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INNOVATIVE SCHEDULING

by
Brian J. Barg

A Thesis

**Submitted in partial fulfillment of the requirements of the
Master of Arts Degree
of
The Graduate School
at
Rowan University
April 10, 2003**

Approved by

Date Approved April 10, 2003

Abstract

Brian J. Barg

Innovative Scheduling
2003
Dr. Theodore Johnson
School Administration

The purpose of this study was to develop an academic schedule that was well-thought, thorough, consistent, and beneficial to students' academic achievement. The use of a block scheduling formula for the high school meant providing students and teachers with an opportunity to innovatively and creatively interact in the learning process, while using time-on-task in an efficient manner. Utilizing an innovative schedule determined how teachers used pedagogy to improve academic performance. Innovative scheduling made a contribution to scholarly research, scholarly work, student interest, and cooperative learning.

The intern reviewed research regarding the advantages of block scheduling. In order to gather input regarding innovative scheduling, the intern sent memos to local administrators and distributed surveys to approximately 120 students and 120 faculty members of Pennsauken High School.

Major findings indicated that block scheduling was effective if thorough teacher training was provided by the school district. Teachers and students had mixed views of block scheduling. Findings indicated that innovative schedules were effective if electives were double periods and major classes were single periods.

Mini-Abstract

Brian J. Barg

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School Administration

The problem was to determine an efficient high school schedule. Utilizing surveys, an innovative schedule was determined in which major subjects should be taught one period per day, daily. Science labs, related arts, and physical education should incorporate double periods so the activities and closing procedures can be completed efficiently.

Acknowledgments

First of all, I like to thank Ms. Joelle Wagner-Lynch, English Teacher at Creative Arts High School, for editing my thesis on Innovative Scheduling. I appreciate her time and effort not only to correct my grammatical errors, but also to provide support and encouragement to fulfill my ambition to become an Assistant Principal. Secondly, I like to thank Ms. Annette Castiglione-Degan for helping to get through the last two years of graduate school. The support that we had for one another in times of need to not only educate adolescents, but also to get through the situations that transpired in our personal lives, was the epitome of friendship.

Thirdly, I would like to thank Ms. Davida Coe, Principal of Creative Arts High School. Ms. Coe entrusted me to develop schedule both staff and students for the school years 2001-2002 and 2002-2003. She has always been a strong supporter for educators pursuing higher degrees and ambition. Fourthly, I like to thank Mr. William Clarke, Principal of Pennsauken High School, for permitting me to conduct my research projects as well as this thesis. Mr. Clarke told the faculty at a meeting that not only he supported my work and encouraged others to help out with any information that I required, but also to always go further in education to better yourself.

Lastly, I would like to thank my advisor, Dr. Ted Johnson, for being a positive role model for all administrators, both young and experienced, to look up to. Dr. Johnson's pragmatic guidance permitted to complete my thesis and other projects.

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Chapter 1

Introduction

Focus of the Study

The focus of this study was to use a block scheduling formula for high schools in order to provide students and teachers with an opportunity to innovatively and creatively interact in the learning process, while using time-on-task in an efficient manner.

Purpose of the Study

The purpose of this study was to describe and evaluate the effectiveness of 4 x 4 block scheduling in the delivery of instructional services to high school students using a multi-community-based action research design. The intern's intent, as a result of implementing this project, was to inform teachers, administrators, board members, students, and parents on innovative scheduling for their respective school.

The intern wanted to prove that either the 4 x 4 (four by four) schedule or an eight-period 45 to 50 minute classes was the most fundamental arrangement for both students and teachers. The objective was to discover schools, who implemented 4 x 4 block scheduling, that displayed a decline in student failure rates and drop out rates, and an increase in graduation rates. Class lectures were reduced and more active student engagement was generated. In addition, the use of media center materials and the use of technology was increased. Schedules that incorporated eight periods had provided students with the opportunity to complete more five credit classes during the year. For a selected group of students this seemed to lead to the completion of additional math classes

as well as advanced placement in other academic classes. Students also had opportunities to take classes in vocational areas and in the performing arts.

In 4 x 4 block scheduling, students would have been able to repeat a class over in the second semester if necessary due to failure. If there was an increase in the number of students on the Honor Roll, then the overall GPA for the school should have also increased.

Definitions

Block Scheduling - a strategy for rearranging the school day to establish longer periods of uninterrupted classroom time for student learning and instruction

4 x 4 Block Scheduling - a form of block scheduling in which four classes are scheduled every day for the first semester and four different classes for the second semester*

* Students may retake a class in which they failed during the first semester.

A/B Block Scheduling - a form of block scheduling in which the same four classes are scheduled every other day

AP Exams - Advanced Placement Exams are offered during the Spring. Students who earn a score of 3, 4, or 5 will earn college credit for the respective class.

Pedagogy - the art and science of educating children and is often used as a synonym for

teaching. More accurately, pedagogy embodies teacher-focused education. In the pedagogic model, teachers assume responsibility for making decisions about what will be learned, how it will be learned, and when it will be learned. Teachers direct learning.

Multi-community-based action research - a community that consists of several ethnicities, such as Caucasian, Hispanic, black, Asian, in which a group of people identifies a problem, does something to resolve it, sees how successful their efforts were, and, if not satisfied, tries again (<http://www.web.net/~robrien/papers/arfinal.html>, 1998).

Limitation and Delimitations of the Study

The size of the local population was approximately 100 teachers and 1915 students. Resources were the Principal, the Schedulers, Central Administration, guidance counselors and academic teachers. The delimitations of the study will be students and teachers who do not want to cooperate with the study.

Settings of the Study

The primary setting is Pennsauken High School (PHS), located in Pennsauken, New Jersey. PHS is located in Northern Camden County, near an industrial park and a major highway. Pennsauken is a suburban middle class community of approximately 35,000 people that has some urban characteristic. Its 10.5 square miles are home to people of diverse cultural and economic backgrounds. The school district provides education for approximately six thousand students in grades pre kindergarten through 12.

For the 2002-2003 calendar year, a first year teacher with a BA degree will earn \$39,500 and a teacher with seventeen years and a MA degree plus 30 additional master credits will earn \$74,500. The head football coach of PHS, who is paid the highest from all other head coaching positions, earns \$7,850.

Pennsauken High School (PHS) is a four-year high school, which was built in 1959. It is located on 50 acres of rolling hills, surrounded by an athletic complex. PHS provides a comprehensive curriculum which includes a diversified and flexible program of studies and activities to help students develop into effective responsible members of society. PHS offers students more than 200 courses to help prepare for careers or higher education. Selected courses are offered in association with local universities, colleges, and summer and after school programs. According to a PHS guidance counselor, students who enroll at PHS in ninth grade, about 95% graduate and 75% attend a college or university.

PHS offers a full comprehensive college preparatory program with nineteen advanced placement courses in Chemistry, Physics, Biology, Anatomy, Physiology, English, social studies and foreign language. College preparatory mathematics courses ranges from Algebra to Calculus. Social studies' courses include Psychology and Sociology. Advanced courses in Japanese and Russian, micro/macro economics, probability, statistics/discrete math and world geography are offered via satellite. Students with broadcasting in their future can take part in the districts modern television studio and TV station, WPSS-TV, which telecasts 24 hours a day on Channel 19.

The Related Arts/Technology program is extremely varied with multi-year

offerings in six major vocational/technology areas. These include Building Technology, Concrete/Masonry, Auto Technology, Drafting Technology, Electronics Technology, and Graphics Technology. These courses are augmented by elective courses in the related arts area and three (3) co-op work study programs.

Cooperative work study programs are offered in the senior year in business, distributive education, industrial arts and special needs areas. High technology is also part of the high school curriculum. Courses are offered in computer literacy, computer science, electronics, automotive, computer assisted drafting and computer-assisted art. Special Education and remedial instruction are available to students needing special help.

The co-curricular programs of PHS provide students many opportunities to get involved, such as the athletic teams, clubs, and activities. The music programs are known throughout the region. The Apache Band, Indoor Guard, Jazz Ensemble and Double Dozen have won many championships and accolades. Students have an opportunity to participate in a variety of extracurricular activities including service clubs, tutorial programs, drama clubs, school musicals, just to name a few, all of which enable them to utilize and develop their special skills and talents. In addition, the high school offers a comprehensive athletic program in all major sports, interscholastic for the competitive and intra scholastic for fun. With a variety of school activities, all students will have their opportunity for academic, athletic or social development (<http://www.pennsauken.net/xhigh.html>,” 2001).

The intern located area high schools that utilized block scheduling. Sterling High School, located in Somerdale, NJ, incorporated 4 x 4 Block Scheduling. Rancocas Valley

Regional High School, located in Mount Holly, NJ, incorporated 5 x5 Block Scheduling. Haddon Heights High School, located in Haddon Heights, NJ, incorporated a hybrid form of block scheduling. The settings were chosen because their schedules were reflective for the intern's research.

The intern worked for the Camden City School District for more than nine years as a Mathematics Teacher. The past two years and one month, the intern taught mathematics and arranged scheduling for Creative Arts High School (CAHS). CAHS was located in a drug infested and run down section of South Camden. When walking to and from school, students must frequently face the following obstacles: dilapidated buildings, violence, prostitution, and drug distribution. This was rampant throughout the city. Camden was ranked 2nd in the country as the poorest city. (East St. Louis, Illinois was ranked #1.)

The educators of Creative Arts High School were providing students with a thorough and efficient education, in addition to the following extra curricular activities: LEAP (after school tutoring), drama (plays), gospel choir, madrigals, and mural design. In addition, students may participate in NJSIAA structured athletic programs at either Camden High or Woodrow Wilson High School.

Creative Arts High does not use block scheduling except for their major classes. However, their Math and Verbal SAT Prep classes for 11th grade will be blocked. Students will have either Verbal or Math SAT Prep 11 on Mondays, Tuesdays, and Wednesdays during 7th and 8th period. Then, they will have either Math or Verbal SAT Prep 11 on Thursdays or Fridays. Camden High unsuccessfully utilized A/B Block Scheduling from 1996 to 2001.

Significance of the Study

Utilizing effective block scheduling has determined how teachers use their pedagogy to improve academic performance. Innovative scheduling has made a contribution to scholarly research, scholarly work, student interest, and cooperative learning. There were several positive aspects of the 4 x 4 Semester Schedule as compared to the A/B schedule. With 4 x 4 scheduling, teachers were responsible for fewer classes during each semester. Students had fewer classes, exams, and above all, less preparation. Teachers' record-keeping was more manageable. It was simpler to speed up high achieving students. They had the opportunity to graduate after the first semester of their senior year. Fewer textbooks were needed. It was easier to provide extended learning time and class repeats to struggling students. Hopefully, teachers and students will have indicated that the school term was less stressful. In the A/B schedule, students were situated in their respective classes on alternate days.

Organization of the Study

The remainder of this study was the following:

- Chapter 2 Review of Literature
- Chapter 3 The Design of the Study
- Chapter 4 Presentation of Research Findings
- Chapter 5 Conclusion, Implications and further studies

Chapter 2 was a review of literature that contained important information about the intern's research articles on innovative scheduling. The main idea of innovative

scheduling, how to select an innovative schedule, the design of innovative scheduling, and the pro and cons of block scheduling were discussed.

Chapter 3 was the design of the study. This section addressed five areas related to the research design used for the study. The first area was a general description of the research design. The second area was a description of the sample and sampling technique used in the study. The third area was a description of the sample and sampling technique used in the study. The fourth area was a description of the data collection approach. The fifth area was a description of the data analysis plan.

Chapter 4 was the presentation of the research findings. This section answered two major questions, “How was the information on Innovative Scheduling found?” and “What did the information on Innovative Scheduling mean?”

Chapter 5 was the last chapter of the thesis that described the study’s major conclusions and their corresponding implications. It also highlighted the conclusions and implications of the study on the intern’s leadership development. It addressed how the organization changed as a result of the study.

Side Topic

Another topic to consider that may be beneficial to 4 x 4 block scheduling was early graduation. We have heard stories about young geniuses graduating from high school at the age of 12 and medical school at the age of 18. These people are few and far between. However, both the Camden Board of Education and Pennsauken Board of Education both do not have a policy to graduate students early, such as after their third

year of high school.

As freshman, students could be permitted to take English 9, English 10, Geometry, Algebra 2, Physical Science, Global Studies, Health and Physical Education. During summer school, students could be permitted to take Art and Biology. During their sophomore year, students could be permitted to take English 11, Trigonometry, Chemistry, History 1, Spanish 1, Music, Health and Physical Education. Finally, during their junior and final year, students could be permitted to take English 12, Spanish 2, Calculus, Physics, History 2, study hall (no credit), Health and Physical Education.

If students were to complete their classes in the fore mentioned paragraph, then it would be mathematically possible to have enough credits (110) to graduate from high school in the State of New Jersey in three years.

Chapter 2

Review of Literature

Introduction

The main idea of innovative scheduling was to develop an academic schedule that is well-thought out, thorough, consistent, and beneficial to students' academic achievement. The research obtained was a reflection of block scheduling. Unlike a traditional eight period school day, block scheduling required students to attend four classes per day for approximately 80 minutes, provided the previous year's classes were 40 minutes long. In other words, block scheduling was developed for teachers to teach a class for 80 minutes. However, not every school, that has block scheduling, has 80 minute classes.

Block scheduling was designed to do the following:

1. Reduce the number of discipline referrals to the office.
2. Reduce the number of class tardiness.
3. Reduce the number of absenteeism for both students and teachers.
4. Reduce the stress level for both teacher and student, since they have fewer classes to cope with.
5. Reduce the class lecture and generate more active student engagement.
6. Increase the use of media center materials.
7. Increase the use of technology.

Review on the Problem

From the research that the intern gathered from the Center for Innovative School Scheduling and from discussions with former colleagues, the 4 x 4 schedule might be the most advantageous to both students and teachers.

However, in the 4 x 4 Schedule, the following challenges must be addressed. AP classes must be scheduled with consideration given to the testing dates. Since the AP exams are offered in May, AP classes should be scheduled during the Spring semester. Consider this, would students be able to handle a double period of AP English, AP Calculus, and AP Biology in one day for every day in one semester? Math teachers must establish curriculum and pacing guides. Level two foreign language classes must be scheduled as close to Level 1 as possible. Band and other year-long classes must be scheduled outside the 4 x 4 format so students can prepare for assemblies, plays, sports, and off campus performances. Provisions must be made for transfer students and for students who have excessive absences.

Review on Major Concept Related to the Problem

The intern wanted to know where has it been proven that 4 x 4 Block Scheduling had been more successful than either A/B Block Scheduling or Eight Period scheduling and, in general, where had block scheduling been successful? Had it been more successful in the suburban areas or in the urban areas? In addition, the intern wanted to determine if Pennsauken High School should use the 4 x 4 scheduling formula beginning or continue with an eight-period bell schedule that includes lunch and study halls in the 2003-2004

school year.

Continue with Major Concepts Until You Have Completed the Review

Block scheduling is a strategy for rearranging the school day to establish longer periods of uninterrupted classroom time for student learning and instruction. The article presented the experiences and preliminary outcomes of the 4 x 4 block scheduling model used at Allentown High School, which is located in New Jersey's Upper Freehold Regional School District. The quality and quantity of classroom time were important due to the fact that American students spend less time in core academic subjects than students in Germany and Japan. However, not all schools have benefitted from block scheduling. More rigorous studies to substantiate claims of effectiveness were needed. In the 1997-1998 school year, Allentown High School initiated four 85-minute blocks of time (Evans, Rice, Sokolow, Sloan, and Vona, 1994).

In order to render a thorough assessment of the new scheduling model, district educators looked at changes in instructional pedagogy, changes in the curriculum experienced by students, and changes in the school climate. The faculty examined the impact of implementing block scheduling using two sets of assessment measures. The first involved surveys: one for students and one for teachers. The surveys, which were distributed in May 1998, focused on the perceptions of each group in the context of the new scheduling arrangement. The second involved examination of school records to determine specific outcomes for both students and teachers under the new plan. More than 75% of the teachers felt better after utilizing block scheduling. The most significant

changes transpired in instructional practices, assessment practices, and student involvement in the instructional process. The results indicated that block scheduling could be a catalyst for positive change (Evans et al, 1994).

However, opponents of block scheduling indicate that schools have reported negative results. A few Canadian studies have displayed declines in student achievement. While no study was precise, there were two that was intriguing. A study by the Canadian Ministry of Education and Training and one by the College Board in relation to performance on advanced placement tests illustrated no strong positive effect on student achievement. Student transfers to and from schools with block scheduling can be highly problematic. For some subjects, an entire year's curriculum was wasted due to a midyear transfer ("Block Scheduling," 1999).

The purpose of implementing block scheduling in schools and around the country was to positively effect the classroom atmosphere. Educational Research Services indicated that instructional activities were often varied by teachers. In addition, teachers were getting to know their students better as a result of block scheduling. For the teacher, the classroom climate was often structured by the time constraints imposed on him or her to get things done during the course of a class. At HTMS Monmouth County, a student's day was divided into five periods and the typical class lasted for seventy minutes. Teachers from each academic area in the school provided lessons using the internet and other computer on-line services. Based on a poll, 87% of the students believed that longer periods induced positive classroom atmosphere. On a survey, there was at least one pupil who indicated that longer periods permitted for greater interest in the subject since the

teacher was given the opportunity to involve the students to a greater extent and at a higher level (Cawelti, 1994).

The 1994 report of the National Education Commission on Time and Learning stated, "Schools will have a design flaw as long as their organization is based on the assumption that all students can learn on the same schedule." Scheduling changes were usually linked to decreased reliance on the standard pattern of lecture, discussion, and class work, and an increase in individualization and creative teaching strategies. They were often part of a major restructuring effort. Students who failed a course had an earlier opportunity to retake it, which enabled them to regain the ability to graduate on time. Teachers had fewer students to keep records and grades for each semester, and schools required fewer textbooks, which saved money for the school district. Teachers who were most successful in block scheduling planned lessons in three parts: explanation, application, and synthesis (ED393156, 1996).

Before major schedule changes were implemented, it was desirable to have a common vision, a sufficient plan, and strong support of all stakeholders. Ideally, the superintendent, school board, principals, teachers, students, and parents should be provided with opportunities to learn about the proposed innovations, and have plenty of opportunities to discuss the ramifications. Suggestions were the following:

- A presentation about the pros and cons of various block scheduling models
- Visits to schools that have block schedules
- Panel presentations by teachers from schools with block schedules
- Faculty discussion meetings, which lead to a vote or consensus

- Parent and community meetings
- Assemblies for students conducted by students from other schools or by their peers who have visited schools
- Distribution of relevant research data and implementation procedures
- School board presentations and approval
- Staff development that focused on the appropriate design of curriculum and use of extended blocks of time for instruction

Attempting smaller changes minimized the risks, but created fewer striking results and was also less likely to generate enthusiasm and commitment. To be successful, the change must have addressed a need, benefitted teachers' situation, and included detailed strategies (ED393156, 1996).

There have been studies that either supported or denounced the implementation of block scheduling. Most of these studies supported the longer traditional schedule with science as the catalyst over the 4 x 4 block, yet support the 4 x 4 block schedule with math and social studies as the factors. As previously mentioned, graduation rates have also reported to benefit the 4 x 4 block schedule. There was a significant difference in Biology and English with a 4 x 4 semester schedule students achieving higher scores than the traditional schedule. However, there was a study that concluded there were no significant differences in student achievement between 4 x 4 semester and traditional schedule types in geometry and history (Veal and Scheiber, 1999).

Block scheduling has been in existence since the late 1960s, and it gained interest in the late 1980s as a viable scheduling model. With information on deeper learning by

students through sustained and uninterrupted interactions with their subject matter, it has been estimated that nearly 40% of American high schools had implemented or intended to implement some form of block scheduling, which was an indication of validity to its popularity as a flexible scheduling option. There were four general models of block scheduling: 4 x 4 Semester Plan, Alternative Day Plan, Trimester Plan, Extended-Time Plan (Cobb, Abate, and Baker, 1999).

The primary factor in the reduction of opportunities for some students to continue with a sequential course of study for performance art classes was scheduling conflicts. If we were able to provide the most opportunities for students, then we must identify the problems that some have had with block scheduling and attempt to find solutions to these scheduling queries. One of the areas which required attention in many schools was student enrollment in consecutive semesters and consecutive years of arts performance classes. Since classes on the full block schedule often completed an entire year's credit in one semester, many did not understand the need for sequential year-round instruction in arts performance classes ("The Impact of Block," 1997).

Locally, block scheduling was implemented in each high school of the Camden City School District in 1996. Block scheduling was not successful due to inconsistency. From 1995 to 2000, daily periods were arranged differently each school year and HSPT scores declined. Thus, the graduates of the classes of 1999 and 2000 all had to adapt to a different scheduling arrangement each year. Medical Arts was the only high school that implemented the 4 x 4 block scheduling, while Camden High and Woodrow Wilson implemented the A/B version of block scheduling. Although the A/B schedule was posted

in each homeroom and issued to each student, many students arrived to school not knowing what day it was, especially on Mondays or after being absent due to an illness or personal reasons. Many of the teachers expressed concern because they could not get to know their students on a daily basis. In addition, teachers had to write different daily lesson plans each year even though they taught the same subject each year. Furthermore, the Creative Arts High School, which opened in 1999, has double performing arts class periods (“www.camden.k12.nj.us,” 2000).

Conclusion

Innovative Scheduling has application to the ISSLC standards. Standard two states “A school administrator is an educational leader who promotes the success of all students by advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth.” By referring to this standard, scheduling involved treating both students and teachers with fairness, dignity, and respect. As a colleague, the intern must listen to teachers’ request for them to teach certain subject areas and to divide classes into academic levels, which the intern has always been a proponent for. By involving teachers, especially on my scheduling committee, the intern was asking the students and staff to feel valued and appreciated. The intern has made it a point to acknowledge the responsibilities and contributions of each individual not only on my team, but those who have provided input because scheduling revolves around every staff member and student (Ubben, Hughes, and Norris, 2001).

The barriers to student learning have been identified, clarified, and addressed through IEP reports, parent-teacher conferences, and team and faculty meetings. Special need students required special scheduling. For instance, these students may have been situated in resource rooms for English and Mathematics where they received one-to-one instruction by the special education teacher.

From analyzing SAT and HSPA scores, having discussions with local and central administration, and distributing surveys to both staff and students, the intern will have determined whether Pennsauken High School should continue its schedule of an eight period day or implement 4 x 4 block scheduling.

Chapter 3

Design of the Study

Introduction

The intern addressed this thesis on innovative scheduling because it was imperative for students and staff members to have schedules that were geared toward learning as well as an effective organization delivery process. What the intern intended to do with innovative scheduling was to ascertain the best scheduling model for Pennsauken High School by comparing and contrasting block scheduling to traditional scheduling. Teachers who have been accustomed to traditional scheduling may not want to change their pedagogy for an 80 to 85 minute period due to an anxiety of filling 80 to 85 minutes of instructional time. Students who have short attention spans and are not on the college preparatory track may be bored with the longer period and find it difficult to concentrate for 80 to 85 minutes. The students must realize that they will not be lectured for 80 minutes; even the intern would not have the ability to focus on the objective of the teacher's lesson. The intern has had professors who lectured for more than two hours, which resulted in information that was neither comprehended nor synthesized into a general understanding of the professor's lesson.

On the other hand, teachers would be able to develop cooperating groups, utilize technology, such as graphing calculators to illustrate the graphs of linear, quadratic, and trigonometric functions, and laptops for researching people and events for term papers.

General Description of the Research Design

The intern developed steps to implement innovating scheduling at Pennsauken High School. However, the readers must understand that the intern resigned from the Camden Board of Education on July 30. A few of these steps were based in Creative Arts High School in the Camden City School District. For instance, in July, the intern scheduled teachers by subject, period, and room number. The intern made modifications to teachers' schedules at the principal's request. In August, the intern scheduled students by grade level, major, and other classes. Majors consisted of double periods throughout the year. Verbal SAT Prep and Math SAT Prep were blocked during 7th and 8th period for the entire year. It was essential for students to receive the math and verbal background of the SAT throughout the year. Half of the Junior class was scheduled for Verbal SAT Prep on Mondays, Tuesdays, and Wednesdays and Math SAT Prep on Thursdays and Fridays. The other half of the Junior class was scheduled for Math SAT Prep on Mondays, Tuesdays, and Wednesdays and Verbal SAT Prep on Thursdays and Fridays. Students who pass these classes will earn four credits because the pupils will have been in these classes at least four periods per week. Students who were weakest in mathematics received SAT Prep on Mondays, Tuesdays, and Wednesdays. The intern's justification was CAT-5 scores and proficiency in Algebra and Geometry. Students who scored in the bottom 50% of their class in mathematics were placed in Math SAT Prep on Mondays, Tuesdays, and Wednesdays.

In September, the intern made scheduling adjustments according to the students' academic needs and request. The intern wanted the teacher, guidance counselor, and Principal's approval for any scheduling alterations. On September 30, 2002, the intern

departed from the Camden City School District to teach and complete his internship at Pennsauken High School.

In October, the intern researched block scheduling models. The intern discovered the following schools in the Delaware Valley tri-state area that utilized 4/4 and A/B Block Scheduling: Sterling Regional High School and Rancocas Valley Regional High School. In December, the intern contacted administrators of these schools. The intern compared and contrasted student and staff attendance of each school. Results were based on the school year 2001-2002 and the first marking period of 2002-2003.

In January, the intern surveyed teachers from PHS. The survey primarily asked if teachers preferred block scheduling, then how would they structure their lessons if Pennsauken High School went to block scheduling? In addition, teachers were asked how would they incorporate technology with block scheduling? Furthermore, the intern met with the Guidance Department Chairperson of each school in order to receive the average SAT scores from October and November from each school.

In February, the intern analyzed the data as well as analyzed the success of the innovative schedules in Pennsauken High School, Creative Arts High School, Sterling Regional High School, and Rancocas Valley Regional High School. In March, the intern prepared a report of findings and presented the report to the Principal, his field mentor, to either maintain Pennsauken High School's current schedule or implement block scheduling based on the evidence of the surveys.

Development and Design of the Research Instrumentation

Surveys (see Appendix A) were given to the students and staff of Pennsauken High School. Questions were developed based upon theories of innovative scheduling. A separate survey was given to students. Two separate field tests were conducted with two teachers and two students in order to see if the questions were reasonable and understandable, and then, each survey was typed, distributed, collected, and analyzed. Each survey was one page and consisted of responses, such as strongly agree, somewhat agree, neutral, somewhat disagree, and strongly disagree; yes or no; sufficient or insufficient, and the quantity of classroom activities that should be taught during a lesson.

Description of the Sampling and Sampling Techniques

The intern distributed surveys to the teachers of PHS. The intern gave an additional 100 to 120 surveys to his students since they were readily accessible. The survey, which was a pre-class activity, was conducted ten minutes before the regular lesson commenced.

In addition, the types of data that was collected to prove the objective of this project were the results of HSPA and SAT scores. Low HSPA scores and SAT scores achieved by students who attended high schools without block scheduling may be an indication that the school should consider changing its schedule in order to raise test scores. However, schools with 80% passing HSPA scores and above-average SAT scores should not change their schedule, whether the classes are a traditional 40-45 minutes long or 70-82 minutes. If the academic progress of the school is not broken, then do not try to

fix it.

On the other hand, in depth knowledge of content area entails going deeper into instruction by delivering information in a variety of ways. Ascertaining college instruction and maintaining real world employment entails more in depth knowledge being utilized for longer than 45 minutes. Students must be acclimated to a longer period of academic work in order to keep up with the hustle and bustle of a steady and well-paid position of employment.

Description of the Data Collection Approach

It was public knowledge for the stake holders, school administration, teachers, and parents to receive their district's HSPA and SAT scores. However, it was not public knowledge, except for the local administration and teachers, to know an individual's test score. Data was collected by the guidance department, who received a copy of the scores from the State Department of Education (New Jersey). Copies of scores were given to mathematics, English, and literacy teachers in order for them to help raise test scores. Individual and group weaknesses were analyzed to devise strategies for better academic achievement.

Description of the Data Analysis Plan

The test scores and schedule from each school were compared and analyzed with charts and graphs. Since both the HSPA and SAT were divided into two categories: mathematics and literacy, there were two charts for each test. Furthermore, the students'

and teachers' surveys regarding the feasibility about block scheduling were analyzed against last year's scores. The intern came to a conclusion about which innovative schedule Pennsauken High School should begin with for the 2003-2004 by reviewing the surveys and identifying a correlation between test scores and scheduling. Teachers' and students' opinion were highly regarded since a new schedule will effect more than 100 teachers and 1900 students, as well as other staff members such as guidance counselors and hall monitors.

Chapter 4

Presentations of Research Findings

Introduction

Action research can become tedious and time consuming. However, action research is imperative in order to receive accurate information in developing a proposal. Once the concept has been proposed, the school district will then decide to accept or reject the concept. These are the themes that have been concentrated throughout this thesis.

1. Where has block scheduling been more successful? In the suburban areas? In the urban areas?

The 4 x 4 block scheduling was more successful in the suburban schools, such as Rancocas Valley Regional High School and Sterling High School than A/B Block Scheduling was had been in the urban setting, such as Camden High School.

In 1996-1997, the Camden City School District implemented block scheduling for their high schools: Camden, Woodrow Wilson, and Medical Arts High School, which was a magnet school. Block Scheduling did not succeed at Camden High because of scheduling inconsistencies.

Medical Arts was the only school that implemented the 4 x 4 block scheduling. In order to be accepted into Medical Arts, students' grades in middle school not only had to be exceptional, but they had to pass a written test and display an interest in the medical field. Camden and Woodrow Wilson implemented the A/B version of block scheduling. On "A" day, students went to Periods 1 to 4. On "B" day, students went to Periods 5 to

8. In other words, students saw their teachers for an 80 minute period every other school day. The reason why both schools did not implement the 4 x 4 schedule was due to student transfer. For many years, the Camden City School District has had a high student transfer rate. In 1996, most schools in the Delaware Valley (tri-state area) had not incorporated block scheduling.

The central administration did not want students who would transfer into Camden during the year from school districts that offered eight or more classes throughout the year into a district that offered four classes a semester. A typical 10th grader's classes could have been Geometry, English, Biology, Spanish 2, SAT Prep, U.S. History 1, and Health 10/Physical Education. A student, who transferred from a high school that offered only four of these classes, would have to catch up on any missed curriculum. It would have been especially difficult if the student did not have Spanish 2 or Geometry for the first month of school. However, the A/B schedule was not beneficial to Camden High School. Though the A/B schedule was posted in the classrooms and issued to students, many students arrived to school unaware what day it was, especially on Mondays or after being absent through an illness or personal tragedy. Several teachers expressed concern because they could not get to know their students on a daily basis. Many classes did not meet for several days due to Election Day, NJEA Convention, Winter recess, and Spring recess.

From 1995 to 2000, each academic year was arranged differently. The graduating class of 1999 and 2000 all had different schedule arrangements for their consecutive years at Camden High School. In other words, they had to adapt to a different scheduling arrangement each year. For five years, there was no scheduling consistency. Although,

many instructors taught the same subject each year, they still had to write different daily lesson plans every year. In 1995-1996, every class period was 40 minutes. From 1996 to 1998, every class period was 80 minutes. In 1998-1999, Camden High used a hybrid form of block scheduling. Classes were 40 minutes long on Monday, Thursday, and Friday. Classes were 80 minutes long on Tuesday and Wednesday. In 1999-2000, each class period was 80 minutes.

Teachers had to become creative with their lessons to fill an eighty minute period. Cooperative learning was utilized, but the intellectual abilities among the students in each class varied. The district would not establish tracking levels for their college prep classes. Therefore, students who wanted to learn showed up for class. Students who did not want to stay in class for 80 minutes, cut class, failed, and dropped out of school. Table #1 is an illustration of Camden High's scheduling from the years 1995 to 2000.

Table #2 is an illustration of five South Jersey high school's HSPT scores from 1996 through 2001.

Table #1

Camden High School's Class Bell Schedule

1995-1996	1996-1997		1997-1998		1998-1999			1999-2000	
no block scheduling	A-day Pd.1-4	B-day Pd.5-8	A-day Pd.1-6	B-day Pd.7-12	Mon. Thur. Fri.	Tue.	Wed.	A-day	B-day
Pd.1	Pd.1	Pd.5	Pd.1	Pd.7	Pd.1	Pd.1	Pd.5	Pd.1	Pd.7
Pd.2	Pd.2	Pd.6	Pd.2	Pd.8	Pd.2	Pd.2	Pd.6	Pd.2	Pd.8
Pd.3	Pd.3	Pd.7	Pd.3	Pd.9	Pd.3	Pd.3	Pd.7	Pd.3	Pd.9
Pd.4	Pd.4	Pd.8	Pd.4	Pd.10	Pd.4	Pd.4	Pd.8	Pd.4	Pd.10
Pd.5			Pd.5	Pd.11	Pd.5			Pd.5	Pd.11
Pd.6			Pd.6	Pd.12	Pd.6			Pd.6	Pd.12
Pd.7					Pd.7				
Pd.8					Pd.8				

Table #2

Grade 11 High School Proficiency Test Results

R - Reading, M - Mathematics, W - Writing, A - All sections

Year	State Average	Camden High	Haddon Heights	Pennsauken	Rancocas Valley	Sterling
1996-1997	R 92.5% M 94.1% W 94.0% A 88.5%	R 74.4% M 85.7% W 83.3% A 68.5%	R 97.8% M 96.4% W 94.9% A 82.7%	R 90.4% M 95.6% W 96.2% A 86.0%	R 97.5% M 95.7% W 96.1% A 91.4%	R 98.0% M 99.3% W 94.6% A 93.9%
1997-1998	R 93.0% M 90.9% W 93.0% A 86.7%	R 76.8% M 67.2% W 80.8% A 61.0%	R 94.6% M 96.0% W 97.3% A 91.9%	R 90.7% M 85.7% W 89.6% A 78.9%	R 94.6% M 91.0% W 97.0% A 90.1%	R 92.1% M 91.0% W 91.6% A 85.4%
1998-1999	R 89.4% M 92.0% W 93.1% A 85.1%	R 57.5% M 67.4% W 76.9% A 47.5%	R 92.7% M 93.9% W 95.1% A 89.6%	R 85.9% M 91.7% W 92.7% A 79.8%	R 94.8% M 93.1% W 96.2% A 90.2%	R 90.8% M 94.0% W 89.1% A 85.3%
1999-2000	R 90.2% M 92.3% W 91.9% A 85.1%	R 55.9% M 61.3% W 67.6% A 44.6%	R 90.6% M 93.8% W 93.0% A 89.1%	R 83.1% M 83.7% W 83.7% A 71.9%	R 91.8% M 94.1% W 94.1% A 87.9%	R 90.8% M 96.6% W 86.2% A 83.3%
2000-2001	R 89.9% M 91.4% W 94.1% A 85.8%	R 45.4% M 47.1% W 65.2% A 35.2%	R 92.4% M 94.3% W 94.3% A 88.0%	R 79.2% M 78.0% W 89.0% A 68.2%	R 93.0% M 93.8% W 97.8% A 90.3%	R 92.3% M 93.4% W 95.6% A 87.8%

The New Jersey School Report Card was discovered on the following web address

<http://evalsoft07.evalsoft.com/NJReportCard2001/njPDF/>. Click on "Choose by

County/District/School Number," highlight a county by clicking on it, click "Select

County," select the school district, and then the high school.

2. Is technology being utilized more in four 80-minute periods than during a typical eight 40-minute periods?

Students had more opportunity to develop their technological skills more during an 80 minute class than a 40 minute class. At Creative Arts High School, students learned how to prepare for their SATs via www.achieva.com. Since the SAT exam was more than two hours, students were able to sit at a computer for at least an hour and take practice SAT questions. When it came time for the students to take the real SATs, they had already become accustomed to sitting in one spot and taking a test for over a hour.

At Pennsauken High School, several classes were 90 minutes of which is Automotive Technology 3. As a automobile owner, how many times have we taken our automobile to the shop and we had to wait over an hour until the work was completed and explained? A 90 minute block prepared students for extreme time-on-task situations.

Biology, Chemistry, and Physics classes met four days a week for one period each. Biology, Chemistry, and Physics labs met one day a week for two consecutive periods. Scientific experiments needed time to develop and accurate results needed to be recorded. Clean up time was essential so that the next lab students and teacher would begin their work in a clean and safe environment.

Several music students were pulled out of class for lessons during 1st, 4th, 5th, or 6th period once a week throughout January and February for additional lessons. The music teacher had instructed each student that they were responsible for making up any missed work. However, since music was a cultural and performing art, classes like Music and Appreciation and Band benefitted by converting to a double period class that met three

days per week.

Drafting and Photo Technology were also electives that were both beneficial by being offered as a double period. Knowledge and skills of drafting, graphic communication, drawing, sketching, and principles of descriptive geometry, and photo software are all necessities used for these classes. Topics in architecture were selected to correspond with student and instructor interest to provide the student the opportunity to explore areas of architecture not offered in the regular department curriculum. These Related Arts department classes have prepared students for cooperative education, college related classes, and real-world application as well as employment.

3. What are the courses that have been eliminated from the schedule due to block scheduling?

The State of New Jersey mandated that all public high schools in New Jersey have 85% of students who take the HSPA pass the exam by their senior year. In 2001-2002 Math Lab was eliminated from the curriculum in the Camden City School District. In the Summer of 2001, the intern eliminated Math SAT Prep for freshmen due to insufficient space in the schedule. At Creative Arts High School, the intern concurred with the literacy specialist that all juniors must receive verbal and math HSPA/SAT prep throughout the year. However, there were approximately 53 juniors in 2002-2003 at the beginning of the school out of a total of approximately 200 students, from grades 9 to 12. Since the literacy specialist wanted every junior to have double periods for both math and verbal HSPA/SAT Prep 11, the intern arranged a schedule in which approximately half of

the junior class had either mathematics or verbal HSPA/SAT Prep 11 on Mondays, Tuesdays, and Wednesdays, and the other half of the junior class had either verbal or mathematics on Thursday and Friday. The principal and the intern wanted to have the vast majority of all college prep classes to be taught in the first six periods of the day, while students' major was given during the last two periods of the day. Table #3 shows a sample junior schedule for 2002-2003.

Table #3

A Sample Schedule for a junior at Creative Arts High School

	Monday	Tuesday	Wednesday	Thursday	Friday
Pd. 1	US History 2				
Pd. 2	English 11				
Pd. 3	Algebra 2				
Pd. 4	Health/ Phys. Ed.				
Pd. 5	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
Pd. 6	Chemistry	Chemistry	Chemistry	Chemistry	Chemistry
Pd. 7	VSP11	VSP11	VSP11	MSP11	MSP11
Pd. 8	VSP11	VSP11	VSP11	MSP11	MSP11
Pd. 9	MAJOR 3				
Pd. 10	MAJOR 3				

4. How has the implementation of 4 x 4 schedule affected student learning and achievement?

On Wednesday, January 15, 2003 from 8:04 to 8:12 P.M., the intern had a

telephone interview with Mr. D. Sandowich, Principal of Haddon Heights High School.

According to Mr. Sandowich, after two years of planning with his staff, Haddon Heights High School elected to go with “a hybrid form of block scheduling. The teachers wanted more time in the classroom with their students, but not all of the time.” As previously stated, a similar hybrid schedule did not work at Camden High School because the teachers were not trained and the students were not notified until the commencement of the 1998-1999 school year. Table #4 shows how the periods were arranged at Haddon Heights High School.

Table #4

Haddon Heights High School daily bell schedule

Monday	Tuesday	Wednesday	Thursday	Friday
Period 1	Period 1	Period 1	Period 2	Period 1
Period 2	Period 2	Period 1	Period 2	Period 2
Period 3	Period 3	Period 3	Period 4	Period 3
Period 4	Period 4	Period 3	Period 4	Period 4
Period 5	Period 5	Period 5	Period 6	Period 5
Period 6	Period 6	Period 5	Period 6	Period 6
Period 7	Period 7	Period 7	Period 8	Period 7
Period 8	Period 8	Period 7	Period 8	Period 8

On Wednesday and Thursday, classes were 85 minutes.

The staff had reservations teaching on a 4 x 4 traditional block schedule because of the gap in Foreign Language, Mathematics, and rescheduling. For instance, a Freshman may have Spanish 1 during the first semester of 9th grade and then, Spanish 2 during the

second semester of 10th grade. In other words, a student or group of students may have to wait one full year before they continue with their chosen foreign language.

Principal Sandowich preferred the traditional 4 x 4 block schedule because the teachers would see half of their students each semester. Instead of calculating grades for 100 students per semester, teachers calculated grades for 50 students. Furthermore, Mr. Sandowich believed the school's schedule "forces teachers to get out of routine and become more creative." The school went with the UBD model (Understanding by Design). "The good teachers got better and the bad teachers became obvious."

Mr. Sandowich believed that a successful schedule for both students and faculty was the result of "training your staff." "Assessments will determine how we teach."

On February 2, 2003, the intern sent the following memo to Haddon Heights, Sterling, and Rancocas Valley Regional High School:

Dear _____,

I need to know for my thesis the answer to the following question:
How has the implementation of 4/4 schedule affected student learning and achievement? In addition, if you could provide me with the following information by Thursday, February 6, I will be deeply appreciative.

1. 2001-2002 HSPA results
2. 2001-2002 SAT results (October 2001 to May 2002)
3. 2002-2003 SAT results (October to December 2002)

Sincerely,

Brian J. Barg

Teacher of Mathematics, Pennsauken High School
School Administration Intern c/o Rowan University

Mr. Sandowich emailed me back with the following response:

Brian,

The test results are public info available on line. Our hybrid model was not expected to change test results as it was not a major change. It has however effected the success of students where teachers have changed their instructional methods and provided various means (assessments) for students to show their understanding and mastery of content.

Dave Sandowich

However, Joseph Dipatri of Sterling High School, wrote the following:

Brian,

I cannot answer the block scheduling question at great length because I am new here. I know that at my previous school, Penns Grove High School, it had an extremely positive affect on grades, but often did not transform to higher SAT or HSPA scores, despite a mountain of evidence to the contrary.

Thank you,

Joe DiPatri

Furthermore, Rancocas Valley Regional High School Superintendent, Dr. Cram, wrote the following:

Brian,

The data you requested on the 2001-2002 HSPT results is available on the state department of education website. The 2002-2003 HSPA results through December are not yet available. Generally speaking our results have improved slightly over the years we have been using the block.

Hank Cram

As previously stated, the stakeholders looked at our school district test scores. For the high schools, they were concerned with the HSPA and SATs. On February 6, 2003, the South Jersey newspaper, COURIER-POST published the student enrollment, average class size, and 2001-2002 SAT scores from high schools in Burlington, Camden, and Gloucester counties. The data on Table #5 was taken directly from the COURIER-POST. (Rothschild, 2003)

Table #5

A Portion of six local High School Report Cards from 2001-2002

High School	Enrollment	average class size	average SAT Math	average SAT Verbal	average SAT combined
Haddon Heights	833	22	505	505	1010
Sterling	923	21	499	503	1002
Rancocas Valley Regional	1970	24	499	479	978
Pennsauken	1730	21	450	444	894
Brimm Medical Arts	258	15	429	437	866
Camden	1441	19	363	345	708

A summation of the HSPA results for the Class of 2003 was provided to the intern by an assistant principal of Pennsauken High School. This summation is simplified in Table #6.

Table #6

Summation of the HSPA Results for the Pennsauken High School Class of 2003

Literacy	# Tested	# Proficient	# Partially Proficient	% Proficient
March 2002	367	304	63	82.83%
October 2002*	66	36	30	54.55%
Summation*	379	340	39	89.71%
Mathematics	# Tested	# Proficient	# Partially Proficient	% Proficient
March 2002	362	224	138	61.88%
October 2002*	144	40	104	27.78%
Summation*	374	264	110	70.59%

* This information included 12 new students.

The summation illustrated that 89.71% passed the literacy portion and 70.59% passed the mathematics portion of the HSPA.

5. What deeply held values and beliefs do the students of Pennsauken High School have in regards to block scheduling?

Students must believe that they were valued and appreciated. Their opinion was essential. They were the ultimate group of individuals that will determine the success or failure of innovative scheduling. Students selected for the survey were the intern's Geometry and SAT Prep classes and another mathematics teacher's Trigonometry classes. They were selected to represent Pennsauken High School in this survey because they were

randomly accessible. Filling out the survey was a pre-class activity that took between 10 and 15 minutes to complete. The following were the results of the student's survey.

STUDENT SURVEY: INNOVATIVE SCHEDULING
 LOCATION: PENNSAUKEN HIGH SCHOOL
 DATE: JANUARY 23, 2003

RAW RESULTS

1. Are you satisfied with the current eight-period class bell schedule?

Strongly agree	somewhat agree	neutral	somewhat disagree	strongly disagree	DNR
26	36	37	10	6	2

2. Would you prefer that Pennsauken High School has block scheduling?

Strongly agree	somewhat agree	neutral	somewhat disagree	strongly disagree
6	16	21	20	54

3. Do you believe the lunch periods should be altered?

As is (45 minutes)	30 minute lunch	DNR
109	7	1

4. How many days of the week should Health and Physical Education be offered per semester as a single period?

1	2	3	4	5
17	16	37	12	35

5. How many days of the week should Health and Physical Education be offered per semester as a double period?

1	2	3	4	5	DNR
53	33	13	2	12	1

6. How many days of the week should Study Hall be offered per semester as a single period?

1	2	3	4	5	DNR
13	17	20	7	58	2

7. Currently homeroom begins at 7:10 A.M. and the school day ends at 1:50 P.M. Should school begin later in the morning and end later in the day? Circle ONE PAIR of beginning and ending times of the day.

7:10 A.M.	7:20 A.M.	7:30 A.M.	7:40 A.M.	7:50 A.M.	DNR
1:50 P.M.	2:00 P.M.	2:10 P.M.	2:20 P.M.	2:30 P.M.	
50	8	10	8	38	3

8. When do you believe the majority of your major subjects should be offered?
Note: major subjects are English, Mathematics, Science, and History.

Periods 1 to 5	Periods 1 to 4	Periods 2 to 6	Periods 3 to 8	All Periods	DNR
3	47	35	16	12	5

9. If Pennsauken went to a block schedule, then how long and how many classes would you prefer for one semester?

Four Classes for 80 to 85 minutes	Five Classes for an hour each	DNR
41	72	4

10. For a hybrid block schedule, classes are 90 minutes on Wednesday and Thursday.

Would you prefer a hybrid block schedule?

YES	NO	DNR
35	78	4

11. Should first year freshmen students have block scheduling?

YES	NO	DNR
58	55	4

6. What deeply held values and beliefs do the teachers of Pennsauken High School have in regards to block scheduling?

Referring to Standard 2 of the ISSLC Standards, scheduling involved treating both students and teachers with fairness, dignity, and respect. As a colleague, I must listen to teachers' request for them to teach certain subject areas and to divide classes into academic levels, which the intern has always been a proponent for. By involving students and teachers, by completing surveys at Pennsauken High School and, prior to that, involving teachers on my scheduling committee at Creative Arts High School, the intern made adolescents and colleagues feel valued and important. The intern made it a point to acknowledge the responsibilities and contributions of each individual not only on my team, but those who had provided input because scheduling revolved around every staff member and student.

The barriers to student learning were identified, clarified, and addressed through IEP reports, parent-teacher conferences, and team and faculty meetings. Special needs students required special scheduling. At Pennsauken High School, special needs students were either situated in resource rooms or inclusion rooms where they were able to receive one-on-one instruction by the special education teacher.

The following were the results of the teacher's survey. Copies of the survey were placed into 120 Pennsauken High School faculty members' mailboxes on January 23,

2003. Thirty-five surveys were returned by January 30, 2003.

**TEACHER'S SURVEY: INNOVATIVE SCHEDULING
LOCATION: PENNSAUKEN HIGH SCHOOL
DATE: JANUARY 23, 2003
RAW RESULTS**

1. Department	No.
English	9
Mathematics	7
Science	6
Social Studies	4
World Language	3
Special Education	3
Related Arts	3
Health & PE	1

2. Are you satisfied with the current eight-period class bell schedule?

Strongly agree	somewhat agree	<u>neutral</u>	somewhat disagree	strongly disagree
8	11	12	2	2

3. Would you prefer that Pennsauken High School has block scheduling?

Strongly agree	somewhat agree	<u>neutral</u>	somewhat disagree	strongly disagree
3	6	6	9	11

4. Do you believe the lunch periods should be altered for students only?

As is (45 minutes)	30 minute lunch	No lunch period
15	19	1

5. What classes should be offered and how many days of the week should they be offered per semester as a single period if Pennsauken High School went to block scheduling? Classes were to be written on the blank space below.

Class(es) _____

Twenty-three teachers responded, while twelve teachers either did not respond to this question, wrote “?” or “none.”

A. English Department Instructors stated:

1. “Electives (band/chorus/etc.) However, Foods classes may work better as a block; perhaps Lab sciences as because they lose time with block.”
2. “All required for graduation.” He/she, who also is a member of the Language department, circled the number “5.”
3. Physical Education class should be taught five days per week.
4. English, Math, Science, and History should be taught for three days a week.
5. “All” and circled the number “5.”
6. “Electives” and circled the number “3.”
7. “Electives could be cut in half or semester only.”
8. “Study hall, gym, and health,” without indicating the number of days of the week.

B. Mathematics Teachers stated:

1. Math, English, science, and history should be taught two or three days per week.
2. History, English, Language, and Science should be offered three days per week.
3. “All” and circled the number “1.”
4. “Math, science, language, social studies” and circled the number “4.”

5. "Major subjects" and circled the number "3."

C. Science Teachers stated:

1. Physical Education and ESL should be offered five days a week.
2. "All classes alternating three 1st week and two 2nd week."
3. "Electives" and circled the number "4."
4. "math?/elective", but it was scribbled, circled the number "5" and stated, "up to math teachers."

D. Social Studies teachers stated:

1. "A career explorations class," but neglected to write the number of days of the week.
2. "All - no block!"
3. "Physical Education, science labs double, all others single" for five days a week.

E. Special Needs teachers stated:

1. "Everything that is not a science or technology (class)." He/she also neglected to write the number of days of the week.
2. A Special Needs teacher circled the number "1."

F. A Health & Physical Education Teacher wrote "Driver's Education" and circled the number "5."

6. How many days of the week should Health and Physical Education be offered per semester as a double period?

0	1	2	3	4	5	DNR
4	3	15	5	3	1	5

7. How many days of the week should Study Hall be offered per semester as a single period?

0	1	2	3	4	5	DNR
5	10	5	4	0	8	3

8. Currently, homeroom begins at 7:10 A.M. and the school day ends at 1:50 P.M. Should school begin later in the morning and end later in the day? Circle ONE PAIR of beginning and ending times of the day.

DNR	7:10 A.M. 1:50 P.M.	7:20 A.M. 2:00 P.M.	7:30 A.M. 2:10 P.M.	7:40 A.M. 2:20 P.M.	7:50 A.M. 2:30 P.M.
1	10	3	8	2	11

9. When do you believe the majority of your major subjects should be offered?
Note: major subjects are English, Mathematics, Science, and History.

DNR	Periods 1 to 5	Periods 1 to 4	Periods 2 to 6	Periods 3 to 8	All Periods
1	6	9	4	3	13

10. If Pennsauken went to a block schedule, then how long and how many classes would you prefer for one semester?

Four Classes for 80 to 85 minutes	Five Classes for an hour	Other
18	12	5

11. For a hybrid block schedule, classes are 90 minutes on Wednesday and Thursday. Would you prefer a hybrid block schedule?

YES	NO	DNR/neutral
8	22	5

12. Should first year freshmen students have block scheduling?

YES	NO	DNR
13	17	5

13. Should the time period be increased from four to five minutes to arrive to class on time with the understanding that the school day could be a little longer?

YES	NO	DNR
12	22	1

14. Should there be a separate schedule for college prep and general education?

YES	NO	DNR
13	20	2

15. Should there be tracking levels within both college prep and general education?

YES	NO	DNR
28	6	1

16. No. of teachers who wrote suggestions No. of teachers who did not

15	20
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Conclusion

According to the results of the survey given to the students of Pennsauken High School, 99 out of 117 students were satisfied with the current eight-period bell schedule and thus, 74 out of 117 students believed that Pennsauken High School should not implement block scheduling throughout the day. There were 109 out of 117 students that

believed that lunch periods should remain 45 minutes. 53 students agreed that both Health and Physical Education should be offered once a week for a double period in one semester, while 33 students thought both should be offered twice a week for a double period in one semester.

There were 58 students who believed that study hall should remain for five days in a semester. However, there were many students who currently had study hall five days a week for the year. Some teachers think study hall was a “joke.” Pennsauken High School should only offer study hall to students who use it for studying, and not socializing. All students who register for study hall must be approved by three of their teachers or their previous study hall teacher in order to be allowed to take this non-credit elective.

There were 50 students who believed the schedule should remain from 7:10 A.M. to 1:50 P.M.. However, there were 38 students who believed that the schedule should change from 7:50 A.M. to 2:30 P.M.. There was have to be enough buses to accommodate this scheduling change. In addition, fall coaches will have to adjust their practices from 3:00 P.M. to 5:00 P.M.

There were 82 students who believed the majority of their major subjects should be offered during periods 1 to 6, provided there was no block scheduling. However, if block scheduling would come to fruition, there were 72 out of the 117 students who preferred five classes for an hour every day for each semester.

Ironically, 58 students thought first year freshmen students should have block scheduling, while 55 did not believe first year freshmen should have block scheduling.

Feedback from students was acceptable. The intern wanted the students to have

input from their beliefs, both pro or con, in reference to block scheduling. There were five students who wrote additional comments in regards to block scheduling.

Student #15 stated “If you want to start with block scheduling in a school that doesn’t have it, you should start with freshman.” Currently, freshmen at Pennsauken High School have two classes that are a double period: English and Sociology. In other words, they have Sociology on Mondays and Wednesdays for two periods and one period on Friday and they have English on Tuesdays and Thursdays for the same two periods and one period on Friday.

Student #39 wrote that Health and Physical Education should be given for two days each per semester and on the fifth day have a study hall. However, study halls will not be given for a double period.

Student #47 did not prefer the hybrid block schedule. “It takes too much time and people would get tired easier because they would be in class for longer, unless the class was interesting.” Teachers must always make their classes interesting.

Student #52 strongly disagreed that Pennsauken High School have block scheduling because “a class might be too boring or the teacher can irk you or you might forget what you learned from one day to another.”

Student #59 believed “we shouldn’t have a double period gym.” However, students should have study hall on “the days we don’t have gym.” This same student stated “we should come in later and go home earlier” by just shortening the periods or eliminating gym or lunch.

The intern will not propose a shortened day. At Pennsauken High School,

students were only in school for six hours and forty minutes. At Creative Arts High School, students were only in school for seven hours. All students in the State of New Jersey must have four years of both Health and Physical Education. With parental approval, they have been permitted to forgo lunch for another class. For example, the intern has a student in fourth period Geometry who has Band instead of lunch.

According to the results of the survey given to the faculty of Pennsauken High School, 31 out of 35 teachers were satisfied with the current right-period bell schedule and thus, 20 out of 35 teachers believed that Pennsauken High School should not implement block scheduling throughout the day.

Teachers were split between the students' allotted time for lunch. There were 15 teachers who believed the lunch period should remain at 45 minutes, while 19 teachers believed 30 minutes was a sufficient amount of time. However, the intern understands that students do not have enough time to wait in line for their lunch, eat and digest their food in a thirty minute period. Four hundred and fifty to five hundred students and teachers were a lot of people to feed in 45 minutes. There was one teacher who believed students should not have a lunch period. By state law, all students attending a public school in New Jersey must have a lunch period.

The results of the survey indicated that 12 teachers did not respond or wrote "none" to the question "What classes should be offered and how many days of the week should they be offered per semester as a single period if Pennsauken High School went to block scheduling?" The intern made errors in how this question was written. By reviewing the teachers' comments, it appeared that some of them believed the classes in

which they wrote about would be taught for the entire year and therefore, misinterpreted the question. From the raw data, it appeared that four teachers did not correctly respond to the above-mentioned question. However, this poorly worded question actually helped the intern devise a conclusion on which classes should be taught as a single or double period, every day, offered in a semester, or offered throughout the year. This will be answered in Chapter Five.

There were 15 teachers who believed that Health and Physical Education classes should be offered twice a week for a double period in one semester. However, ten teachers felt that the study hall should be offered once a week for only one semester, but eight teachers thought five days a week was more sufficient. Five teachers thought students should not have a study hall.

There was a mixed reaction in reference to the beginning and ending times of the school day. Ten teachers elected to keep the current beginning and ending times as 7:10 A.M. to 1:50 P.M.. Eight teachers wanted to see the schedule changed to 7:30 A.M. to 2:10 P.M. Eleven teachers wanted the schedule changed to 7:50 A.M. to 2:30 P.M.

Thirteen teachers believed that major subjects should be taught during all periods. If Pennsauken went to a complete block schedule, eighteen teachers selected the four classes for 80 to 85 minutes format. However, 22 out of 35 teachers did not want a hybrid schedule. Thirteen teachers believed that first year freshmen should have block scheduling, while seventeen thought they should not. There were five teachers who were undecided about freshmen having block scheduled classes.

Tardiness to school and class has always been a major concern. At Pennsauken

High School, teachers have been permitted to write up students after five latenesses. Therefore, there were 22 teachers who did not believe that the time period between classes should be increased from four minutes to five minutes.

Thirteen teachers agreed that there should be a separate schedule for college prep students and students who were in general education, while twenty teachers thought their students should not be separate. However, 28 out of 35 teachers believed that there should be tracking levels within all classes.

Feedback from staff members was imperative. The intern wanted the staff to provide detailed information on their beliefs, both pro or con, in reference to block scheduling. Fifteen teachers had written suggestions, while twenty did not any suggestions. The following was a summary of teacher's suggestions.

Teacher #1, from the world language department, had written the following on the survey memo.

“Dear Sir,

I have completed your ‘survey’ to the best of my ability, hoping you will give some attention to my thoughts.”

Teacher #1 believed there should be no lunch periods at all, opposed block scheduling, and stated that “Health and Physical Education should be an ‘elective’ only. ‘Study hall’ is a joke - just another ‘time filler’ to keep students contained. High school students should be the last in the district to enter. The elementary kids should go first, then the middle school.” In other words, elementary school children should begin their day before middle school children and middle school children should begin their day before

high school adolescents.

Teacher #1 also mentioned the approximate time frame would be from “8:45 A.M. to 2:00 P.M. with no lunch, no ‘study hall,’ and no required gym as in Europe.”

Teacher #1 must realize that Health and Physical Education is a four-year high school requirement in the State of New Jersey. Furthermore, teacher #1 indicated he/she would retire from teaching if Pennsauken High School went to a full block schedule.

Teacher #1 concluded the survey with the following: “I have tried to make my comments along the way, but to summarize I should say this: As long as we are trying to serve as society’s child sitters instead of our true purpose as academic subject educators, we are going to continue to see an increase in problems. There seems to be a stress on the quantity of time spent in school rather than on the quality of the process. This is a result of public political pressure.”

The intern wrote a letter to teacher #1. In the letter, the intern agreed that World Language classes should not be blocked. As a matter of fact, children should begin to learn a second language as early as first grade, but that was another issue to be addressed with the State of New Jersey.

Teacher #3, from the Social Studies department, stated that there should be “less time on physical education. Five days a week is too much and the students do not benefit from gym class, in terms of fitness and social interaction. It’s playtime for them. Let college-prep students have some study hall time, and schedule re mediation for the students who need it.”

Teacher #7, from the related arts department, was vehemently against block

scheduling. “Block scheduling costs jobs! Eliminates electives! Exceeds students’ ability to stay focused. Provides poor continuity from one course to the next. Other than labs and some double periods in major shop classes, there is no educational or professional reason to support block schedules! Oh yeah, it would break our contract of teaching only five periods per day.”

Teacher #8, from the mathematics department, stated “It’s very hard to answer these questions where I haven’t seen any research nor had a chance to experience it. You (the intern) also need to understand that we have block scheduling in this building currently, but there is never any discussion of its effectiveness!”

Teacher #8 was referring to the block scheduling of freshmen Sociology and English. The discussion of its effectiveness would have been between the Sociology and English teachers and freshmen students.

Teacher #9, from the science department, stated that “My biggest objective would be to get more class period options for students. With an increase in requirements, students have very little time for electives - including electives within a major subject area. As a response, I see the district eliminating many subject options resulting in a cookie cutter program that is the same for everyone.”

Teacher #10, a Biology instructor, said, “I am a huge advocate of block scheduling, especially for the sciences. I taught block scheduled classes in previous years and there are many advantages. For instance, it is much easier to conduct a lesson and allow the students to engage in a cooperative learning activity that supports the lecture in 85 minutes than in 45 minutes. There is not enough time in a 45 minute period to switch

your teaching style more than once. In addition, I find it difficult to coincide lab topics with my lecture each time I have a scheduled double period lab in our current schedule. Labs flow much better in block scheduling. I can lecture on a topic and still have enough time to conduct a lab that emphasizes concepts just discussed.”

Teacher #11, a 9th grade English instructor, stated “I believe the current freshman-level schedule (with alternate day block and single-period Fridays) is best. It is a somewhat modified version of the pure block schedule (where you have different classes each semester; ‘4 x 4’). It also allows the Sociology and English teacher to work together on an integrated curriculum.”

Teacher #15, from the social studies department, strongly disagreed that Pennsauken High School have block scheduling. “Any changes demand staff training!! The district routinely ignores any significant need for meaningful training and fails to keep its word about those promises!! Let’s not ‘reinvent the wheel’ and assume we’re the first district to consider this!”

The intern spoke with this instructor and agreed unless proper training was implemented, block scheduling cannot be effective, let alone exist throughout Pennsauken High School. The principal of Haddon Heights, who oversaw the hybrid block schedule in his school, had his staff thoroughly trained on how to write and utilize effective lesson plans with a hybrid block schedule.

Teacher #16, from the English department, stated that “Study hall should not be offered - it is a wasted period!”

The intern disagreed that study hall has not been a wasted period for those

students who worked diligently on homework, went to the library for research, saw a teacher for making up an assessment, or met with their guidance counselor.

Teacher #18, from the science department, stated “the biggest problem that I see right now with scheduling is that many kids who do not belong in CP (college prep) are allowed to register for it. The students should need approval from their teacher in that subject area from the prior year to be allowed into a CP course. They shouldn’t be allowed to enter just because the student or parent believes they are fit. Maybe a form should be used where teacher signature is required.”

Teacher #20, from the special education department, stated “I really don’t care for block scheduling - attention spans are too short for students. Teachers are being used for this as scapegoats for BAD behavior and keeping kids out of hallways. This had been unsuccessful at the Camden Schools.”

The intern previously illustrated why block scheduling was unsuccessful at Camden High from 1996 to 2000.

Teacher #21, from the English department, stated “I teach 9th grade English, which is on an every other day block schedule, so I feel unqualified to answer some of these questions.” The intern believed that all faculty members were qualified to answer the survey.

Teacher #21 continued, “I have taught on a modified block schedule in a different school, and I enjoy it: 3 classes from Monday to Friday for 85 minutes for one semester only. I would also like the every other day block, but only if the students’ entire schedule followed it. As is, students resent English and Sociology for their length.” As previously

mentioned, both classes meet for 90 minute classes twice per week.

Also from the English department, teacher #23 said, “Block scheduling has been proven to be unnecessary. Students’ attention spans usually extend to approximate their ages. That means that any given student (12th grade) have an attention span of between 15-20 minutes. Longer class periods will NOT alleviate the problem - more effective teaching methods will. Problems in education cannot be fixed by ‘philosophical’ methods created by ‘educators’ who have never been in a classroom. Real world experience proves all the ‘theories’ dreadfully lacking.”

The intern does not concur with teacher #23. Block scheduling has not been proven to be unnecessary in a high school setting. What has been proven is how block scheduling was implemented and where it has been implemented. All subjects do not need to be 80 minutes, only the subjects where students have to utilize their hands aside from writing essays, taking notes, and mathematical problem solving.

Teacher #27, from the science department, mentioned that “Block scheduling should be all classes or no classes - not hybrids. Science classes should not have labs scheduled 1st period (especially on Monday) or 8th period (especially on Friday).”

Teacher #29, from the mathematics department, stated “I do not believe in block scheduling, especially for math and foreign language.” The intern agreed that mathematics, foreign language, history, and English should all be 45 minute classes.

Teacher #30, from the English department, stated, “Although I do not support typical block scheduling. I feel that the 9th grade block schedule is effective. The problem, however, is that math and science are not taught in blocks of instruction. All

9th-grade classes are heterogeneously grouped, but all their other classes are tracked. This creates a 'natural' tracking within those so-called heterogenous groups.”

The intern disagreed with teacher #30. The intern did not believe other ninth grade classes were tracked since their 9th, 10th, and 11th grade students were sitting in the same Algebra 1 class and 10th, 11th, and 12th grade students were sitting in the same Geometry class.

Chapter 5

Conclusions, Implications, and Further Study

Introduction

From the 120 surveys distributed to the faculty, there were 35 surveys that were returned within a week. Therefore, 85 members of the faculty did not elect to write their opinion about innovative scheduling. Teachers have the right to speak their mind in a tone that should be constructive, but not blasphemous or derogatory, and teachers have the right not to complete a survey and let others be their voice. Since the intern was a new teacher to the Pennsauken Board of Education, he did not want to ruffle any feathers by implicating that he was trying to change the world.

By having the students take their own survey, any concerns in which they would have had about block scheduling were tabulated and evaluated. From his experience in education since 1991, the intern was able to devise an innovative schedule that should be beneficial and supportive to the needs and staff of Pennsauken High School.

Implications of Study on Leadership Skills

The experience of receiving data on innovative scheduling at Pennsauken High School taught me how to interact with my peers and students on an administrative level. This was essential when making a positive impact on my leadership capacity. Everyone in this society has an opinion, but not everyone understands how to express it without offending others. Teachers and students were given the opportunity to express their desires if they would like to have a form of block scheduling at Pennsauken High School.

The intern had read some harsh comments written by veteran teachers who did not want block scheduling. The intern has developed a report with the faculty. This was not only professional, but also imperative to learn about the student's academic needs.

Implications of Study on Organizational Change

One of the reasons why teachers were negative toward block scheduling related to the inconsistency of restructuring the block schedule each year. This was the reason why block scheduling did not work for the staff and students at Camden High School. However, what the teachers of Pennsauken High School may not have realized was that block scheduling had been successful at Charles A. Brimm Medical Arts High School in Camden. Charles A. Brimm Medical Arts High School's 2001-2002 SAT scores (866) exceeded Camden High School (708), Woodrow Wilson High School (715), and Creative Arts High School (810). Students, who have been enrolled in college prep classes and displayed advanced proficiency throughout elementary and middle school in science, mathematics, language arts, and reading, did well in high school as long as they avoided intervening variables, such as drug abuse, guardian neglect, and mischief.

Another reason why several teachers did not want full block scheduling was that they did not want to change the way they teach. This meant that their 45 minute lesson plans would not only have to be rewritten to illustrate an 80 to 85 minute lesson, but also figured out how to keep a classroom busy through learning.

As a system whose primary purpose was to educate students, Pennsauken High School did not change as an organization because of the intern's research on innovative

scheduling. Teachers and administrators went about their daily duties of teaching their classes and making certain that the school was an effective learning environment.

Discovering all the content area of each class and how they were taught, surveying and talking to students and teachers, and speaking to local administrators, the intern was able to decide on the most innovative schedule for Pennsauken High School.

The schedule that will be most effective or innovative will be the following:

1. The school should maintain its current eight period schedule of 45 minute classes.
2. There will be courses that will incorporate double periods.
3. Three science classes will meet three days a week for lecture and/or assessment and one day a week for a double period of laboratory work. They are Biology, Chemistry, and Physics.
4. Physical Education class will meet one day a week for a double period for the year.
5. Students will be able to select either art, Computer Literacy, Drafting, Photo Technology, Vocal Music, home economics, Wood, Metal, Auto Shop, or Band as double period electives. However, these classes will be offered two or three days a week for the entire year or semester, depending on enrollment size and course content.
6. Health classes will meet three days a week for the year. The Health and Physical Education department will decide on which content should be taught in quarterly marking periods or semesters.

7. Any missing periods in the schedule, students will have an opportunity to take a study hall with guidance and teacher approval.
8. Table #7, 8, 9, and 12 illustrates four sample innovative schedules for Pennsauken High School 2003-2004.

Table #7

Sample Freshman Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
Period 1	English 9				
Period 2	Physical Science				
Period 3	Algebra 1				
Period 4	Lunch	Lunch	Lunch	Lunch	Lunch
Period 5	Health Ed. 9	Health Ed. 9	Health Ed. 9	Study Hall	Study Hall
Period 6	Sociology	Sociology	Sociology	Sociology	Sociology
Period 7	Band	Band	Band	Art	Phys. Ed.
Period 8	Band	Band	Art	Art	Phys. Ed.

Classes with the credit amount in parenthesis are English (5), science (5), mathematics (5), social studies (5), Health (3), Physical Education (2), music (5), and related arts (3).

Freshman Credits Attempted (33)

Total Credits Required for Promotion (27.5)

Table #8

Sample Sophomore Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
Period 1	English 10	English 10	English 10	English 10	English 10
Period 2	Biology	Biology	Biology	Biology	Biology Lab
Period 3	Health 10	Health 10	Health 10	Study Hall	Biology Lab
Period 4	Lunch	Lunch	Lunch	Lunch	Lunch
Period 5	History	History	History	History	History
Period 6	Geometry	Geometry	Geometry	Geometry	Geometry
Period 7	Photo Tech/ Wood Shop	Photo Tech/ Wood Shop	Physical Education	Band	Band
Period 8	Photo Tech/ Wood Shop	Photo Tech/ Wood Shop	Physical Education	Band	Band

Classes with the credit amount in parenthesis are English (5), science (6),

mathematics (5), social studies (5), Health (3), Physical Education (2), music (4), Wood Shop (2), related arts (2), and study hall (0).

Sophomore Credits Attempted (34)

Total Credits Attempted (67)

Total Credits Required for Promotion (55)

Table #9

Sample Junior Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
Period 1	English 11	English 11	English 11	English 11	English 11
Period 2	Chemistry	Chemistry	Chemistry	Chemistry	Chem. Lab
Period 3	Health 11	Health 11	Health 11	Study Hall	Chem. Lab
Period 4	Algebra 2	Algebra 2	Algebra 2	Algebra 2	Algebra 2
Period 5	History	History	History	History	History
Period 6	Lunch	Lunch	Lunch	Lunch	Lunch
Period 7	Math SAT/ Computer Literacy	Math SAT/ Computer Literacy	Math SAT/ Computer Literacy	Math SAT/ Computer Literacy	Physical Education
Period 8	Verbal SAT/ Computer Literacy	Verbal SAT/ Computer Literacy	Verbal SAT/ Computer Literacy	Verbal SAT/ Computer Literacy	Physical Education

Classes with the credit amount in parenthesis are English (7), science (6), mathematics (7), social studies (5), Health (3), Physical Education (2), Computer Literacy (4), and study hall (0).

If this possible schedule is implemented, student would increase their days (periods) in both Verbal and Math SAT prep from currently 45 to 72.

Junior Credits Attempted (34)

Total Credits Attempted (101)

Total Credits Required for Promotion (82.5)

Table #10

2002-2003 SAT Prep scheduling arrangement

Marking Period Class	Days in a Week	Full weeks in a marking Period	total periods spent in class
Verbal SAT prep	5	9	45
Math SAT prep	5	9	45

Table #11

Proposed 2003-2004 SAT Prep scheduling arrangement

Semester Class	Days in a Week	Full weeks in a marking period	total periods spent in class
Verbal SAT prep	4	18	72
Math SAT prep	4	18	72

Table #12

Sample Senior Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
Period 1	English 12	English 12	English 12	English 12	English 12
Period 2	Physics	Physics	Physics	Physics	Physics Lab
Period 3	Health 12	Health 12	Health 12	Health 12	Physics Lab
Period 4	Trig.	Trig.	Trig.	Trig.	Trig.
Period 5	Drafting/ Photo Tech	Drafting/ Photo Tech	Physical Education	Drafting/ Photo Tech	Drafting/ Photo Tech
Period 6	Drafting/ Photo Tech	Drafting/ Photo Tech	Physical Education	Drafting/ Photo Tech	Drafting/ Photo Tech
Period 7	Lunch	Lunch	Lunch	Lunch	Lunch
Period 8	Study Hall	Study Hall	Study Hall	Study Hall	Study Hall

Classes with the credit amount in parenthesis are English (5), science (6), mathematics (5), Health (4), Physical Education (2), related arts (8), and study hall (0).

However, seniors may take a history class instead of study hall.

Senior Credits Attempted (30)

Total Credits Attempted (131)

Total Credits Required for Promotion (110)

Further Study

The proposed sample scheduling charts have been forwarded to the Pennsauken High School Administration and Pennsauken Education Association. The charts indicated that students will have an opportunity to take major subjects: English, mathematics, science, and history, required subjects: Health and Physical Education, credit electives: music, related arts, Computer Literacy, and a non credit elective: study hall.

Electives were classes that students want to take, and were not required to take for three or four years. Therefore, it would benefit students and teachers to have these classes for double periods. In the intern's experience at Creative Arts High School, student's major were double periods every day for the entire year. In order to be effective as well as beneficial, these classes had to be 80 to 85 minutes long.

For instance, if students were painting in art class, they would have to set up where they would have enough working space. Set up materials, such as a stand, selected color paints, and brushes, take time to assemble, i.e., five minutes. Clean up took longer than set up, i.e., ten to fifteen minutes, which resulted in the class would have 60 minutes for lecture, demonstration, and/or work time.

Proficient set up and clean ups procedures were a safety precaution in science labs. A safe twenty minute set up and clean up procedures were more important than an effective 40 to 60 minute laboratory work. All students must learn how to maintain a clean environment. If an accident occurs, all students and teachers must be aware of how to handle spills of toxic chemicals. Students and teachers must scrub their hands and arms to make certain they were not contaminated. A 45 minute period would not be beneficial

for science labs.

In music, vocalists do not learn how to sing a song in 45 minutes and instrumentalists cannot learn how to play a song in 45 minutes. Both choir and band must develop their skills of blending together to produce beautiful music. Ninety minute periods would be more practical than 45 minutes.

Learning how to type has been an essential tool for everyone, especially secretaries, students, teachers, administrators, and those in the business world. The intern has always believed that everyone should learn how to type. With the progress from the manual typewriter to the laptop, people have always had the opportunity to sharpen their typing skills. An 85 minute computer literacy class will be more beneficial than 45 minutes. Students will have more time for drills and complete an essay or three page report in one class.

On March 3, the intern spoke with three instructors from three different disciplines: Drafting, 3-D Animation, and music. These were five credit classes. Each teacher agreed that their courses could be offered three days a week. Two of those days would be a double period and one day a week would be a single period. This will allow the weekly set up and clean up time to be the same, while the time-on-task period would be longer. The 3-D animation teacher believed that a twenty to twenty-five minutes per period to develop their work was an insufficient amount of time.

Pennsauken High School has had a variety of subjects, including general education, college prep, related arts, technology, and cooperative education work study programs. The school has offered a plethora of co-curricular programs, such as sports for all seasons

and cultural arts. The school district's web page is <http://pennsaukenhighschool.net/>. The school's sports web page is located at <http://www.eteamz.com/pennsaukenathletics/>.

In the intern's opinion, the before mentioned schedules would benefit both teacher and student alike being that neither would be adversely affected by the implementation. The teachers who prefer to teach 45 minutes will continue to do so. The teachers who need to have a 90 minute block will be able to better utilize time-on-task.

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Appendix A

Research Instruments

Student Survey
Teacher Survey

STUDENT SURVEY: INNOVATIVE SCHEDULING
 LOCATION: PENNSAUKEN HIGH SCHOOL
 DATE: JANUARY 23, 2003

Directions: This survey is anonymous, so do not write your name. Please, circle one response for each question.

9. Are you satisfied with the current eight-period class bell schedule?

Strongly agree somewhat agree neutral somewhat disagree strongly disagree

2. Would you prefer that Pennsauken High School has block scheduling?

Strongly agree somewhat agree neutral somewhat disagree strongly disagree

3. Do you believe the lunch periods should be altered?

As is (45 minutes) 30 minute lunch

4. How many days of the week should Health and Physical Education be offered per semester as a single period?

1 2 3 4 5

5. How many days of the week should Health and Physical Education be offered per semester as a double period?

1 2 3 4 5

6. How many days of the week should Study Hall be offered per semester as a single period?

Note: not all students take advantage of what study hall is suppose to provide for all students, which is an opportunity to do research in the Media Center and get caught up with homework and other assignments.

1 2 3 4 5

7. Currently homeroom begins at 7:10 A.M. and the school day ends at 1:50 P.M. Should school begin later in the morning and end later in the day? Circle ONE PAIR of beginning and ending times of the day.

7:10 A.M. 7:20 A.M. 7:30 A.M. 7:40 A.M. 7:50 A.M.
 1:50 P.M. 2:00 P.M. 2:10 P.M. 2:20 P.M. 2:30 P.M.

8. When do you believe the majority of your major subjects should be offered?
 Note: major subjects are English, Mathematics, Science, and History.

Periods Periods Periods Periods All Periods
 1 to 5 1 to 4 2 to 6 3 to 8

9. If Pennsauken went to a block schedule, then how long and how many classes would you prefer for one semester?

Four Classes for Five Classes for
 80 to 85 minutes an hour each

10. The following is a sample hybrid block schedule.

	Monday	Tuesday	Wednesday	Thursday	Friday
7:22 to 8:07	Period 1	Period 1	Period 1	Period 2	Period 1
8:11 to 8:56	Period 2	Period 2	Period 1	Period 2	Period 2
9:00 to 9:45	Period 3	Period 3	Period 3	Period 4	Period 3
9:49 to 10:34	Period 4	Period 4	Period 3	Period 4	Period 4
10:38 to 11:23	Period 5	Period 5	Period 5	Period 6	Period 5
11:28 to 12:12	Period 6	Period 6	Period 5	Period 6	Period 6
12:16 to 1:01	Period 7	Period 7	Period 7	Period 8	Period 7
1:05 to 1:50	Period 8	Period 8	Period 7	Period 8	Period 8

On Wednesday and Thursday, classes are 90 minutes.

Would you prefer a hybrid block schedule?

YES

NO

11. Should first year freshmen students have block scheduling?

YES

NO

TEACHER'S SURVEY: INNOVATIVE SCHEDULING
LOCATION: PENNSAUKEN HIGH SCHOOL
DATE: JANUARY 23, 2003

Directions: This survey is anonymous, so do not write your name. However, please write your content area. Please, circle one response for each question.

1. What is your Department? _____

2. Are you satisfied with the current eight-period class bell schedule?

Strongly agree	somewhat agree	neutral	somewhat disagree	strongly disagree
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3. Would you prefer that Pennsauken High School has block scheduling?

Strongly agree	somewhat agree	neutral	somewhat disagree	strongly disagree
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4. Do you believe the lunch periods should be altered for students only?

As is (45 minutes)	30 minute lunch
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5. What classes should be offered and how many days of the week should they be offered per semester as a single period if Pennsauken High went to block scheduling?

Class(es)

1	2	3	4	5
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6. How many days of the week should Health and Physical Education be offered per semester as a double period?

1	2	3	4	5
---	---	---	---	---

7. How many days of the week should Study Hall be offered per semester as a single period? Note: not all students take advantage of what study hall is suppose to provide for all students.

1 2 3 4 5

8. Currently homeroom begins at 7:10 A.M. and the school day ends at 1:50 P.M. Should school begin later in the morning and end later in the day? Circle ONE PAIR of beginning and ending times of the day.

7:10 A.M. 7:20 A.M. 7:30 A.M. 7:40 A.M. 7:50 A.M.
 1:50 P.M. 2:00 P.M. 2:10 P.M. 2:20 P.M. 2:30 P.M.

9. When do you believe the majority of your major subjects should be offered? Note: major subjects are English, Mathematics, Science, and History.

Periods Periods Periods Periods All Periods
 1 to 5 1 to 4 2 to 6 3 to 8

10. If Pennsauken went to a block schedule, then how long and how many classes would you prefer for one semester?

Four Classes for Five Classes for
 80 to 85 minutes an hour

11. The following is a sample hybrid block schedule.

Monday	Tuesday	Wednesday	Thursday	Friday
Period 1	Period 1	Period 1	Period 2	Period 1
Period 2	Period 2	Period 1	Period 2	Period 2
Period 3	Period 3	Period 3	Period 4	Period 3
Period 4	Period 4	Period 3	Period 4	Period 4
Period 5	Period 5	Period 5	Period 6	Period 5
Period 6	Period 6	Period 5	Period 6	Period 6
Period 7	Period 7	Period 7	Period 8	Period 7
Period 8	Period 8	Period 7	Period 8	Period 8

On Wednesday and Thursday, classes are 90 minutes.
Would you prefer a hybrid block schedule?

YES

NO

12. Should first year freshmen students have block scheduling?

YES

NO

13. Should the time period be increased from four to five minutes to arrive to class on time with the understanding that the school day could be a little longer?

YES

NO

14. Should there be a separate schedule for college prep and general education?

YES

NO

15. Should there be tracking levels within both college prep and general education?

YES

NO

16. If you have any suggestions, then feel free to write them below. If not, then leave it blank.

Biographical Data

Name	Brian J. Barg
High School	North Penn High School Lansdale, PA
Undergraduate	Bachelor of Science Speech Communications Millersville University Millersville, PA
Graduate	Master of Arts Mathematics Education Beaver College Glenside, PA
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Present Occupation	Mathematics Teacher Pennsauken High School Pennsauken, NJ