offering a decreased number of daily classes coupled with increased time in each class (Canady and Rettig, 1995a, 1995b).

Block scheduling affords teachers the opportunity to engage students in activities that develop problem solving techniques and higher level thinking skills (Buckman, King, & Ryan, 1995). The percentage of time utilized on administrative tasks is

lessoned, thus proportionately increasing instructional time. Block scheduling uses time to the advantage of student learning, not to the convenience of school administrators.

Disadvantages of Block Scheduling

Research has indicated some disadvantages related to block scheduling.

Complaints seem to focus on a few consistent topics. For example, teachers who receive little support, whether through in-service training or peer assistance, have difficulty meeting curriculum standards because of the new way time is utilized (Short and Thayer, 1997). Another complaint is that the semester-based courses inherent in block scheduling make district and state assessments fall at inopportune times for many students (Short and Thayer, 1997).

Student absence was an area of major concern (Edwards, 1995; Hurley, 1997; Weller & McLeskey, 2000). Student absences become a larger concern under block scheduling because missing a day under the block is equivalent to missing two days under a traditional system. Upon returning from an absence, students could be an entire lesson behind the class. In the worst case scenario a student could fall further and further behind as he or she tries to catch up to the class. This situation is only compounded if a student is out for an extended time.

Canady and Rettig (1995a), who strongly favor block scheduling, admit that a weakness of block scheduling occurs when a student transfers from a school with traditional class scheduling to one with block scheduling. It is also indicated that advanced placement (A.P.) classes have posed a problem. For example, the exams for these classes are usually given in the spring. Students who take an advanced placement

class in the fall may have difficulty retaining the information. If retaining information for A.P. students might pose a problem, one wonders what difficulties students with learning problems might face.

Other critiques are related to teacher stress and fatigue as a weakness especially in a small school district. Teachers in small school districts have the tendency to teach more classes, and, in some cases, have more responsibilities than teachers in larger districts (Reid, 1996).

Block Scheduling and Students with Special Needs

To date, there are few articles that discuss block scheduling and its relationship to students with special needs. In their extensive research, Canady and Rettig (1995b) identify the traditional, assembly-line schedule as a depersonalized environment where teachers have to deal with more than 100 students per day. In such a learning environment, teachers lack the time to develop close relationships with students, while students with special needs require extra attention and guidance to be successful.

Current studies offer little significant insight into whether or not block scheduling helps the academic performance of students with L.D. Snell, Lowman, and Canady (1996) focus entirely on parallel block scheduling, and they argue that this method of block scheduling is a better way to offer special education services than pulling students out of class. While that argument seems logical, there is limited information provided on whether students performed better academically, though it implies that students would benefit socially, and increase their self esteem because they remain in class with their peers, avoiding the stigma of traveling to a special class.

Furthermore, Santos and Rettig (1999) interviewed 18 special education teachers who function as department chairs. One of the research goals was to examine two types of block schedules, the 4X4 and the alternate-day. Overall, those interviewed prefer block scheduling, however, the authors now recommend the 4X4 schedule for special education students in part because retention rates were reported to be negatively affected by the alternate-day schedule, though this is unsubstantiated by further investigation (Santos & Rettig, 1999).

There are numerous articles that support block scheduling for special needs students. Eisenberger, Bertrado, and Conti-D'Antonio (2000) noted two significant reasons for moving to the block. First, teachers could vary their instructional strategies to meet the needs of more students. Secondly, teacher would have the time to instruct their students in strategies for task completion as well as skills for managing their environment. In addition, they tout the benefits afforded to special education teachers to teach students the learning process, rather than just reinforcing content. Teaching how to learn is a very important life-long skill; however, the authors offer no evidence to demonstrate retention of this skill or improved academic performance. The authors indicated that a block approach would, in the end, help reduce student dependency on special education services because learning strategies would be emphasized. Such ideas are commendable, but empirical evidence would substantiate them.

Weeler and McLeskey (2000) also concur that block scheduling has worked well in inclusive classrooms. Their research found that teachers felt that they could meet students' needs more effectively than in a pull out program. They also found that longer class periods with blocked time allowed for more student-centered learning activities,

which should enhance learning. Weeler and McLeskey (2000) even assert that block scheduling would be “more effective if all students had access to resource class supports” (p. 213). They conclude that block scheduling and inclusion “fit together well”; however, their research results were obtained through qualitative data only. Their assertions are based on teacher observations and perceptions, which can have validity, but are subject to bias.

In his capacity as the director of special education in an elementary school, Bugaj (1998) was involved in implementing and evaluating a study initiated by the school district. The Mifflin County School District (MCSD) in Pennsylvania wanted to determine the impact of intensive (Block) scheduling on the special education students in its two high schools. The MCSD used these questions for the study: How would IEP goals and objectives be affected? How would the new scheduling facilitate inclusion? How would "pull-out" services such as speech be hindered? Would the hiring of additional special education teachers be necessary?

For the study the school district contacted the 11 school districts throughout Pennsylvania that had already implemented intensive (block) scheduling. Telephone contact and a survey were used to investigate 11 school districts. The survey consisted of 15 items with 13 of the 15 questions requiring a Likert-type response. Of all the items, four questions pertained to academic performance, four to inclusion, three to support services, and two to staffing requirements. Copies of the survey were provided to district administrators, special education teachers, and regular education teachers. The questions involving inclusion have the lowest percentage of Don't Know/Not Applicable (DK/NA), which leads Bugaj (1998) to conclude that intensive scheduling has led to more special

education students being integrated into regular classrooms and to having demonstrated greater success. Yet the questions on academic performance provided mixed results. Bugaj (1998) concluded that academic performance of classified students improved with intensive scheduling, which was based on the responses to one question. He also stated that the result of another question on grade point averages was "less than representative." It would seem that higher GPAs would help foster the conclusion on academic performance, but that was not the case. The questions involving support services and staffing requirements all have at least 45% DK/NA responses. This demonstrates a lack of knowledge on behalf of the participants, yet Bugaj (1998) concludes that support services are adequately provided and that additional staff should be hired. Those results should be discounted. With so many respondents uncertain, the results cannot be reliable. The participants, 14 administrators, 31 special education teachers, and 45 regular education teachers, should have had the full range of their districts' special education programs explained to them. Also, potential services should have been outlined. Such actions would have improved responses in those areas and made the data more meaningful. In an area of limited research, Bugaj's study (1998) adds little except a starting point.

Meanwhile, Vermillion (1998) investigated the procedural changes that high school special education teachers make in their transition to block scheduling as well as teachers' perceptions of the effect of block scheduling on the literary skills of classified students. The study revealed that 64% of respondents preferred block scheduling and 34% felt that academic achievement improved. Seventy-five percent of respondents were concerned, however, that students' attention spans could not endure for a full block.

Vermillion (1998) recommended that a larger population of school districts, in other regional areas, be investigated for further research.

Tenney (1998) studied 19 New Hampshire high schools to see how block scheduling affected students with emotional disorders as well as those diagnosed with attention deficit hyperactivity disorder (ADHD). Tenney surveyed the teachers to determine their perceptions on the performance and achievement of the two subgroups of students within the context of block scheduling. The results showed that these students demonstrate no change or improvement in their academic performance after implementation of block scheduling (Tenney, 1998). In this study, teachers raise concerns over students' ability to sustain attention for a 90-minute period.

Summary

Block scheduling is not a new idea; its foundations lie in late nineteenth century high schools, which utilized time more flexibly. What has now become the "traditional" schedule is based on the Carnegie Unit, an instrument for measuring graduation credits based on time spent in a class. The Carnegie Unit, which was proposed in 1909, has been utilized by several generations of students and has become ingrained in the American psyche as to how schools should be managed. In 1983, after serious evaluation of school performance, led by the *Nation at Risk* Report, did flexible scheduling again become a viable alternative within the mainstream school systems.

There are numerous variations of block scheduling, but two models have emerged as the most popular: eight-block alternating day and 4 X 4. The cornerstone of each

model is a block of instructional time lasting about ninety minutes. Though these models are the most popular, districts can and do modify them to fit their own needs.

Promoters of block scheduling support its more efficient use of time. In a ninety-minute block, teachers utilize proportionally less time to perform administrative tasks, such as taking attendance. Conversely, teachers are free to use the large chunk of time to implement different instructional strategies, especially, as advocates tout, those that involve higher thinking skills. Students who learn through block scheduling are less likely to experience factual learning through rote memorization. They are more likely to experience projects, sometimes co-operative projects that incorporate information into problem solving tasks.

Critics of block scheduling do not dislike the large blocks of time. Their concerns focus on how the teachers use this time. A teacher who is not trained to use the block of time will waste the time that the block is intended to include. Teachers who are used to lecturing for 30 to 40 minutes cannot continue that instructional method throughout an 80 to 90 minute block. Students would not be able to stay attentive for such a long period. In addition, the effects of students' absences are compounded under a block system, where one day is comparable to two days under a traditional schedule. No plan seems to have been developed to combat the problem of attendance.

The articles that focus specifically on learning disabled students and block scheduling generally favor the change. Special Education teachers advocate the large block of time for giving them the flexibility to try different instructional methods to teach their students. The teachers now have time to introduce, teach, and reinforce material in one day. Those special educators that provide services within a regular classroom find

that more time helps them ensure success for their students (Snell, Lowman, & Canady, 1996). There are also special educators who feel schedules that follow an alternating block and do not allow for daily contact with students are detrimental. They feel that students with significant academic deficits need daily remediation (Santos and Rettig, 1999).

Unfortunately, few studies were conducted on the impact of block scheduling upon students with learning disabilities. Moreover, because of the recent inclusion movement, more and more students with disabilities will be placed within a regular classroom. The longer time afforded by block scheduling may provide teachers the opportunity to instruct students at different levels and offer follow up activities and practice to reinforce the skills they are learning. Because this trend is inevitable, additional studies are needed to ascertain whether this method of time usage is effective on this group of students.

Chapter 3

Method

Samples

A total of 26 regular education teachers and eight special education teachers in a middle school with a student population of 401 participated in the study. The regular education teachers are divided into two teams at each grade. Of the special education teachers, two are assigned to each grade level to provide resource room teaching or in-class support, where needed. Two special education teachers are utilized for self-contained classroom instruction for the students with the most need. The sample was chosen based on professional contacts and proximity to the researcher.

Setting

The school district chosen for this study is located in southern New Jersey. The district encompasses one town of less than 10,000 residents, almost all of whom are of European descent. The middle school itself has approximately 400 students in grades 6 – 8 and is the destination of students in the district's three neighborhood elementary schools. The middle school feeds into one high school that serves 530 students. This school district converted its middle school to block scheduling five years ago, with a good deal of hesitation from the community and staff, despite a year of preparation for both parents and teachers.

The special education population in the middle school is composed of sixty-two students, most of whom are classified as learning disabled (L.D.) according to the New Jersey Administrative Code (6A:14-3.5(c)10). Student placement ranges from fully self-

contained classrooms taught by a certified teacher of the handicapped to students who are fully mainstreamed and taught only by teachers with standard certifications. The majority of students with learning disabilities receive in-class support. This arrangement mainstreams a student with L.D. into the regular classroom, but a certified teacher of the handicapped is assigned to the classroom to provide any necessary assistance to help the student be successful. The district offers support classes in each of the grade levels and in each academic subject: Communications, Mathematics, Social Studies, and Science.

The block schedule in this school is divided into five periods of time. The four instructional periods last for 85 minutes, while the lunch period lasts for 30 minutes. Each student has Communications (English and reading) and Mathematics every day for the entire school year. Students have Science and Social Studies every day but for only one semester. The fourth block of time is divided between Physical Education/Health and related arts, such as art, music, and wood shop. Physical Education is offered every other day for three marking periods, with health occupying the fourth marking period. The related arts classes are offered every other day but for only one marking period; students rotate between the arts each marking period.

Research Design

A questionnaire (see Appendix A) was designed by the researcher to examine the affectiveness of block scheduling on students with learning disabilities. This study builds upon the work of Weller and McLeskey (2000) who investigated teachers' perceptions of block scheduling and inclusion in a high school. This study changed the setting to a

middle school and narrowed the focus to the academic achievement of students with learning disabilities.

While researching background information on block scheduling, the researcher discovered several questionnaires dealing with block scheduling. Some questions were gleaned from the works of Buckman, et al. (1995), Vermillion (1998), and Staunton (1997), whereas the researcher specifically developed others.

The researcher distributed the questionnaire to all regular and special education teachers within the school. To help maintain anonymity, the teachers were given an envelope addressed to the researcher in which to return the forms.

The subjects were asked to answer questions in which they had to use a Likert scale to determine whether they strongly agreed with a statement (1) or strongly disagreed with a statement (5). The questions focused on four broad themes: teaching strategies, understanding of students, academic work, and classroom management.

Special education teachers were given an additional survey to complete. This second survey focused specifically on the needs of students with learning disabilities. The questionnaire (see Appendix B) focused on the students' learning and on the teachers' instruction. Questions were in several different formats including Likert scale, checklists, and open-ended. As a follow up, four special education teachers were interviewed so that more specific experiences with block scheduling could be ascertained.

Data Analysis

The data gathered from this research tool was tabulated and the mean and standard deviation were computed to obtain a descriptive analysis. Each of the Likert

scale questions was classified into one of six categories: (a) teaching strategies, (b) understanding of students, (c) needs of students, (d) quality of work, (e) special education services, and (f) concerns about block scheduling. These categories were then analyzed. In addition, the comments to open ended questions were examined and divided based on their descriptive statements. Results will be discussed in chapter four.

Chapter 4

Results

The purpose of this study was to determine the affectiveness of block scheduling on the academic performance of students with learning disabilities. This study answered five questions:

- (a) Does block scheduling reflect positively on student performance?
- (b) Under block scheduling, are there any demands placed on students with learning disabilities that affect them more significantly than their non-disabled peers?
- (c) What are the regular and special education teachers' attitudes toward block scheduling?
- (d) Has block scheduling affected instructional techniques or classroom management?
- (e) Does the extended time granted by block scheduling help with the implementation of IEP objectives?

Presented in this chapter are the results of the teachers' responses to two surveys. The first survey was administered to regular and special education teachers in one middle school in southern New Jersey. Subsequently, an additional survey was provided to all special education teachers in the school. In addition, the researcher randomly selected four special education teachers to be interviewed in order to obtain their perceptions and feelings for further information.

Survey

The following data were obtained from surveys that were distributed to the teachers. Participants were asked to complete the survey(s) within a week and return it to the researcher. After ten days a total return rate was 21 out of 34 (62%)..

A portion of the main survey asked the teachers to identify demographic professional background information. These questions asked teachers to identify the following:

- (a) Including this school year, how many years have you taught special education? or regular education?
- (b) How many years were taught using a traditional schedule? or a block schedule?

Table 1 presents a summary of the demographic characteristics regarding the population of teachers who participated in this study. It reflects that teachers who have taught regular education have, on average, more than twice as much teaching experience than their colleagues in special education. In addition, Table 1 shows that these teachers have, on average, three times as much experience under a traditional schedule than block scheduling. It is noted that 2 teachers taught using only a block schedule.

Table 1

Summary of the Number of Years in Teaching and Types of Schedules Used

Number of Years in Teaching	Regular Education Teachers	Special Education Teachers	Experience using Traditional Schedule	Experience using Block Schedule
Zero to ten	5	2	7	17
Eleven to twenty	4	3	7	4
Twenty-one to thirty	5	1	5	0
Over thirty	2	1	0	0

The questions from the first survey (See Appendix A) could be divided into six categories:

- (a) Teaching strategies – numbers 1,2, and 14
- (b) Rapport/Understanding of students – numbers 3, 9, 10, and 12
- (c) Needs of students – numbers 5, 6, 7, 8, and 13
- (d) Quality of work – numbers 4 and 11
- (e) Special education services – numbers 15, 16, and 20
- (f) Concerns about block scheduling – numbers 17, 18, and 19

A Likert-type response. All statements began with the clause: “As a result of block scheduling”. A score of 1 indicates that the participant “strongly agreed” with the statement while a mark of 5 indicates “strongly disagree”. These responses were then averaged and the standard deviation determined. The results are displayed in table 2.

The questions dealing with teaching strategies were: Number 1 – I have made changes to my teaching strategies, Number 2 – I am able to vary the strategies I use during a class period to better keep students involved in the class activities, Number 14 – There are fewer disciplinary problems or disruptions within the classroom. The results,

which are displayed in Table 2, reveal that the teachers agree that they had to change their techniques to meet the time demands of block scheduling. Teachers also agreed that they used different strategies and techniques. These changes in technique resulted in modest improvement in classroom behavior.

Table 2

Results from the Survey to Regular and Special Education Teachers

Categories and Survey Questions	Mean	SD
I. Teaching Strategies		
1. I have made changes to my teaching strategies	1.67	1.08
2. I am able to vary the strategies...to better keep students involved	1.62	1.09
14. There are fewer disciplinary problems	2.76	.87
II. Teaching Personalization		
3. I know my students better and established a better rapport	1.81	1.1
9. I am better able to personalize my approach	2.1	1.06
10. I am more accurate in assessing level of understanding	2.24	.87
12. I know more about my students' learning styles	2.33	.78
III. Meeting Needs of Students		
5. I am better able to meet the needs of students at differing levels of ability and/or readiness	2.33	1.13
6. High functioning students are served well	1.71	1.08
7. Average students are served well	1.95	1.09
8. At-risk students are served well	2.33	1.46
13. I am better able to assess the individual needs of students	2.24	1.06
IV. Quality of Work		
4. I have seen improvement in the quality of work	1.81	1.1
11. Students are more productive	2.0	.69

V. Block Scheduling Negatives		
17. Students have more difficulty keeping organized	3.86	1.17
18. Students have difficulty transitioning	3.43	1.14
19. Absences have become more detrimental to success	2.57	1.29
VI. Special Education and its Services		
15. In-class support teaching works well under block scheduling	2.47	.98
16. Block scheduling and inclusion fit well together	3.10	1.18
20. The need for support from special education has increased	2.84	.99

The next series of questions addressed whether or not teachers felt that block scheduling gave them a better understanding of their students' needs. The four questions asked were: Number 3 – I know my students better and have established a better rapport with them, Number 9 – I am better able to personalize my approach with students, Number 10 – I am more accurate in Assessing my students' level of understanding, Number 12- I believe that I know more about my students' learning styles. The results, revealed in Table 2, found that the teachers have a better rapport with their students and can better personalize lessons. Similarly, the teachers felt more confident in assessing their students and understanding their students' learning styles.

Table 2 outlines the results of questions that wondered if block scheduling is meeting the needs of the students. The questions on this topic were: Number 5 – I am better able to meet the needs of students at differing levels of ability and/or readiness, Number 6 – High functioning students were well served, Number 7 – Average students are well served, Number 8- At-risk students are well served, Number 13 – I am better able to assess the individual needs of my students. Collectively, the results indicate that teachers feel that average and higher functioning students are better served using block

scheduling; whereas, the score for at-risk students was closer to neutral. These teachers reveal that they were better able to assess individual needs, which is the same score as Question 10, which asked about accuracy in assessing student understanding.

Two of the survey's questions involved the quality of student work. Question 4 stated: "I have seen improvement in the quality of work my students produce", and Question 11 stated: "Students are more productive". The results indicate that the teachers feel that not only are students more productive but that the quality of work is better under block scheduling.

The survey also addressed topics that background research indicated are negatives with block scheduling. The statements were: Number 17 – Students have more difficulty keeping organized than under traditional schedules, Number 18 – Students have difficulty transitioning from one activity to another, Number 19 – Absences have become more detrimental to students success. The experiences of these teachers show that student organization and transition of lessons is not a serious concern, however, the score of 2.57 in regards to absences indicates slight concern in that area.

The three statements that specifically addressed special education and its services were: Number 15 – In-class support teaching (two teachers) works well under block scheduling, Number 16 – Block scheduling and inclusion fit well together, Number 20 – The need for support from special education teachers has increased. The results, as displayed in Table 2, indicate fairly neutral scores. This could mean that the needs of students with special needs are being met. The results, especially of Question 20, could indicate that the respondents were unclear as to what was being asked. Question 20 wondered if the need for special education support has increased. If a teacher is uncertain

as to what services are available, it would be difficult to answer this question. The other questions reveal that service delivery is fine, which should mean that Question 20 would have a negative response, but that was not the case.

Special education teachers were asked to complete an additional survey (see Appendix B). These questions addressed the needs of students with learning disabilities, the focus of the study.

Table 3

Results from Part One of the Survey to Special Education Teachers

Question	Mean	S.D.
1. Student learning has been enhanced using block scheduling.	2	1.10
2. In-class support smoothly adjusted to block scheduling.	2.4	1.02
3. Pull-out services, such as speech, fit into the schedule without significant disruption.	3.8	1.17
4. Because of the longer instructional time, students retain information better.	3	.63
5. Students verbally respond positively to the block schedule.	2.8	1.17

A Likert scale with 5 points was used for this survey (See Table 3). A 1 indicates “strongly agree” while 5 means “strongly disagree”. Question 1 asked if students learning had been enhanced using block scheduling. Five teachers responded with an average score of 2 (S.D. 1.1), indicating that the teachers felt that block scheduling did help improve the learning process. Question 2 asked if in-class support smoothly adjusted to block scheduling. The results had a mean of 2.4 (S.D, 1.02) indicating slight agreement with the statement. Question 3 wondered if pull out services (e.g., speech) fit

into the schedule without significant disruption. The teachers responded with a score of 3.8 (S.D. .63), indicating that pull out services are disruptive. Question 4 stated: “Because of the longer instructional time, students retain information better.” The teachers responded with a mean of 3 (S.D. 1.17). This indicates a divided, neutral score. Question 5 wondered if students respond positively to block scheduling. The score was 2.8 (S.D. 1.17) indicating that students do not have strong feelings one way or another regarding block scheduling.

The second section of the special education survey asked two yes/no questions with room to follow up. The first question asked whether or not there had been changes in special education paper work since the implementation of block scheduling. All 4 respondents indicated no and did not offer any explanation. The second question asked if there had been changes in curriculum and instruction since the implementation of block scheduling. Three respondents said no while one said yes. The one respondent changed his/her science and social studies block back to a traditional schedule to avoid the 6-month gap between the teaching of these subjects. In essence this teacher’s self-contained class is now a hybrid between block and traditional scheduling.

Section 3 of the special education survey contained two questions with a series of statements to be checked. Tables 3 and 4 display the results. The clearest advantage to block scheduling is the increased time for hands-on activities. In addition, teachers like their longer prep periods. It was also indicated that academic achievement improved. The biggest disadvantage was making up work after absences (80%). Teachers also indicated that students’ attention span may not be consistent with the time of block scheduling (60%).

Table 4

Which of the following are advantages to block scheduling with regard to special education? (check all that apply)

Response	Percent	Frequency N=5
Improved academic Achievement	40%	2
More time in regular ed. classes	20%	1
Fewer discipline problems	0%	0
Improved social interaction with peers and teachers	20%	1
More time for teachers to plan	60%	3
Time for hands-on activities in self-contained programs	80%	4

Table 5

Which of the following are disadvantages to block scheduling with regard to special education (check all that apply)

Response	Percent	Frequency N=5
Make up work after an absence	80%	4
Students' attention span	60%	3
Behavior problems	20%	1
Problems retaining information	20%	1
Academic achievement	0%	0
Frequency of instruction	20%	1

The final section of the special education teacher survey contained two open-ended questions. In the first, teachers were asked: "To what extent have the literacy skills (reading, writing, listening, and speaking) of students with learning disabilities been affected positively or negatively by implementation of block scheduling?" Only one teacher responded to this question. The teacher felt that the longer time allowed for more teacher-student contact, which makes it "easier to discern" if a student has a problem and then "help them get on track."

The other open-ended question asked whether the teacher would go back to traditional scheduling if given the opportunity. The five teachers responded. Four stated that they would not like to go back while one teacher answered “unsure.” The unsure teacher indicated that the previous schedule contained two periods for language arts, the same time currently allocated in the block. The only subject to receive longer time over the old schedule was mathematics. This teacher finds the extra time for math enjoyable because all concepts can be reviewed in the longer time allocated.

Finally, four special education teachers were interviewed individually. Each teacher was asked two questions: “How do you feel about block scheduling?” and “How have your students responded to block scheduling?” All teachers felt that block scheduling had its advantages. The consistent advantage was the flexibility of time. Within a block teachers could adjust lessons to include different activities, which help students with different learning styles learn the lessons. In addition, the teachers have time to really “know” their students. It is hard not to pick up weaknesses within such a long teaching period. Also, getting to “know” their students helps improve the learning atmosphere and reduce discipline problems.

One staff member who provides services to the classified students (e.g., speech therapy and counseling) raised concerns over block scheduling. This staff member has found it very difficult to schedule appointments under the block scheduling, calling it a “nightmare”. Classroom teachers do not want students pulled out of class. Also, since teachers try to “cram” so much in one day, missing a half hour causes the student to miss a large amount of work. Missing class work forces the student to finish the assignment for homework, which seems like a punishment for the student. In addition, the short

attention span of many students with learning disabilities limits their learning in such large blocks of time. This teacher stated that students were “grateful;” to get the break from the block.

Chapter 5

Summary, Findings, and Conclusions

Block Scheduling refers to a school schedule where classes meet for a block of sixty minutes or more. The larger blocks of time are believed to enhance student learning by providing the flexibility that allows for a diversity of instructional activities. The use of block scheduling has increased significantly during the past decade. In their study Canady and Rettig (1995a) found that after two years on block scheduling 80% of the teachers felt that they prefer the block scheduling and would not want to go back to the traditional schedule. The research completed in this study confirmed this generalization, at least among special education teachers.

Teachers' Perceptions

A majority of the special education teachers felt as though block scheduling was a positive change, and given the opportunity to return to the traditional form of scheduling, 80% said they would rather remain in the block schedule format. The participants felt as though the advantages of block scheduling are: improved understanding of students' needs and improvement in student work both in quantity and quality. Despite these overall improvements, the special education teachers responded with a neutral score to the question that wondered if students were able to retain information better because of the longer instructional time permitted with block scheduling. In addition, the first survey indicated that collectively all teachers were more confident that the needs of high functioning and average students were being met than the needs of at-risk students. These results reiterate the idea that an

empirical study is needed to measure whether or not students learn better under block scheduling.

Eisenberger, Bertrado, and Conti-D'Antonio (2000) felt that an advantage to block scheduling was that it was easier for teachers to adjust their instructional strategies to meet the needs of the students. The responses to the questionnaires in this study indicate similar results. A mean score of 2.1 out of 5 reveals positive agreement with the statement that teachers could better personalize lessons under block scheduling. Similarly, a mean score of 2.33 out of 5 on the question involving the assessing of learning styles demonstrated that teachers feel that the longer time in a block can allow for different and/or more appropriate assessments. Having a better understanding of students' abilities and their modality of learning should help teachers with their instruction and facilitate learning.

Teachers' Concerns

Research by Snell, Lowman, and Canady (1996) found that pull-out support services worked well in block scheduling, which is surprising since this survey found the opposite to be true. Pull-out services, such as speech and counseling, were considered by the special education teachers to be disruptive to the learning process. Taking a student from class, even for just a half hour, caused the student to miss a large amount of work. Then, many of the teachers required the student to make up the work. This caused the student to view going to speech or counseling as a punishment, which interferes with the success of that service.

Classroom teachers felt that there are somewhat fewer disciplinary problems

under block scheduling, which confirms findings by Santos and Rettig (1999).

Concerns regarding student organization and wasted time in transitioning lessons, which appeared in background research, were not substantiated by this study.

Besides the published advantages to block scheduling, there have also been documented disadvantages to this scheduling that were cited in the review of literature. The two major disadvantages seemed to be: (1) concern over missed work because of absences and (2) concern whether or not students could stay attentive for the longer blocks of time. This study asked both regular and special education teachers whether absences had become more detrimental to student success under block scheduling. Their response (mean 2.57) indicates slight concern, which is similar to other research (e.g., Edwards, 1995; Hurley, 1997; Santos & Rettig, (1999), and Weller & McLeskey, 2000). When special education teachers were asked if making up work because of absences was a disadvantage to block scheduling, 80% of these teachers agreed. In a personal interview a person who pulled out students for special services said that students were usually grateful to get out of class. This person's impression was that the students could not stay focused for the entire block.

Limitations

The subjects in this study were middle school (6-8) special education and regular education teachers from a small school district in southern New Jersey. Because of the limited number of teachers and schools, the results may need to be validated by further studies in different regions and school districts throughout the nation. Additionally, the study was dependent upon a self-reported survey, and completion of the survey was

voluntary and no special time was granted for its completion. Therefore, the returned surveys may not be a true representation of teachers from the southern region of the state. Finally, only one school participated in this study. This number is considered too limited to generalize findings to a certain geographic area or population.

Recommendations

Based on the results of this study, the following recommendations for future research are made:

It is recommended that a more advantageous method for pull-out services be investigated so that these services can more compliment the classroom environment rather than conflict with it. It is recommended that some procedure or program be established to help students make up work missed due to absence. The participants for this study were limited to middle school teachers within one south Jersey school. It is recommended that a study be conducted to include a large number of participants from a wider geographic area. Because of the limited number of special education teachers in this study it is recommended that a future study utilize a district with more special education teachers. It is recommended that teachers continue to receive training in different instructional strategies to keep students actively learning and as focused as possible within the block framework.

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Appendix A

Block Scheduling Teacher Survey

I would like to know how you feel about teaching using block scheduling and how you think it affects students with learning disabilities.

Please use the scale of 1 to 5. 1 being Strongly Agree and 5 being Strongly Disagree.

As a result of our block schedule:

1. I have made changes to my teaching strategies.
1 2 3 4 5

2. I am able to vary the strategies I use during a class period to better keep students involved in the class activities.
1 2 3 4 5

3. I know my students better and have established a better rapport with them.
1 2 3 4 5

4. I have seen improvement in the quality of work my students produce.
1 2 3 4 5

5. I am better able to meet the needs of students at differing levels of ability and/or readiness.
1 2 3 4 5

6. High functioning students are well served.
1 2 3 4 5

7. Average students are well served.
1 2 3 4 5

8. At-risk students are well served.
1 2 3 4 5

9. I am better able to personalize my approach with students.
1 2 3 4 5

10. I am more accurate in assessing my students' level of understanding.
1 2 3 4 5

11. Students are more productive.

1 2 3 4 5

12. I believe that I know more about my students' learning styles.

1 2 3 4 5

13. I am better able to assess the individual needs of my students.

1 2 3 4 5

14. There are fewer disciplinary problems or disruptions within the classroom.

1 2 3 4 5

15. In-class support teaching (two teachers) works well under block scheduling.

1 2 3 4 5

16. Block scheduling and inclusion fit well together.

1 2 3 4 5

17. Students have more difficulty keeping organized than under the traditional schedule.

1 2 3 4 5

18. Students have difficulty transitioning from one activity to another

1 2 3 4 5

19. Absences have become more detrimental to student success.

1 2 3 4 5

20. The need for support from special education teachers has increased

1 2 3 4 5

Please answer the following questions in the space provided:

1. Including this school year, how many years have you taught special education? _____
and/or regular education? _____
2. Of those years in question #1, how many have been in a traditional schedule? _____
How many have been in a block schedule? _____

Appendix B

The following questions are for **special education** teachers ONLY:

Rank the following statements as you did before, however these apply specifically to students with learning disabilities (1 being Strongly Agree and 5 being Strongly Disagree):

1. Student learning has been enhanced using block scheduling.

1 2 3 4 5

2. In-class support smoothly adjusted to block scheduling.

1 2 3 4 5

3. Pull out services, such as speech, fit into the schedule without significant disruption.

1 2 3 4 5

4. Because of the longer instructional time, students retain information better.

1 2 3 4 5

5. Students verbally respond positively to the block schedule.

1 2 3 4 5

1. Have there been changes in special education paperwork since the implementation of block scheduling?

If yes, please explain these changes:

2. Have there been changes in curriculum and instruction since the implementation of block scheduling has occurred?

If yes, please explain these changes.

a. Curriculum:

b. Instruction:

3. Which of the following are advantages to block scheduling with regard to special education? (Check all that apply)

- Improved academic achievement
- More time in regular education classes
- Fewer discipline problems
- Improved social interaction with peers and teachers
- More time for teachers to plan
- Time for hands-on activities in self-contained programs

Feel free to add any other advantages you have experienced:

4. Which of the following are disadvantages to block scheduling with regard to special education? (Check all that apply)

- Make up work after an absence
- Students' attention span
- Behavior problems
- Problems retaining information
- Academic achievement
- Frequency of instruction

Feel free to add any other disadvantages you have experienced:

5. To what extent have the literacy skills (reading, writing, listening, and speaking) of students with learning disabilities been affected positively or negatively by implementation of block scheduling?

6. Would you go back to traditional scheduling if given the opportunity? _____

Why or why not?

Appendix C

February 7, 2002

Dear colleagues:

In May I hope to earn a master's degree in special education. To reach that goal, I must write a thesis, and I need your help to accomplish this. My paper investigates the effects of block scheduling on the academic performance of students with learning disabilities. Since I have no experience using block scheduling, your input is essential.

The data gathered and the conclusions drawn are to satisfy my own curiosity as well as to meet a graduation requirement; it will not be part of a campaign advocating or criticizing Pitman's use of block scheduling. Please feel free to add any personal insights to the survey. The surveys are confidential, so please do not add your names to them. To maintain the confidentiality I ask that you return the surveys to me in the high school through inter-department mail. Please return by February 14th.

Thank you all in advance,

Paul Blass