

AN EVALUATION OF THE SEVEN-PERIOD DAY  
AS IMPLEMENTED AT ABINGDON HIGH SCHOOL  
1985-86

by

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(ABSTRACT)

The purpose of this study was to evaluate the effectiveness of the seven-period day schedule implemented at Abingdon High School and to judge the feasibility of implementing a comparable schedule in all Washington County high schools on a permanent basis. In order to facilitate the evaluation, several areas of inquiry were identified. Questions of interest included: Did the students take advantage of the additional opportunities to take courses? If so, what courses were selected? Did an extended day create problems for students and/or faculty? If so, what kind of problems/concerns were encountered? Was students' performance affected? Did students' behavior change? Did the lengthened school day increase stress or otherwise affect teachers' performance? What about cost? Finally, administrators in the region were asked to comment on the possible impact (advantages and disadvantages) of a

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seven-period schedule as an addendum to the data collected at the school.

Data pertinent to the evaluation of the seven-period day were obtained from various offices at Abingdon High School and the Washington County School Board. Data regarding perceptions of faculty and students were obtained from two 13-question surveys, one given to 76 faculty members with 58 responses and the other given to all students with 977 responses.

There were subjective qualities involved in the study such as newness of the seven-period day or change itself. These qualities cannot be measured quantitatively and may have affected the results of the study. Aside from these considerations, no evidence was revealed by the research that would indicate the seven-period day was less effective than the six-period day. The results of the study indicate that students would take additional courses if given the opportunity with no apparent negative effects. The cost of the seven-period day was less on a per course basis than for the six-period day.

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## Chapter 1

### Introduction

Recent national studies on education, such as A Nation at Risk, The Carnegie Report, and A Place Called School, have issued strong criticism and specific recommendations which have resulted in pressure on state boards of education to formulate new standards. Among the practices receiving scrutiny is the traditional school day, which consists of five or six class periods and a lunch period. The National Commission on Excellence in Education stated the following in A Nation at Risk (1983) "Schools are not doing enough to help students develop either the study skills required to use time well or the willingness to spend more time on school work" (p. 24), and also, "Compared to other nations, American students spend much less time on school work." The Commission, therefore, recommended that state and local high school graduation requirements be strengthened and that, at a minimum, all students seeking a diploma be required to lay the foundations in five "New Basics" by taking the following curriculum during their four years of high school: (a) four years of English, (b) three years of mathematics, (c) three years of science, (d) three years of social studies, and (e) one-half year of computer science. For the college bound,

two years of foreign language in high school were strongly recommended in addition to those taken earlier.

Regarding time allocations, the National Commission on Excellence in Education made several specific recommendations which would provide for more time for the new basics. Among these recommendations was found the suggestion that school districts and state legislatures consider implementing a seven-hour school day and a 200 to 220 day school year. One of the purposes of implementing a longer school day was to provide additional time in order "to meet the special needs of slow learners, the gifted, and others who need more instructional diversity than can be accommodated in the current conventional school day" (A Nation at Risk, p. 29).

In response to the national reports and the increasing public criticism, many state legislatures and school boards began studying their own educational systems and evaluating their programs. In Virginia, the State Board of Education issued the Standards of Learning objectives in July, 1984 (see Appendix E). It soon became obvious to school personnel that the implementation of these objectives would require revamping the curriculum and more efficiently and effectively organizing time. The Commonwealth's new requirement of five and one-half hours in school for each student each day and the requirement of additional subjects for specific kinds of diplomas have generated much concern among school officials.

Specifically, new graduation requirements included the following for a 20-credit and a 22-credit diploma:

20-credit diploma		22-credit diploma	
	units		units
English	4	English	4
Mathematics	2	Mathematics	3
Laboratory Science	2	Laboratory Science	3
Math or Science	1		
Social Studies:	3	Social Studies:	3
US and VA History-1		US and VA History-1	
US and VA Government-1		US and VA Government-1	
World Studies-1		World Studies-1	
		(History and/or	
		Geography)	
Health and Physical Ed.	2	Health and Physical Ed.	2
Electives	6	Electives	4
(Academics, Fine Arts,		Foreign Language (3 of	3
and Vocational Ed.)		one or 2 of two)	
Total Units	20	Total Units	22

With these problems in mind, the school board in Washington County, Virginia, decided to experiment with a different class schedule at one of the county's four high schools. This was to be a pilot study of the seven-period day which would enable the school board to determine the

feasibility of using the seven-period program county-wide the following year.

### Significance of the Study

This study was conducted to obtain information for Washington County school officials about the effectiveness of the seven-period day schedule implemented at Abingdon High School and to judge the feasibility of implementing a comparable schedule in all county high schools on a permanent basis. Since the seven-period day schedule had been adopted by several Virginia school systems, and was under consideration by many more, it was hoped the results of this study might provide the decision makers in those systems with information upon which to base their judgement.

### Statement of the Problem

The problem of this study was to evaluate the effectiveness of the seven-period day schedule implemented at Abingdon High School. In order to facilitate the evaluation, several areas of inquiry were identified. Questions of interest included: Did students take advantage of the additional opportunities to take courses? If so, what courses were selected? Did an extended day create problems for students and/or faculty? If so, what kind of problems/concerns were encountered? Was student performance

affected? Did student behavior change? Did the lengthened school day increase stress or otherwise affect teachers' performance? What about cost?

Finally, administrators in the region were asked to comment on the possible impact (advantages and disadvantages) of a seven-period schedule as an addendum to the data collected at the school.

Several questions were formulated on the assumption that a seven-period day schedule would be as effective in meeting the needs of students as the former six-period day.

1. Did students enroll in more classes/courses when provided an extra period in which to schedule?
2. Did grade point averages change when students took an additional subject? Comparisons included:
  - A. Overall grade point average in 1984-85 with the overall grade point average in 1985-86.
  - B. Grade point average of students taking the maximum number of subjects (six) in 1984-85 with the grade point average of students taking the maximum load (seven) in 1985-86.
  - C. Selected departments' grade point averages in 1984-85 with grade point averages in 1985-86.
3. Did faculty and students exhibit favorable perceptions toward the seven-period day when compared to the six-period day?

4. Did the seven-period day affect student drop-out rate, participation in school activities, number of students applying for college, number of discipline problems, and absentee rate?
5. Did the seven-period day affect faculty demographics such as absentee rate and workload?
6. What was the cost of implementing the seven-period day?
7. What were the reactions of Southwest Virginia school administrators concerning the results of the study?

#### Limitations of the Study

The limitations of the study were as follows:

1. Abingdon High School, one of four high schools in Washington County, Virginia, was the only high school involved in the pilot study.
2. The pilot study evaluation continued for only one year; it did not address long-term implications.

#### Definition of Terms

For the purpose of this study, the following definitions were formulated:

Seven-period day - A class schedule which enables a student to enroll in a maximum of seven classes per day. The student may choose six subjects and a study hall or five

subjects and two study halls. The schedule also includes a thirty-minute lunch period. The first period class begins at 8:35 a.m. with each class period consisting of fifty minutes; the seventh period ends at 3:30 p.m.

Six-period day - A class schedule that enables a student to enroll in a maximum of six classes per day with fifty minutes in each class. The students could also choose five subjects and a study hall. The schedule includes a twenty-five minute lunch period. The first period begins at 8:44 a.m.; the sixth period class ends at 3:30 p.m.

Concurrent schedule - A schedule which allows a senior student to be enrolled in four units of high school credit and be enrolled in three hours of college credit during each quarter or semester of the academic year.

Co-op schedule - A schedule which allows the student to take three or four units of credit and be permitted to leave early for on-the-job training.

Abbreviated schedule - A schedule that applies to a second-year senior who needs only one or two units to graduate.

Elective courses - Courses which are not required for graduation.

Academic courses - Courses which include English, foreign language, social studies, mathematics, and science.

Non-academic courses - Courses which include business, home economics, industrial arts, art, music, physical education, health, vocational and trades.

### Organization of the Study

In Chapter 1, the need for this study is justified, and the seven-period schedule is discussed. The pilot program, as implemented at Abingdon High School, and the need for evaluating the program are discussed briefly.

Chapter 2 contains a review of the literature and results of research relative to the seven-period day schedule.

The design of the study is presented in Chapter 3. The procedures and research model are described.

Chapter 4 deals with description and analysis of the data and its tabular presentations.

In Chapter 5, the conclusions of the study are stated and appropriate recommendations made.

### Special Note

Teacher work schedules/assignments at Abingdon High School in 1984-85 were 5 assigned classes (or study halls). In 1985-86 teachers were assigned to five classes and one non-teaching assignment for one semester (the equivalent of 5.5 teaching assignments). This increased workload carried

no additional cost but did produce "additional" personnel resources to staff the revised schedule. This factor should be considered when reviewing teacher responses to the survey and interview reports as well as the cost analysis section in Chapter 5.

## Chapter 2

### Review of the Literature and Research

The following literature review concerning the seven-period day is the result of a search of the Educational Resources Information Center database using the DIALOG Information Retrieval Service at Virginia Polytechnic Institute and State University. The descriptors used in searching the topic were: (1) Extended School Day (Plan That Extends the Time a School is Open); (2) Flexible Scheduling; (3) Seven-period Day; (4) Secondary School Scheduling; and (5) High School Scheduling. The sources obtained from the ERIC search dated from 1966 to 1985. The dissertation abstracts were also searched for topics related to the seven-period schedule.

The National Association of Secondary School Principals' research department was contacted and given the same descriptors. Their database was searched for articles related to the seven-period day and they are included in the review.

The research department of Phi Delta Kappa was also contacted. They were given the same descriptors and asked for any sources relating to the seven-period day.

Finally, the Virginia State Department of Education was contacted and asked to send any information concerning the seven-period day. The researcher was particularly interested in the information about the number of school divisions in Virginia that were using or planning to use the seven-period day.

Evaluation of the seven-period day was the focal point of this study. It is necessary, therefore, to review the literature concerning existing seven-period day schedules. The extended school day and other verifications or modifications of the "normal" school day schedule were also included in the review.

The seven-period day was implemented at Abingdon High School in order to determine if it better enabled the students to meet new state requirements for various kinds of diplomas. This schedule provides an opportunity for a maximum of 28 units of credit for students (seven units per year for four years). Students can qualify for either Virginia diploma and still take six or eight units outside of electives.

Other advantages summarized in a study conducted in Hawaii by Adachi and Kim include the following:

- a. Teaching load - The seven-period proposal will not increase the daily teaching load for most teachers.

- b. Retention of electives - With the addition of the seventh period, it will be possible to provide for all required courses and retain elective courses.
- c. Increased use of existing facilities - The additional sections gained by the seven-period day proposal increase the availability of specialized facilities for the students.
- d. Other uses for periods gained - The additional sections gained by the seven-period day proposal may also be utilized for advisorships, department chairpersons, and other necessary activities associated with the operation of the school.
- e. Length of school day - The seven-period proposal does not require an extension of the school day in most cases. (Adachi and Kim, 1985, pp. 73-74)

The seven-period schedule adds one-seventh more flexibility to the master schedule. This reduces the chances for conflict in the student's schedule. Assuming faculty members will teach five periods and have one period for planning, one period remains for administrators to assign. For a faculty of 65, the administrator has approximately 65 hours per day to assign for the operation of the school.

The extra time gained by using the seven-period day can aid in staff development. Faculty members aspiring to become administrators can be assigned administrative duties for one

class period per day. These duties could include work in the attendance office, transportation and bus schedules, supervision of large groups, or other areas as assigned by the administrator.

Research on the seven-period schedule has also been conducted by JoAnn Goldberg for the Montgomery County Public School Systems, Rockville, Maryland. The research was designed for the Montgomery County School System with the aim of documenting and analyzing changes which occurred when 14 of the 22 high schools in the system switched from a six- to a seven-period schedule. The seven-period time table was adopted

. . . in order to 1) allow students taking full academic loads the opportunity of taking special electives and advanced level courses; 2) reduce students' scheduling conflicts; 3) provide more time for teachers to engage in activities with individual students while being involved in departmental and team planning; and 4) enable schools with smaller staffs to offer courses comparable in size to schools with larger staffs. (p. 1)

The goals of the study included monitoring and analyzing the number and kinds of additional courses taken by students, effects of the proposed changes in the length of class periods on the teachers and students, and the added cost of

staffing and transportation to the school system (Goldberg, 1983, p. 38).

Goldberg (1983) also listed several criticisms of the seven-period day including:

1. The seven-period day schedule provides teachers with an additional nonteaching period. Schools will implement an Instructionally Related Activity Schedule to enable teachers to use this period in a constructive manner for the benefit of the students and school. It is possible that these activities will not benefit anyone and the time will be wasted.
2. The seven-period schedule requires that a school increase its staff by approximately 14% and thereby increases the financial burden to the school division.
3. The seven-period schedule shortens the instructional period, reduces student exposure to academic courses and, possibly, learning.
4. Classes such as physical education and labs which require extended start-up and close-down times are said to be especially hard hit by a reduction in the (length of the) class period.
5. Eleventh and twelfth grade students who are not motivated by school will have even greater problems establishing an acceptable schedule. This may lead

to increased disruptive behavior and supervision problems. (Goldberg, 1983, p. 2)

The analysis of the impact of the seven-period day in the Montgomery County study was reported by Joy A. Frechtling. A preliminary analysis found that "a seven-period day schedule allows small high schools in Montgomery County, Maryland, to offer almost as many courses as larger six-period schools and allows their students to enroll in more courses, particularly in academic areas." It further concluded that

. . . students took advantage of expanded offerings with the number of sections of academic courses increasing by 7%. In both six- and seven-period day schools, total course offerings decreased slightly from 1981-82 to 1982-83, but seven-period schools added academic courses. Despite school enrollment declines, course enrollment increased in both types of schools, growing 11.7% in the seven-period schools. Both 'academic' and 'non-academic' departments in the seven-period schools gained enrollment, with increases of over 2,500 students in business, home economics, and industrial arts, and over 1,000 in physical education, art, foreign languages, social studies, mathematics, and science. In six-period schools, however, only mathematics gained over 1,000. Students used seventh

periods to acquire vocational and life skills as well as to add academic courses. The seven-period day affected tenth and eleventh graders' course selections, but not those of twelfth graders. The seven-period day affected students of all achievement levels equally; the shift toward taking a slightly greater proportion of non-academic courses was similar for both high and low achievers. (Frechtling, 1983, p. 7)

There is no doubt that the seven-period schedule will offer students an opportunity to take more courses, but some researchers indicate that academic achievement will increase only modestly--and at great expense (Mazzarella, 1984, pp. 14-20).

In 1985, the General Assembly of Virginia requested "The Department of Education to study the feasibility of revising regulations to facilitate a seven-period extended day for high school students" and to "report its findings" to them prior to their 1987 session. An Executive Summary of the House Joint Resolution No. 96 reports the following from a review of The Standards for Accrediting Schools in Virginia which was adopted July, 1983, and has a bearing of the implementation of a seven-period day for students:

**Standard B**

- Criteria 1. The school shall provide at least 180 days of instruction.

Criteria 2. The school shall operate an instructional program, excluding intermission for meals, that shall average at least 5 1/2 hours for students in grades 1-12 and a minimum of 3 hours for kindergarten.

Criteria 9. The standard unit of credit for graduation shall be based on a minimum of 150 clock hours of instruction. When credit is awarded in less than whole units, the increment awarded must be no greater than the fractional part of the 150 hours of instruction  
. . .

Standard C.

Criteria 11. No secondary teacher shall teach more than 25 class periods per week, except teachers of block programs and teachers of very small classes. Teachers of block programs with no more than 90 students per day may teach 30 class periods per week. Teachers who teach very small classes may teach 30 class periods per week provided the teaching load does not

exceed 75 students per day. One class period each day, unencumbered by supervisory or teaching duties, should be provided for every full-time instructional person for instructional planning (p. 1).

The draft of the summary went on to state that more efficient use of the school day, a longer school day, a lengthened school year, or a reduction in the number of hours required per unit of credit was required for the implementation of a seven-period day. The more effective use of staff or a larger staff was also noted as a requirement for the seven-period day.

The findings of the draft reported the lack of significant research concerning the value of an extended school year. This was due, in part, to the limited variability in length of the school year nationwide. A difference of less than ten days between the shortest and longest school year of the different states was found. A Research Report from Educational Testing Service, dated January, 1986, found that "one state requires 174 days per school year; 16 states require 175 days; two states require 176 days; one state requires 177 days; 29 states, including Virginia, require 180 days; and one state requires 182 days" (p. 2).

Also noted was the fact that the length of the school day varied a great deal nationally and within each individual state. Varying times for elementary and secondary students was reported by 32 states. The longer school day, of course, was found at the secondary level; one state (Florida) gave financial compensation to school divisions where a seventh period was added to the school day. It was reported that the extended school day, which included time for an additional period, came about with the increased emphasis on requirements for graduation.

The number of hours of instruction required for a unit of credit dictates the length of the class period in a secondary school. By converting the number of hours required per unit of credit to minutes and dividing by the number of days of instruction provided per year, the amount of instructional time required daily per subject can be determined. The summary reported that "ten states require 160-180 hours of instruction per unit of credit; seven states, including Virginia, require 150 hours; nine states require 130-145 hours; fifteen states require 120 hours; and seven states do not specify hours of instruction per unit of credit" (p. 2).

Previous to the increased graduation requirements approved by the Board of Education in July, 1983, the six-period day was the simplest arrangement for providing the

required instructional time, which was to teach a specific course for 50 minutes each day for 180 days. However, the increased graduation requirements required Virginia students to complete a number of instructional units which place them among the top states in the nation. In fact, at the time they were approved, these requirements placed Virginia third with only two states requiring more units of instruction than those receiving the 22 unit diploma and only nine states requiring more than those opting for the 20 unit diploma. This has stimulated questions by school administrators as to whether students' needs can be met through the six-period day. The seven-period day has evolved as a result of these concerns.

The summary went on to report on the Board of Education's approval of the request from three school divisions (Campbell County, Covington City, and Hopewell City) to conduct pilot studies during the 1984-85 school year with a seven-period day. One school division (Covington City) dropped the study in 1985, but the other two extended the study through the 1985-86 school year. One of the two school divisions (Hopewell City) asked for the waiver to be extended and continued the seven-period day; however, they did not invoke the waiver. The return to the traditional five teaching assignments per day was due to teacher dissatisfaction. One school division (Campbell County) asked

and received an extension of the study through the 1986-87 school year.

Many proponents, according to the study, have been convinced that they can better meet the educational needs of their students by making certain administrative adjustments within the school day and by extending the day a few minutes at the beginning and at the end. Homeroom periods at many schools have been eliminated in order to devote additional time to instruction.

The summary also supported the rapid growth of the seven-period day in Virginia. The number of schools employing a seven-period schedule in Virginia increased to 68 high schools and 112 middle schools in 1984-85 from 20 and 31 respectively in 1983-84. This number went even higher in 1985-86 to 90 and 127 respectively. The study further reported that 42 of the 133 school divisions responding to the survey had seven-period days. Another 20 divisions were considering the seven-period day for middle schools, and 49 were considering the seven-period day for high schools at the time of this report. This made a total of 108 of the 133 responding school divisions either having schools on the seven-period day or schools which were considering going to a seven-period day.

Another factor brought out in this study was that many of the divisions which have implemented a seven-period day

have found that "the requirement for increased staff has been less than anticipated" (p. 4). A 4% increase was reported by one school division which had anticipated at least a 15% increase. Two schools implemented a seven-period day beginning with the 1986-87 school year without increasing staff at all. More efficient student scheduling came about by spreading the course offerings over seven periods. "As a result many small classes were filled, especially in vocational courses, the arts and other electives" (p. 4).

The following are the most often cited advantages of the seven-period day as found by the study:

1. Increasing the number of course offerings, especially in elective courses.
2. Increasing the number of class sections within a course.
3. Providing for the separation of combined classes.
4. Reducing the number of courses in which only one section is offered.
5. Providing for easier scheduling of single section classes that still exist.
6. Reducing class size.
7. Reducing student and teacher scheduling conflicts.
8. Giving students access to more electives.
9. Providing for more effective use of staff. (p. 5)

The disadvantages cited were as follows:

1. A longer school day for students and staff.
2. Earlier bus pick up and later discharge of students.
3. Increased operational and maintenance cost.
4. Increased staff salaries.

The findings prepared by the Virginia Department of Education included the conclusion that the seven-period day for high school students was rapidly replacing the traditional six-period day in Virginia. There have not been insurmountable obstacles to this movement by the current regulations contained in The Standards for Accrediting Schools in Virginia. School divisions may exceed, if they so desire, the minimum standards pertaining to length of the school year and length of the school day. It was also noted that this may also place undue hardship on certain school divisions who choose to do so. "The requirement pertaining to the number of hours required for a unit of instruction could be reduced but the amount of content covered in the course would also need to be reduced" (p. 5).

After much concern for the number of class periods that a teacher might teach per week, the "Standards" have been made more flexible through the following proposal:

Standard C.

- Criteria 8. The secondary classroom teacher's standard load shall be no more than 25 class periods per week. One class

period each day, unencumbered by supervisory or teaching duties, shall be provided for every full-time classroom teacher for instructional planning. Teachers of block programs with no more than 120 student periods per day may teach 30 class periods per week. Teachers who teach very small classes may teach 30 class periods per week provided the teaching load does not exceed 75 student periods per day. Any classroom teacher who teaches 30 class periods per week with more than 75 student periods per day (120 in block programs) shall be contracted for such with appropriate compensation. (p. 6)

The recommendation from this study was that "the proposal for the change in the standard governing the number of class periods that a teacher may teach be adopted . . . that the standards pertaining to the length of the school year, the length of the school day, and the number of hours required for a unit of credit remain unchanged" (p. 6).

Even though research shows that many European and Japanese students spend as many as eight hours daily and 220

days yearly in the classroom, 661 American superintendents surveyed believe the present U.S. average--six hours and 180 days--to be adequate, raising questions about their potential support in changing the system (Educational Research Services, 1984). This finding gives further credibility to the seven-period day. The seven periods can be scheduled within the existing six hour school day and confirm Goodlad's (1983) suggestion that "we can make better use of the time that is now available instead of adding time" (p. 99).

A review of factors diminishing instructional time concludes with the estimate that less than 30% of the average school day is devoted to instruction. Rather than extending the school day or year, more efficient time management and re-evaluation of the importance of non-instructional activities are recommended. Gilman and Knoll (1984) and Justiz (1984) also suggest that "instead of lengthening school days and years, schools should efficiently include rescheduling school days to include solely academic courses and instituting mastery learning" (pp. 483-485).

Arguments for lengthening the school day and/or year are predicated on the notion that more time devoted to learning will yield proportionally higher achievement scores. Research reveals, however, that the correlation between time and achievement is far less than predicted. Allocated time is that amount of time which is allotted within the master

schedule for a teaching period. Engaged time is the amount of time that students and teachers actually interact in the learning process. "The quality of instructional time is more important than quantity; moreover, the cost of extending school time is disproportionate to any resulting instructional gains" (Ellis, 1984, p. 3).

A review of time on task research including length of day, reveals that time is not the only variable related to student achievement. Increasing time in school will not automatically increase student achievement or raise standardized test scores. Other variables such as corrective and immediate feedback, attention to and transfer of prior learning, and active participation of the teacher with students are also important. Quality of time spent in the classroom then clearly becomes a significant correlate to achievement (Quartarola, 1984, p. 11).

Although policymakers have recently tended to call for longer school days or years, such reforms might be ineffective or counterproductive if they fail to take into account the interactions between time and other determinants of learning, including the role of the student in allocating time. Levin (1984) stated the following:

. . . the amount of learning is a function of capacity, effort, time, and quality of resources. Since effort is a variable determined by the students, means must be

found to increase it by developing motivators either intrinsic or extrinsic to the curriculum. Extrinsic motivators, which seem to be losing their appeal to students, include rewards provided by parents, school, and society; expectations of economic success; and fear of economic failure. Extrinsic motivators are difficult to manipulate. Cost analysis indicates that investing in upgrading the quality of teaching resources would cost less than increasing school hours and student workloads and would enhance learning. Furthermore, no good evidence suggests that adding days to the school year improves performance; even so, many states are making such additions. (pp. 5-6)

Although the literature is sparse regarding the impact of the seven-period day, several variations are reported here.

According to Craig Loper, Principal of Rangely High School, Rangely, Colorado, the eight-period day as adopted by his school is one modification which allows students an opportunity to meet the new graduation standards which require 28 required credits of which 21.5 hours must be academic requirements. With these stiff requirements it is easy to see why elective areas such as art, home economics, industrial arts, auto shop, and music did not enroll the number of students the community would like to see. With

overwhelming support, the board of education approved the concept for implementing the eight-period day during the 1984-85 school year. The day was organized into eight 47-minute periods commencing at 8:05 a.m. and dismissing at 3:21 p.m. Loper reported, ". . . we are very pleased with the results of the eight-period day. We are convinced that it has provided numerous options, beneficial to students, that would otherwise not have been available to them" (pp. 9-10).

Also included in Loper's article were highlights of the eight-period day which included the following:

- Elective offerings have increased. A wider variety of classes is offered without an increase in faculty.
- Enrollment in the arts, electives, and vocational classes has increased more than 40%.
- More students are enrolled in academic electives.
- Over 50% of the students are taking eight classes, allowing those in the college preparation track to take more electives.
- Teachers with heavier preparation loads now have been given more preparation time.
- Grades have been improving, dropout rate has been significantly reduced, and truancy has decreased.
- The students appear happier.

- Most teachers support the shorter class periods and enjoy teaching new electives.
- Students, teachers, and the community are very supportive of the eight-period day.
- The pupil to teacher ratio has been reduced.
- Students who failed classes early in their high school years now have the chance to graduate on time by taking eight classes per year. (p. 10)

In summary Mr. Loper states,

The eight-period day has worked well for us. It has helped us answer our initial question of how to meet rigid academic requirements and balance this with good elective programs. This concept could work well for districts with six periods moving to seven and in districts with the four day week. We have received inquiries and continue to welcome more. (p. 10)

Nathan Hale High School in Seattle, Washington, is operating on a modified schedule called, "Six on Seven." A student registers for seven periods which are rotated on a seven-day cycle and is taught in four morning sessions and one long afternoon session. Students and teachers profit from this scheduling. "The program has resulted in such new developments as a tape library of all the formal lessons taught in the foreign language classes, new team-planning and

team teaching programs in which teachers capitalize on their particular talents" (Gladstone, 1976, p. 11).

Another modified seven-period day enables school districts to operate on a four-day week. By lengthening school days and moving to a four-day school week, the Cimmaron (New Mexico) School District not only saved energy and transportation costs but also won teacher, student, and parent approval and saw student scores rise on national standardized tests (Pompeo, 1981, p. 37).

Some school districts in Colorado also implemented the four-day week. This schedule was implemented by twenty-three small, rural school districts representing 5,200 students. Thirteen districts implemented their four-day program in the 1980-81 school year. Ten additional districts applied as first year pilot programs in 1981-82. A study conducted by Colorado State University of the original thirteen school districts found that all districts demonstrated the potential of the schedule to save energy and transportation costs and to reduce student and teacher absenteeism. In addition, student achievement levels were comparable to their achievement prior to experiencing the four-day week. Parents, teachers, and students favored the four-day concept over a five-day week by a wide margin. The school districts found they achieved notable cost savings in many areas, and there were important strategic considerations surrounding the

decision of taking Monday or Friday off. Negative factors associated with the schedule were 1) excess time of students, and 2) the school day being very long for young students. The research also concluded that "a community and school should avoid moving into a four-day schedule without careful study and planning" (Brubacher and Stiverson, 1982, p. 7).

Liberty School District, Spangle, Washington, implemented a similar schedule. Schools started fifteen minutes earlier and ended one hour later. Projections indicated that "the typical high school student would gain almost thirty-one school days over a four-year period, despite the fact that school would start one week later and operate for 144 days instead of 180. The gain was attributed to longer class periods" (Feldhausen, 1981, p. 15).

Most states have been evaluating their educational programs so as to get the most for dollars spent. A survey of twenty-eight school districts attempted to estimate cost of adopting reforms recommended in the final report of the National Commission on Excellence in Education. Specifically examined were only those recommendations most readily quantifiable by cost. These included the suggestions that "1) salaries for the teaching profession should be increased and should be professionally competitive and market sensitive; and 2) significantly more time should be devoted to learning." The Commission's report asserted that

"achieving these goals will require more effective use of the existing school day, a longer school day, or a lengthened school year; seven-hour school days and a 200 to 220-day school year were recommended for consideration by school districts and state legislatures." Findings, among others, indicated that "implementing market-sensitive salaries and longer sessions could increase school districts' budgets an average of twenty-seven percent. A wide disparity in the financial capability of school districts to implement reform was also found." It was concluded that "the cost of reform is substantial but not unattainable" (American Association of School Administrators, 1983, p. 15).

#### Summary

The traditional school day, which consists of five or six class periods and a lunch period, has come under scrutiny in recent years. The National Commission on Excellence in Education (1983) stated that:

. . . evidence presented to the commission demonstrates three disturbing facts about the use that American schools and students make of time: (a) compared to other nations, American students spend much less time on school work; (b) time spent in the classroom and on homework is often used ineffectively; and (c) schools are not doing enough to help students develop either the

study skills required to use time well or the willingness to spend more time on school work. (p. 21)

The commission, therefore, recommended that

. . . significantly more time be devoted to learning the New Basics. This will require more effective use of the existing school day, a longer school day, or a lengthened school year. School districts and state legislatures should strongly consider the seven-hour school days, as well as a 200- to 220-day school year.

(p. 29)

The seven-period day as implemented at Abingdon High School is one alternative schedule which might assist school divisions and students in meeting these recommendations.

Clearly the use of time is an important ingredient which impacts opportunities for students. The review of the research literature illustrates a variety of approaches to making better use of existing time. It is also obvious that a variety of approaches has produced mixed results. In some cases, cost has been a significant factor; in others, almost negligible. It appears as though the costs and benefits may be unique to the school system in which a model is employed. This supports the importance of such a study to answer the questions facing Washington County.

## Chapter 3

### Design of the Study

Abingdon High School is one of the four public secondary schools in Washington County, Virginia. Two vocational schools and thirteen elementary schools also serve the county.

The community served by Abingdon High School is composed of the town of Abingdon and a wide surrounding county area. Statistics drawn from the school census of 1983 show that seventy-six percent of Abingdon High School's enrollment is classified as rural, with the remaining twenty-four percent coming from within the corporate limits of the town. This census also showed the population area served by Abingdon High School community to be 12,872, while the 1980 federal census reported the total population of Washington County to be 46,458.

Abingdon High School houses grades eight through twelve. On October 1, 1985, total enrollment was 1,207. The distribution by grades was as follows: eighth grade, 255; ninth grade, 253; tenth grade, 252; eleventh grade, 232; and twelfth grade, 196. These students are served by a faculty of 76 of whom 25 are males and 51 are females; three guidance

counselors, one male and two females; and three administrators, all of whom are male.

Abingdon High School implemented the seven-period day schedule on a one-year pilot program basis during the 1985-86 school year. The purpose of this study was to evaluate the seven-period day so as to provide information to the Washington County School Board regarding the feasibility of establishing the seven-period day in all county high schools.

Evaluation is defined by Stufflebeam (1971, p. 22) as a means of acquiring and providing information useful in making judgments about decision alternatives. It was hoped the Washington County School Board could use the data collected in this study to make important judgments as to the feasibility of using the seven-period day in all county high schools.

Evaluation of the seven-period day addressed the following components:

1. Student course enrollment;
2. Grade point average including:
  - A. Overall grade point average,
  - B. Grade point average of students taking the maximum load of subjects,
  - C. Department grade point average;
3. Student and faculty perceptions of the seven-period day;

4. Faculty impacts including absentee rate and workload;
5. Student impacts including drop-out rate, participation in school activities, applications for college, discipline problems, and absentee rate;
6. Cost of implementing the seven-period day at Abingdon High School; and
7. Review of study results by Southwest Virginia school administrators.

In order to provide data to evaluate the seven-period day, several questions were formulated. Specific questions addressed were:

1. Did students enroll in more classes/courses when provided an extra period in which to schedule? If so, which classes?
2. When students took additional courses did grade point average change? Comparisons included:
  - A. Overall grade point average in 1984-85 with the overall grade point average in 1985-86;
  - B. Grade point average of students taking the maximum number of subjects (six) in 1984-85 with the grade point average of students taking the maximum number of subjects (seven) in 1985-86;

- C. Selected departments' grade point average in 1984-85 with grade point averages in those departments in 1985-86.
3. Did faculty and students exhibit favorable perceptions toward the seven-period day when compared to the six-period day?
  4. Did the seven-period day affect faculty absentee rate and workload?
  5. Did the seven-period day affect student drop-out rate, participation in school activities, number of students applying for college, number of discipline problems, and absentee rate?
  6. What was the cost of implementing the seven-period day?
  7. What were the reactions of Southwest Virginia school administrators toward the seven-period day?

#### Procedures and Analysis

Enrollment data were collected from the guidance office at the end of the 1985-86 school year to determine if more students enrolled in additional classes when given an opportunity. The number of students taking additional subjects was determined by counting the number of grades of each student that were transferred to his/her permanent record. A question regarding additional subjects was also

included on the survey. The percentage of students in each grade taking additional subjects was calculated by dividing the number of students taking six or seven subjects in a particular grade by the total number of students in that grade.

### Student Course Enrollment

The data collected included 1985-86 student enrollment at Abingdon High School by grade and course. This information was collected at the end of the 1985-86 school year from the Guidance Department Office of Abingdon High School. The number of students taking seven subjects was determined by counting the number of grades of each student transferred to the permanent record. The percentage of students taking seven subjects in each grade was computed by dividing the number of students taking seven subjects in a particular grade by the total number of students enrolled in that grade.

### Grade Point Average

Data regarding grade point average were collected from the guidance office at Abingdon High School at the end of the 1985-86 school year. The overall grade point average in 1984-85 was compared with the 1985-86 overall grade point average. Grade point average is computed by assigning a

numeric value to each grade: A=4, B=3, C=2, D=1, and F=0. The numeric value assigned to weighted courses such as honors English, honors history, honors government, Algebra II, calculus, analysis, physics, Latin III and IV, French III and IV, and Spanish III and IV, was A=5, B=4, C=3, D=2, and F=0. The overall grade point average was determined by adding the numeric value of each grade for each student in each class and dividing by the total number of students. Grade point average determined by this method was used to compare grade point averages of students taking the maximum number of subjects (six) in 1984-85 with the students taking the maximum number of subjects (seven) in 1985-86. Selected departmental grade point averages were also determined and compared using this method.

#### Faculty and Student Perceptions of the Seven-Period Day

The data regarding perceptions of faculty and students concerning the seven-period day was obtained from two 13-question surveys. The two questionnaires (see Appendix A and B) were developed after determining what information was needed by Washington County School Board to make their decision concerning implementation of the seven-period day. With specific information in mind, the questionnaires were developed with assistance from professors at Virginia Polytechnic Institute and State University.

The faculty survey containing 13 questions was given to all faculty members (76) during a faculty meeting in February, 1986. Fifty-eight faculty members responded. The student survey containing 13 questions was given to all students (977) present in March, 1986, of whom 479 were male and 498 were female. The survey was distributed, answered, and collected during first period class. The total number of responses was 977.

### Faculty Impact Study

#### Absentee Rate and Workload

The attendance data for faculty members were compiled from records maintained in the Washington County School Board Office. The percentage of absenteeism for faculty members was calculated by dividing the number of days absent into the total number of assigned student contact days (180). Total days were calculated on a full-time equivalent basis. Full-time equivalency was determined by dividing the total number of sections taught by five and adding the number of guidance counselors, librarians, and administrators. Full-time equivalency was used to compute the number of days possible to be absent. Since the actual number of teachers (68 in 1984-85 and 76 in 1985-86) was known along with the actual number of days missed (for both males and females for

both years) the percentage was determined by dividing the total number of days missed into total possible days (as determined by full-time equivalency). The same procedure was used to determine percentage of absenteeism for males and females.

The percentage of absenteeism for both years was calculated and is displayed in Chapter 4. The rate of absence for males and females is also presented for both years.

#### Daily Teaching Workload per Teacher

Data regarding teacher workload were collected from the guidance office in April, 1985. The information was obtained from teacher rolls and master schedules for 1984-85 and 1985-86.

The workload of faculty members was determined by dividing the number of faculty members of a department (full-time equivalents) into the total number of students enrolled in classes offered within that department. The average number of students for which a teacher was responsible in 1985-86 was compared with the number for that department in 1984-85.

Student Impact StudyDrop-Out Rate

Data regarding drop-out rate were obtained from the guidance office at Abingdon High School. This information was gathered in July, 1986. A person was considered a drop-out if she/he withdrew from Abingdon High School and did not re-enter in Abingdon High School or another school during that academic year. The number and percentage of drop-outs in 1985-86 was compared with the total number and percentage in 1984-85. The drop-out percentage was determined by dividing the number of drop-outs by the total number of students enrolled for that year.

Participation in School Activities

The data regarding participation in school activities were collected at the end of the 1985-86 school year. The main office at Abingdon High School maintains records on student participation in school activities divided into four areas: scholastic and honors, service clubs, subject-related clubs, and athletics. Participation for the 1985-86 school year was compared to the percentage of students participating in 1984-85. Participation in school activities was also computed for males and females, comparing 1984-85 with 1985-86.

### Student Applications for College

Data regarding the number of students continuing their education were collected from the Abingdon High School guidance office at the end of the 1985-86 school year. The percentage of students continuing their education was determined by dividing the number of students indicating their intentions of going on to college into the total number of students in the senior class. The percentage of students was determined for 1985-86 and compared with 1984-85. A comparison between males and females planning to continue their education was also computed.

### Absentee Rate

Information concerning absentee rate of students at Abingdon High School was collected at the end of the 1985-86 school year. The percentage of students absent during the 1985-86 school year was compared with the percentage of students who were absent in 1984-85. The absence percentages were taken directly from the end of the year report sent to the division superintendent.

### Discipline Problems

Data regarding the number and percentage of discipline problems were collected at the end of the 1985-86 school year. Discipline cases were divided into two areas: major

offenses and minor offenses. A major discipline offense was one for which a student was suspended or served in-school suspension. Minor discipline cases involved offenses in which students served afternoon detention. The number and percentage of discipline cases were computed for 1985-86. This number and percentage was compared with the number and percentage for 1984-85. Percentage of cases by male and female was also compared for the two years. The number of days served in suspension and/or detention was also determined and reported for the two years.

Cost of Implementing the Seven-Period Day  
at Abingdon High School

The cost of implementing the seven-period day at Abingdon High School was computed by examining selected categories of the Washington County School Board budget. The cost of salary, benefits, and instructional supplies adjusted for across the board salary and benefit increases was determined for the 1985-86 school year and compared with these same categories of the 1984-85 budget. The actual professional salaries, benefits, and instruction cost paid at Abingdon High School was determined for the 1984-85 school year. Those data were compared with the same categories minus 14.6% (system wide) salary increase for 1985-86. A second analysis using full-time equivalent faculty unit costs

was also undertaken. Finally, course unit costs for 1984-85 and 1985-86 were computed and compared.

Interviews: Students, Faculty, and Administrators

Open-ended interviews were conducted by the principal with 20 students, 20 faculty members, and 20 Southwest Virginia school administrators. These interviews were conducted in March, April, and May of 1985. These results were not quantified but were used to further explore and expand on information collected through records review and survey data. Interview questions can be found in Appendices C and D.

## CHAPTER 4

### Analysis of Data

The evaluation of the seven-period day at Abingdon High School was carried out during and immediately following the 1985-86 school year. Components of the evaluation included student course enrollment data; student performance and related grade distribution data; student and faculty perceptions regarding the seven-period day; faculty impact data: absentee rate and workload; student impact data: drop-out rate, participation in school activities, number of students applying for college, number of discipline problems, and absentee rate; data regarding the cost of the seven-period day, and examination of study results by Southwest Virginia school administrators.

### Presentation of Data

#### Course Enrollment

In this school, students did take advantage of the seven-period day. Thirty-three percent of all students took seven subjects. The ninth and tenth grade classes were the biggest beneficiary of the seven-period schedule. Fifty-nine percent of the tenth grade class took seven subjects while

48% of the ninth grade class took seven subjects. The junior and senior classes benefitted least from the seven-period schedule. Thirty percent of the eleventh graders took seven subjects while only 20% of the seniors took seven subjects.

One explanation for the juniors and seniors having a low percentage may be that their program of studies had already been planned, and they did not fall under the new state guidelines for graduation. Only 3% of the eighth graders took seven subjects. They were encouraged to take six subjects and a study hall. This schedule was encouraged for eighth graders because it was the opinion of the Washington County School Board and the Abingdon High School administrative staff that eighth graders needed time to adjust to high school and have at least one period available to study. This study period could also be used for longer counseling sessions with teacher or counselor. In general, more classes were taken by more students in 1985-86 than in the previous year. Eighty-three percent of the 1,193 students at Abingdon High School took six or seven subjects during the 1985-86 school year (see Table 1) compared to 75% who took six subjects in 1984-85. The foreign language department was the biggest beneficiary of the seven period day with an increase of 121 students. The business department increased their enrollment by 113 students while art increased in numbers by 104 students. The English

**Table 1**  
**Number and Percent of Students Taking Six or Seven Subjects by Grade Level - 1985-86 School Year**

Grade	8		9		10		11		12		All Grades	
	N	%	N	%	N	%	N	%	N	%	N	%
Enrollment	256		264		251		230		192		1,193	
Enrolled in 7 subjects	7	3	127	48	148	59	68	30	39	20	389	33
Enrolled in 6 subjects	206	80	129	49	97	39	99	43	60	32	591	50

department had an increase of 103 students. Other departments that showed modest enrollment increases were mathematics, 42 students; science, 83 students; physical education, 9 students; music, 19 students, agriculture, 45 students; distributive education, 23 students, home economics, 42 students. Two departments showed a decrease in enrollment. The social studies department showed a decline of 102 students while the industrial arts department decreased by 16 students.

### Grade Point Average

The mean grade point average for all students remained approximately the same, being 2.63 for 1984-85, and 2.65 for 1985-86 (see Table 2). There were, however, shifts in departmental grade point averages. There were up fluctuations in math, music, business, agriculture, and industrial arts. Down fluctuations were shown in language arts, science, foreign language, physical education, distributive education, art, and home economics. Social studies remained the same.

Some of the fluctuations were more dramatic than others. The greatest increase in grade point average occurred in music with an increase of .59. Agriculture showed a similar (.52) increase in grade point average in 1985-86.

Table 2  
Enrollment and Grade Point Average by Department 1984-85 and 1985-86

Department	1984-85		1985-86		GPA Difference
	(N)	GPA	(N)	GPA	
Math	815	2.24	857	2.44	+ .20
Language Arts	1,200	2.73	1,303	2.50	- .23
Science	820	2.36	903	2.28	- .08
Social Studies	933	2.23	831	2.23	.00
Foreign Language	358	3.33	479	2.91	- .42
Physical Education	755	3.10	479	2.80	- .30
Music	286	3.07	305	3.66	+ .59
Business	313	3.00	426	3.09	+ .09
Agriculture	227	2.02	272	2.54	+ .52
Distributive Education	79	3.00	102	2.70	- .30
Art	64	2.50	168	1.90	- .60
Home Economics	113	3.50	155	2.70	- .80
Industrial Arts	101	2.64	85	2.68	+ .04
<b>Total</b>	<b>5,963</b>	<b>2.63</b>	<b>6,527</b>	<b>2.65</b>	<b>+ .02</b>

The most negative changes in departmental grade point average occurred in foreign language, art, and home economics. The greatest decline in grade point average occurred in art where the grade point average decreased .60 in 1985-86. Home economics decreased from 3.50 in 1984-85 to 2.70 in 1985-86, a difference of .80. Foreign language showed a decline in grade point average of .42. While each of these departments showed a decrease in grade point average, only the art department showed a decrease that caused the average of the department to fall below the overall school average of 2.5.

There were also fluctuations in departmental failure rate (see Table 3). The overall failure rate was less than 6% for both years studied. Increases in department failure rate for 1985-86 were noted in language arts, math, science, music, business, and distributive education. Reduction in the percentage of students failed were noted in social studies, foreign language, physical education, agriculture, art, home economics, and industrial arts.

The highest percentage of failure occurred in the art department in both years. The art department failure rate was 13% in 1984-85 and although there was a decrease of 1% in 1985-86, their failure rate was still 4% higher than the next highest department. The language arts department failure rate was up from 4% in 1984-85 to 6.3% in 1985-86--an

Table 3

## Failure Rate by Department 1984-85 and 1985-86

Department	1984-85		1985-86		Percent Difference
	(N)	No. Failed	(N)	No. Failed	
Mathematics	815	51	857	59	+3.30
Language Arts	1,200	48	1,303	82	+2.30
Science	820	62	903	74	+6.60
Social Studies	933	69	831	58	-4.40
Foreign Language	358	13	479	14	-9.90
Physical Education	755	32	764	23	-1.20
Music	286	0	305	3	+9.90
Business	313	7	426	13	+8.80
Agriculture	227	21	272	19	-2.20
Distributive Education	79	0	102	2	+1.90
Art	64	9	168	21	-1.10
Home Economics	113	4	155	5	-5.50
Industrial Arts	101	9	85	5	-3.60
Totals	5,963	325	6,527	378	5.8

increase of 2.3%. The physical education department decreased its failure rate from 4.2% in 1984-85 to 3.0% in 1985-86. A decrease of 2.2% in the failure rate was noted in the agriculture department when the failure rate went from 9% in 1984-85 to 6.8% in 1985-86. The distributive education department went from no failures in 1984-85 to 1.9% in 1985-86. A decrease of 3.6% was noted in the failure rate of the industrial arts department.

In general, the core academic areas showed a slight increase in department failure rate. The exceptions were foreign language and social studies. The vocational areas generally showed a decline in departmental failure rate. The exceptions were the business and distributive education departments.

#### Maximum Enrollment Grade Point Average

When comparing grade point averages of students who took maximum load, up and down fluctuations were also noted (see Table 4).

The overall grade point average for 8th grade students taking the maximum number of subjects was 2.73 in 1984-85 as compared to 2.68 in 1985-86--a decrease of .05. The grade point average of ninth grade students who took the maximum number of subjects showed the greatest decline. Student's overall average went from 2.81 in 1984-85 to 2.30 in 1985-86.

Table 4  
Grade Point Average of Students Enrolled in Maximum Number of Subjects 1984-85 Compared to 1985-86

Grade	1984-85		1985-86		Difference
	N	6 = Maximum G.P.A.	N	7 = Maximum G.P.A.	
8					
Male	67	2.67	7	2.68	+ .01
Female	108	2.79	0		
Total	175	2.73	7	2.68	- .05
9					
Male	79	2.64	56	2.09	- .55
Female	109	2.98	71	2.43	- .55
Total	188	2.81	127	2.30	- .51
10					
Male	85	2.74	57	2.68	- .06
Female	82	2.96	91	3.04	+ .08
Total	167	2.85	148	2.80	- .05
11					
Male	60	2.75	25	3.24	+ .49
Female	85	2.63	43	3.58	+ .85
Total	145	2.69	68	3.40	+ .71
12					
Male	30	2.42	17	2.90	+ .51
Female	29	2.63	22	3.01	+ .38
Total	59	2.54	39	2.97	+ .43

Tenth graders showed a slight decrease in overall grade point average. The most dramatic grade point average increase was noted in the eleventh grade. The average G.P.A. increased .71. The eleventh grade females increased their average by .85. This represented the largest increase by either sex in all grades.

More females than males in 1985-86 seemed to take advantage of the seven-period day. This was true in every class except the eighth grade. In 1985-86 the females also had a higher grade point average than the males in all grade levels except the eighth grade.

It should be noted that eighth graders were encouraged to take six subjects and a study hall when the seven-period day was implemented in 1985-86. In general, the students who took the maximum load of subjects in grades 8, 9, and 10 showed a decrease in grade point average. The grade point average of eleventh and twelfth grade students who took maximum load in 1985-86 increased in comparison to 1984-85 students who took maximum load. Students in lower grades seemed to struggle or have more difficulty maintaining grade point average. Upper level students of both sexes increased their grade point averages.

### Faculty Perceptions

Information related to faculty attitudes was gathered through a 13-question survey of 76 faculty members at Abingdon High School.

The first three questions on the faculty survey dealt with their perception of benefits that students derive from the seven-period day (see Appendix A).

Fifty-eight faculty members responded of which 40 were females and 18 were males as detailed in Table 5.

Twenty open-ended interviews were also conducted (see Appendix C). A faculty member for each of the 13 departments at Abingdon High School was interviewed. Two faculty members were interviewed in the math, science, language arts, foreign language, business, physical education, and art departments.

In response to the survey, 66% of the faculty thought the seven-period day helped students better meet the graduation requirements; 69% thought the diploma requirement was better met; 64% thought additional subjects justified the cost; 53% thought it was more efficient; and, yet, only a slight majority (52%) wanted to implement the seven-period day on a permanent basis. Fifty-seven percent thought the seven-period day was more stressful. Fifty-nine percent said students had less time for extracurricular duties. Sixty-two percent indicated they had just as much time for planning. Eighty-three percent did not have an additional teaching

Table 5

Profile of Faculty Population and Survey Respondents

Population Profile			Respondent Profile		
Sex	N	%	Sex	N	%
Males	25	33	Males	18	31
Females	51	67	Females	40	69
Total	76		Total	58	

period. Fifty-five percent said they had no more students to teach. Seventy-nine percent of the faculty indicated the four minutes between periods was sufficient, and 72% of the faculty indicated that four minutes was enough time for students to change classes (see Table 6).

In addition to the faculty survey, several faculty members were interviewed concerning their perceptions of the seven-period day. The following quotes from faculty members summarize the perceptions of that group towards the seven-period day.

An English teacher stated the following:

My opinion of the seven-period day is based on my dual role as a member of the faculty and a parent of a student who is enrolled in the school. As a faculty member, I feel some stress, and I can understand the stress some of my colleagues feel. This stress is associated with rushing from one place to another, not having our rooms and materials available to us during our conference periods, and an unbalanced enrollment in some basic classes because extra teachers have not been hired to teach the extra classes. I am also concerned that many students are being placed in classes in which they probably do not belong simply because we have another fifty-minute time slot in which we must keep them occupied. As a parent and an advocate of a liberal arts

Table 6

Faculty Perception of the Seven-Period Day

Topic	% Favorable	% Unfavorable
Helps meet graduation requirements	66	24
Helps meet diploma requirements	69	21
Additional subjects justify costs	64	31
More stressful	38	57
More efficient	53	38
Provides time for extra-curricular activities	41	53
Adopt on a permanent basis	52	47
Provides just as much time for conference or planning	62	38
Number of teaching periods has increased	83	17
Sufficient time for me to change class	79	21
Sufficient time for students to change class	72	28
Number of students taught has increased	55 (no)	44 (yes)

education for serious students, I am delighted that my son, who is enrolled in college preparatory classes, has the opportunity to take recommended academic courses and also take courses in the fine arts, such as chorus, and useful courses such as typing.

A special education teacher stated the following:

As students arrived for classes that fall, we became aware that our brightest and highest achieving students were taking full advantage of the seven periods. They had signed up for record numbers of language classes and social studies classes. There was a perceptible enthusiasm for electives which had been impossible to take in years past.

The average student, too, found the schedule enabling. Electives were chosen enthusiastically, and students began to talk about ways they could pace their years at Abingdon High School. The state's new standards for the diploma no longer threatened to be difficult to manage in the usual four-year curriculum.

Special education students and students for whom school is a chore benefitted as much as any segment of our school population from the seven-period day. Many students with learning problems need time for special assistance and tutoring within each school day in order to be successful in required coursework. Seven periods

gave time to schedule students for the academic courses which are required of them and left time for a period of directed study for those students whose academic limitations were most severe. Finally, mainstreaming can be implemented with time for the special teachers to serve as resources to special students, as well as to their conventional classroom teachers.

It is true that the seven-period day has introduced some problems for our faculty and staff to consider. We noticed that so many of our talented students were taking seven classes, and that segment which had supplied our student leadership in the past was decidedly less involved in student activities (clubs and organizations). We observed that the good students suffered some adjustment problems in time management--there was more homework to do with more courses to take. Some of our classes were too full of students . . . We are seeing the need to diversify our curricular offerings and to expand our courses available to students.

A member of the social studies department said the following about the seven-period day:

I have mixed feelings regarding the seven-period day. It does provide more opportunities for students to take the required subjects for graduation, as well as time

for more elective classes, such as band, chorus, computer math, and typing. As a parent, I appreciate this particular aspect.

On the other hand, I personally feel that there are several negative areas in this system. Students respond in a very frustrated manner to the amount of homework coupled with extracurricular activities, lack of time between classes, crowded lunch periods, and just being tired all of the time.

The language arts department chairperson made the following comments:

As I see it, the numerous disadvantages outweigh the advantages. Even some of the students who carry seven subjects complain about the overwhelming amounts of homework, insufficient time to use the library, little time for make-up work, and extreme fatigue.

Too many students now have two study halls, some do not properly utilize even one study hall, leading to poor habits and educational idleness. This, in turn, promotes negative attitudes, unacceptable behavior, and more discipline problems than usual for this time of year. The numerous study halls require much staff time; I wonder if there is merit in this.

A senior member of the science department quoted the following:

I believe the theoretical advantages--to the students and in the efficient handling of lunch--make the seven-period day worth pursuing. I think in practice this schedule is doing what it is theoretically supposed to do, but at the expense of teachers. My 'impression' is that non-teaching assignments should be performed by non-teachers.

The foreign language department chairperson said:

My students last year in my first period Latin II class showed a real plus for the seven-period day. Eighteen students out of 32 made the honor roll every six weeks. Of these 18, 15 were carrying seven subjects. I feel this example shows that students who are willing to put forth added effort benefit greatly from the seven-period system.

As a teacher, I find the seven-period day no more demanding in my preparation than our previous system. Time on task has been the same for me as far as planning for my classes goes. My biggest problem is make-up work. Unless I arrive at school early or stay late, my students end up making up missed tests during class time. . . . All in all, I feel the seven-period day enables many students to pursue areas of study unavailable to them otherwise. Scheduling of teachers leaves a little to be desired (teaching five straight

classes), but I believe the more we work with this system, the less 'bugs' we'll have. The seven-period day helps the students achieve more in a high school curriculum, and isn't that what we as teachers want for our students?

The physical education department chairperson said: "The seven period day enables the student to take more elective subjects to better prepare them for college or a vocation. However, the seven-period day is more stressful to teachers and students involved in extracurricular activities."

A teacher in the distributive education department stated the following:

In my opinion, the seven-period day has helped the high school overall. It has been especially good for marketing students. The majority of our cooperative students leave school at 11:18 a.m. and are, therefore, able to report to their training sites by 12:00 noon. . . . Another benefit to the marketing program is that the additional period allows more flexibility in a student's schedule, and therefore more students are able to choose electives, such as ours.

Another member of the foreign language department stated  
Last year I taught in a six-period day (in another county) with classes from 8:55 to 3:00. Both the students and teachers benefitted by being out at that

time . . . As a Spanish teacher I found, however, that many students had trouble fitting especially Spanish III into their schedules and even some Spanish II students had to choose between band or a required class and taking a year off from Spanish. The seven-period day seems to provide more flexibility in scheduling, even allowing a possible fourth year class. However, the students seem rushed during the day and those taking seven classes seemed pressured into keeping up in all of them.

A member of the science department stated the following with reference to the seven-period day:

From my personal perspective, the greatest advantage is the increased efficiency of the lunch schedule. The things that I dislike about it are classes start a half-hour earlier, 4th period is 60 minutes long, and my (disproportionately large) non-teaching assignment. My days have been much more hectic this past year, principally I think, due to this non-teaching assignment.

The teacher in charge of the forensics team stated the following:

From the teacher's standpoint, I find many problems with it (the seven-period day). The pressure is greater and by seventh period I feel I am so tired that I fail my

class. Perhaps, next year will prove me wrong as I become more familiar with the schedules. Make-up work is a problem with many of my students who have no time during the day to make tests up for me. The four minutes between classes are not enough for my students to move from one wing to the other and get to the bathroom. I do like the NTA and conference period, but my schedule is extremely difficult because I teach straight third through seventh. As I stated before I feel the program cannot be fairly evaluated at this time. It's just too soon to tell.

The overall impression gained from faculty interviews was that the schedule was more stressful with emphasis being on shortage of time.

### Student Perceptions

Questionnaires were given to 1193 students at Abingdon High School. Information was gathered from the 977 students who responded including 479 males and 488 females (see Table 7).

The respondents included 233 eighth graders, 198 ninth graders, 205 tenth graders, 179 eleventh graders, and 162 twelfth graders.

Questions one, two, and six of the student survey addressed the question of whether the seven-period day better

Table 7

Demographic Profile of Student Respondents to Survey on  
Seven-Period Day

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	N	%
<b>Sex</b>		
Male	479	49
Female	498	51
<b>Grade Level</b>		
8	233	23.0
9	198	20.3
10	205	21.0
11	179	18.3
12	162	16.6

---

serves the student's graduation, diploma, and scheduling needs. Seventy-one percent felt the seven-period day better satisfies graduation requirements (see Table 8). Seventy-two percent believe it better enables them to qualify for various state diplomas. Sixty-one percent felt the seven-period day better meets their scheduling needs.

The students were evenly divided on whether to recommend permanent adoption of the seven-period day. Forty-seven percent did not want the schedule adopted while 46% recommended permanent adoption of the schedule.

Sixty-seven percent of the students who responded said the seven-period day was more stressful than the six-period day. Seventy percent felt the seven-period day placed additional demands on them. Sixty-four percent said they did not have enough time to eat lunch, and eighty percent indicated they did have enough time to change classes.

Fifty-eight percent said they thought there was no change in the opportunity to participate in extracurricular activities. Thirty-five percent said they had less opportunity, and seven percent indicated they had more opportunities.

Sixty-four percent said they spent more time on homework assignments. The students felt they were not doing more homework simply because they were taking more classes but

Table 8

Student Perceptions to Seven-Period Day

Topic	% Favorable	% Unfavorable
Helps meet graduation requirements	71	18
Helps meet state diploma requirements	72	17
Additional demands placed on me	70	18
Sufficient time for lunch	31	64
Sufficient time to change class	17	80
More effective schedule	61	31
More stressful	67	22
Adopt on a permanent basis	46	47
Provides opportunities for extracurricular activities	58	35
Grade point average not affected	49	21
Additional courses	75	25
Requires more homework	64	36
Requires more homework for mentioned reasons	71	29

(See related Tables 9 and 10.)

also because more homework was assigned, and courses were more demanding.

Seventy-five percent of those students who responded to the survey indicated they took additional courses (see Table 9). Forty-eight percent enrolled in elective courses; 9% enrolled in additional core courses; and 18% added both elective and core courses.

Thirty-nine percent of those who responded perceived no change in their grade point average. Twenty-one percent felt their grade point average had decreased while 10% indicated that their grade point average had increased (see Table 10).

The eighth, ninth, and tenth grade students exhibited a more favorable attitude in all areas than did the eleventh and twelfth grade students. Eighty-nine percent of the ninth grade thought the seven-period day better met graduation requirements. The next highest favorable response was the eighth grade at 83%. Eighty-eight percent of the ninth grade thought the seven-period day better met diploma requirements, while 81% of the eighth graders responded favorably.

Seventy-three percent of the ninth grade perceived the seven-period day to better meet their scheduling needs, while 71% of eighth graders responded favorably. Fifty-two percent of the tenth grade class wanted to adopt the seven-period schedule on a permanent basis. A larger percentage of ninth

Table 9

Choice of Additional Courses by Students

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Course Selection	N	% of Students
No additional courses	249	26
Elective courses	470	48
Core courses	83	9
Both	175	18

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Table 10

**Perceived Effect on Grade Point Average of Students Who Took Additional Courses**

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	N	%
Decrease	204	21
Increase	98	10
No change	381	39
No added courses	294	30

---

graders responded favorably to all items (except permanent adoption) than any other class.

Overall, the eleventh and twelfth graders who responded viewed the seven-period day less favorably than the lower grades (see Table 11). The two older groups did not recommend adopting the seven-period day and they were less likely to perceive benefits obtained from the seven-period day for graduation and diploma requirements. They also thought the seven-period day did not reduce conflicts in their scheduling. The survey indicated that seniors were less affected by the seven-period day than any other class, over 50% of the seniors who responded took no additional courses and reported spending no extra time on homework. At the same time the students who took six or seven courses felt the seven-period day was better suited to meet scheduling, graduation, and diploma requirements (see Table 12).

Students who took five, six, and seven subjects perceived the seven-period day to better meet their graduation, diploma, and scheduling needs. However, a larger percentage of students who took seven subjects responded favorably in all three areas. All three groups of students indicated a seven-period day placed additional demands on them. Eighty percent of the students who took seven subjects said the seven-period day was more demanding, while 68% of the students who took six subjects and 69% of the students

Table 11  
Percent Favorable Responses by Grade Level

Topic	Grade 8 %	Grade 9 %	Grade 10 %	Grade 11 %	Grade 12 %
Helps meet graduation requirements	83	89	78	50	45
Helps meet diploma requirements	81	88	74	58	49
Helps meet scheduling needs	71	73	65	48	38
Should adopt 7 period schedule permanently	51	51	52	37	37

Table 12

Comparative Perceptions of Students Taking Seven Subjects vs  
Students Taking Five and Six Subjects

	Percentage of Favorable Responses		
	5 Subjects Taken	6 Subjects Taken	7 Subjects Taken
Helps better meet graduation requirements	58	77	83
Helps better meet state diploma requirements	55	79	84
Additional demands placed on me	69	68	80
Sufficient time for lunch	26	32	30
Sufficient time to change class	14	15	21
More effective schedule	51	64	73
More stressful	72	66	71
Adopt on a permanent basis	34	45	60
Provide opportunities for extracurricular activities	61	67	63

who took five subjects also indicated the seven-period schedule was more demanding than the former six-period schedule.

None of the groups thought there was enough time to change class or eat lunch. All three groups agreed the seven-period day was stressful with those students who took five subjects indicating the most stress.

The students who took five and six subjects did not want to permanently adopt the seven-period day while 60% of the students who took seven subjects wanted to adopt the seven-period day on a permanent basis. Only thirty-four percent of the students who took five subjects wanted the schedule on a permanent basis.

Sixty-seven percent of the students who took six subjects indicated they had just as much opportunity to participate in extracurricular activities in the seven-period day as they did in the former six-period day. Sixty-three percent of the students who took seven subjects and 61% of the students who took five subjects indicated their opportunity was as great in the seven-period day.

Females viewed the seven-period day more positively than males. Over 75% of the females felt that graduation and diploma requirements were better met by the seven-period day. Sixty-five percent also felt that scheduling needs were better met by the seven-period day. Females also reported

they took additional courses and spent more time on homework (see Table 13).

College-bound students also were likely to have a more favorable view of the seven-period day. Seventy-three percent of those students planning to go to college said the seven-period day better met graduation requirements. Seventy-seven percent indicated diploma requirements could be better met, and 65% said scheduling needs were better met (see Table 14).

Although some college-bound students indicated they felt stressed, they reported less stress than the noncollege-bound. Fifty-four percent recommended permanent adoption of the seven-period day.

Following is a list of quotes from selected students at Abingdon High School which represents the variety of opinions expressed. One vocational student stated the following:

I like the seven-period day because it allows me to achieve more credits. It enables me to learn more and achieve more credits. I go to the Neff Center, and thanks to the seven-period day, I can take the courses required and take electronics at the Neff Center without summer school.

One eighth grader indicated the following:

I don't like the seven-period day because, seriously, it's just too much work. We have tremendous amounts of

Table 13

**Comparative Favorable Perceptions of Male and Female Students**

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	Female	Male
Helps meet graduation requirements	76%	66%
Helps meet diploma requirements	79%	64%
Helps meet scheduling needs	65%	56%
Allows for additional courses	77%	70%
Requires more time on homework	70%	57%

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Table 14

Perceptions of Students Planning to Enroll in College

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	Agree	Disagree
Helps meet graduation requirements	73%	15%
Helps meet diploma requirements	77%	13%
Helps meet scheduling needs	65%	27%
Causes more stress	25%	62%
Should be adopted on a permanent basis	54%	38%

---

homework except in this class, 'Thank you,' but anyway, it really wears me out and other people have told me the same. Okay, now for The Dreaded Lunch Period! It stinks; not enough time to eat, and it's hard to eat with all the people in there. Also, there is not enough time between classes and that is a major problem. If we still had our study/lunch it would benefit all of us. It would also be great if we got out around 2:45.

Another student expressed his feelings as follows:

I have mixed feelings about the seven-period day. It is a good opportunity for us to be able to include the classes we want to take. However, there are some negative things about the seven-period day, too. I have been having extra homework (which causes me to stay up all hours of the night). The four minutes between classes bothers me because I don't have a chance to go to the restroom. I take honors classes, and sometimes the extra work worries me.

One upper classman stated:

I like the seven-period day. It allows you to accomplish more in your high school years to better yourself. Having a seven-period day allows the more prestigious students to receive a higher diploma by completing more classes. It also allows you to explore

classes you otherwise wouldn't have room on your schedule to do.

Mixed feelings were brought out by the following quote:

I do like the seven-period day because it gives you a chance to take the required classes plus electives. I don't like the seven-period day because teachers seem to forget that there are six other periods, and each teacher gives homework that lasts all night. I do have better things to do with my time than breathe, eat, drink, and sleep school!

#### Student Impact Study

The seven-period day did not seem to influence student drop-out rate or student attendance rate. The drop-out rate was 5% for both years. The attendance rate was 94% for both years (see Table 15).

There was a slight increase in the number of students indicating they would continue their education; 65% in 1984-85 and 67% in 1985-86 (see Table 16). This was true for both males and females.

#### Activities

Overall participation in student activities increased in 1985-86 (see Table 17).

Table 15

Student Attendance Comparison by Month and Sex for 1984-85 = 1985-86

Month	1984-85			1985-86		
	Boys	Girls	Total	Boys	Girls	Total
September	96	95	95	96	97	96
October	95	94	94	94	94	94
November	88	97	93	93	93	93
December	96	95	95	93	93	93
January	96	94	95	94	94	94
February	94	94	94	93	93	93
March	93	93	93	93	93	93
April	95	94	94	94	94	94
May	94	93	94	93	93	93
June	94	93	94	92	92	92
Total	94	94	94	94	94	94

Table 16

Students Indicating Intentions to Continue Their Education

	1984-85		1985-86	
	Number of Seniors Who Responded	Number Planning To Go To College %	Number of Seniors Who Responded	Number Planning To Go To College %
Males	88	54	89	56
Females	95	65	100	71
Overall	183	119	189	127
		61		63
		68		71
		65		67

Table 17  
Number and Percent of Students Participating in Extracurricular Activities

Type of Activity	1984-85		1985-86		% Difference
	Number of Participants	%	Number of Participants	%	
<b>Scholastic and Honors</b>					
Male	115	20	158	27	+7
Female	184	31	239	40	+9
Total	299	26	397	33	+7
<b>Service</b>					
Male	288	51	362	61	+10
Female	311	52	362	61	+9
Total	599	51	724	61	+10
<b>Subject-Related</b>					
Male	70	12	114	19	+7
Female	94	16	174	29	+13
Total	164	14	288	24	+10
<b>Athletic</b>					
Male	354	62	343	57	-5
Female	201	34	196	33	-1
Total	555	48	539	45	-3

This was true for all general club areas except for athletics. The number of students participating in scholastic and honors clubs increased by 7%. Forty percent of the females at Abingdon High School participated in a scholastic or honors club during 1985-86.

The service clubs, including Civinettes, Cheerleaders, Co-ed Hi-Y, Chess Club, Students Against Drunk Driving, Future Teachers of America, Interact Club, Library Club, Literary Club, Student Athletic Association, Medical Careers Club, Youth Involvement Club, Rod and Gun Club, 4-H Club, Key Club, increased their enrollment by 10% in 1985-86. Sixty-one percent of both males and females participated in a service club in 1985-86. It should be noted that Students Against Drunk Driving (SADD) club, which enrolled 50 students, was added.

Participation in subject-related clubs, such as Future Business Leaders of America, Distributive Education Club, Future Farmers of America, Junior Science Club, Senior Science Club, Foreign Language Club, and Vocational Industries Club, increased by 10% from 1984-85 to 1985-86. The females showed the most dramatic change. Their participation went from 16% in 1984-85 to 29% in 1985-86. It should be noted that a foreign language club was added.

The extracurricular activity group which showed a decrease was athletics. There was a 3% overall decline in

athletic participation. In 1985-86, 57% of the male population at Abingdon High School participated in athletics while 33% of the females participated compared to 62% and 34% respectively in 1984-85. It should be noted that indoor track, with 40 participants in 1984-85, was dropped from the program in 1985-86.

### Discipline

The number of students involved in minor discipline problems decreased during the 1985-86 school year. Minor discipline offenses included all offenses for which students were disciplined but were not suspended. The number of offenses and the number of days served in detention during the 1985-86 school year decreased for both males and females. During the 1985-86 school year the males committed 17% fewer minor offenses and served 18% fewer days in detention while the females committed 16% fewer offenses and served 11% fewer days in detention (see Table 18).

In addition to the decline in minor discipline problems, the number and percentage of major discipline problems declined as well. Major discipline cases included any offense that involved in-school suspension or out-of-school suspension.

There were 308 fewer days served in suspension in 1985-86 (see Table 19).

Table 18  
Number and Percent of Minor Discipline Problems 1984-85 - 1985-86

	1984-85		1985-86		Differences in Detention Days Served	Differences in Offenses	Differences in Detention Days Served
	Number of Offenses	Number of Detention Days Served	Number of Offenses	Number of Detention Days Served			
Male	470	776	388	636	-18	-17%	-18
Female	314	474	262	422	-11	-16%	-11
Total	784	1,250	650	1,058	-15	-17%	-15

Table 19

Number and Percent of Major Discipline Problems

	1984-85		1985-86		Differences In	Differences In
	Number of	Days	Number of	Days	In Offenses	Days Suspended
	Offenses	Suspended	Offenses	Suspended		
Male	337	703	263	476	-22%	-32%
Female	185	304	143	223	-23%	-27%
Total	522	1,007	406	699	-22%	-31%

The number of suspendable offenses for both males and females decreased as well as the number of days of suspension served during the 1985-86 school year. The total number of suspendable offenses by males decreased by 22% while the females' suspendable offenses decreased by 23%. Both males and females served fewer days in suspension. The reduction was 32% for males and 27% for females. One hundred and four offenses of this difference can be accounted for during one thirty-minute time period (8:25 a.m. - 8:55 a.m.). In 1984-85 this block of time was used for a socialization period. The students could use the time in any manner they wished. This same block of time was used to add to the seven-period day in 1985-86 with first period class beginning at 8:35 a.m.

#### Faculty Impact Study

For full-time faculty members the number of teaching periods did not change. However, due to an additional non-teaching assignment that was given to each faculty member, their workload did increase. This assignment was utilized in study halls, clubs, attendance office, cafeteria supervision, or any other activity the administration deemed necessary. The average number of students the teachers taught per class also increased in every department except industrial arts.

### Student Contacts

The work load of faculty members was determined by comparing the number of students enrolled in classes offered by each department and dividing by the number of full-time equivalent faculty members assigned to that department.

The most dramatic increase occurred in art. The per teacher average student enrollment went from 64 students taught per day in 1984-85 to 121 in 1985-86. The business workload went from 73 students per day in 1984-85 to 107 students per day in 1985-86. The agriculture and horticulture departments increased their workload by 25 students per day. Physical education increased by 24 students per teacher while music increased by 16 students per day. The only decrease in the number of students taught per day was in the industrial arts department. Overall, the workload increased in every department with the exception of industrial arts (see Table 20).

### Teacher Absence

The absentee rate was determined by multiplying the number of full-time equivalent teachers by the 180-day school year and dividing by the number of days missed. The 20 extra workdays that are assigned to teachers by principals and central office were not considered.

Table 20

Average Daily Student Enrollment Per Teacher by Department

	1984-85	1985-86	Change
English	119	124	+5
Math	110	114	+4
Physical Education	134	158	+24
Science	124	131	+7
Social Studies	116	120	+4
Music	145	161	+16
Art	64	121	+57
Foreign Language	128	134	+6
Agriculture and Horticulture	74	99	+25
Distributive Education	41	51	+10
Home Economics	62	79	+17
Business	73	107	+34
Industrial Arts	101	85	-16

During the 1984-85 school year the total number of possible days absent was 11,088. The 23 males were absent 173.5 days while the 45 females were absent 761.5 days. The males were absent 2% of the time while the females' rate of absenteeism was 7%. During the 1985-86 school year the males decreased their absentee rate by 1%. The reduction was 2% for the females. The overall reduction in absenteeism was 2% from 1984-85 to 1985-86.

The rate of faculty absenteeism actually decreased from 1984-85 to 1985-86. This was true for both males and females (see Table 21).

The Cost of Implementing the Seven-Period Day  
at Abingdon High School

In order to estimate the cost of implementation of the seven-period day at Abingdon High School, it was determined that the following costs would be considered: (a) identifiable added salary, (b) benefits, and (c) instructional supplies. Even though student enrollment declined by 5 students between 1984-85 and 1985-86, current school board policy would not have required reduction in force. The assumption was, then, that cost escalation could be measured directly.

The expenses were analyzed using the categories of salary, benefits, and instructional supplies comparing the



1984-85 school year to 1985-86. The 1984-85 school year represents the last year the six-period day was used. The 1985-86 school year was the first year in which the seven-period day was used.

The actual amount of money spent for instructional supplies was \$44,373 in 1984-85 and \$47,466 in 1985-86 (see Table 22). Extra textbooks needed to implement the seven-period day are included in the latter figure. This represents a 6.9% increase in total money budgeted and expended for instructional supplies.

The actual expenditure for fringe benefits for 1984-85 was \$291,869. Fringe benefit expenditures for 1985-86 were \$343,529. This represents a 17.7% increase. This 17.7% increase is due, in part, to higher salaries paid in 1985-86 rather than increase in staff.

The actual professional salaries paid at Abingdon High School were \$1,237,088 in 1984-85. The salaries paid professional employees in 1985-86 were \$1,468,022. This represents an 18.6% increase over 1984-85 in salaries. It includes salary increases as well as additional staff.

In order to eliminate the increases attributable to salary adjustments which county-wide were 14.6%, salaries and benefits were reduced by that amount and recorded as "adjusted costs" in Table 22.

Table 22

Cost Comparison of the Seven-Period Day and the Six-Period Day

Year	Salaries	Benefits	Supplies	Total
1984-85	\$1,237,088	\$291,869	\$44,373	1,573,330
1985-86 (actual)	1,468,022	343,529	47,436	1,858,987
1985-86 (adjusted)	1,273,237	300,397	47,436	1,621,070

The mean teacher salary and benefits for 1984-85 were determined, and these figures were used to estimate salary and benefits for staff at Abingdon High School in 1985-86 excluding the 14.6% raise.

The total salary for faculty at Abingdon High School based on the 1984-85 salary scale, when applied to the 1985-86 staffing, was \$1,273,237. This represents a 2.9% increase in salaries that would have been required to staff the seven-period day at the 1984-85 salary schedule.

The benefits were adjusted in the same manner as salaries. The projected figure would have been \$300,397. This also represents a 2.9% increase.

The \$47,436 figure, including additional textbooks needed to implement the seven-period day, represents actual money spent for instructional supplies in 1985-86. This was a 6.9% increase.

The total adjusted cost to implement the seven-period day was estimated at \$47,740. This figure was determined by subtracting the 1984-85 cost of \$1,573,330 from the 1985-86 cost of \$1,621,070. This represents a 3% increase over the 1984-85 cost.

A second method of computation was based on the addition of 1.8 full-time equivalent faculty multiplied by the average full-time equivalent salary plus benefit package in the school division which this year (1985-86) was estimated at

\$28,573. The total personnel cost, using this method of computation, equalled \$51,431 which, when added to identifiable instruction costs, increases of \$3,063 yielded a net cost attributable to implementation of the seven-period day of \$54,494, or an increase of 1.8 FTE for 1985-86 over 1984-85.

### Unit Costs

To further assess cost of implementing the seven-period day, cost per student per class was calculated. The enrollment figure was determined by multiplying the number of students times the number of classes in which they were enrolled. In 1984-85, the total student course enrollment was 5,963 which when divided into total costs of \$1,573,330 yielded a unit (course/student) cost of \$263.84 per student per class (see Table 23).

The student course enrollment in 1985-86 was 6,527 at a cost of \$248.36 per student per class. The per course cost for the seven-period day was \$15.48 less per student per class from the cost of a six-period day using this method of analysis. This represents a per course savings of 5.8%.

Table 23

Cost Analysis of the Six-Period vs. the Seven-Period Day  
Using Course Enrollment Data

	1984-85 (6 period day)	1985-86 (7 period day)	Difference
Total salary, benefits, and supplies	\$1,573,330	\$1,621,070	+\$47,740
Number of students enrolled	5,963	6,527	+564
Cost per student enrollment	263.84	248.36	-15.48

Status and Comments of Central Office Personnel  
from 20 School Divisions of Southwest Virginia  
Regarding the Seven-Period Day

The 20 school divisions contacted were Radford, Bristol, Galax, and Norton City schools and Pulaski, Lee, Wise, Scott, Washington, Dickenson, Buchanan, Russell, Tazewell, Bland, Giles, Smyth, Wythe, Grayson, Carroll, and Montgomery Counties. Seven school divisions of the 20 polled reported they used the six-period schedule in 1985-86. Twelve of the 20 divisions studied were currently (1986-87) using a seven-period schedule. One school division had their two smaller high schools on the seven-period day and their largest high school on the six-period day. Another division indicated they would go to seven periods in 1987-88.

Most central office personnel agreed that the seven-period day has certain advantages, but 7 of 20 decided the advantages did not outweigh the disadvantages. A superintendent of one of the divisions not operating on the seven-period day had the following to say about the schedule:

We talked about the new state standards and the possibility of better making them with a seven-period schedule. We decided that in order to implement such a schedule we would have to increase the length of the school day or decrease the number of minutes per period in the six-period day. If we decrease the number of

minutes we think our academic courses would suffer.

Therefore, a decision was made to stay with the six-period day.

One division which adopted the seven-period day indicated they changed to this schedule in order to offer a wider variety of subjects and be able to increase enrollment in elective areas without significantly increasing staff. In order not to increase staff, the divisions implemented the seven-period day with several restrictions. Three divisions required students to take at least one study hall, while three divisions left the decision to the students on whether to take a study hall or not. In these divisions a student may take one or two study halls. Still another school division indicated they encouraged six subjects and one study hall.

The amount of time that each division allowed per period varied. One division implemented the seven-period schedule and retained the 55 minutes per period while another division reduced the period length to 47 minutes per period.

The number of minutes between classes varied from three to six minutes. The three minutes were used in very small schools. Lunch periods varied from 25 minutes to 35 minutes. The divisions adjusted the mechanics of the schedule to fit their particular needs.

A superintendent of a division who adopted the seven-period day indicated the following:

Nothing we have ever implemented has gone more smoothly than this new schedule. It's just beautiful. I haven't had one call from parents . . . not even one of the principals has complained about it. It has really helped us keep our staff. We have lost nearly 200 students in two years and were facing a tremendous reduction in staff. This seven-period schedule has allowed the students an opportunity to take additional subjects, and students have opted to take electives, vocational and business courses, and foreign languages. If we had not lost so many students we would definitely have had to add staff. With the loss of students the cost was very little, if any.

Most superintendents were particularly interested in giving students an opportunity to take courses in the vocational area. This seemed to be one of the areas facing reduction in students and staff. All superintendents whose divisions adopted the seven-period day felt that any additional cost was negligible. No division that remained with the six-period day indicated cost was the reason.

Another division implemented a modified seven-period day. They simply added two courses at the beginning and end of the day. Only those students interested in those

particular subjects needed to stay late or come early. A disadvantage, as stated by the superintendent, is that the option was less available to the rural students.

### Summary

This chapter reported an evaluation of the seven-period day as implemented at Abingdon High School. The presentation and discussion of the results were facilitated by organizing the data into seven categories: (a) student course enrollment data; (b) student performance and related grade distribution data; (c) student and faculty perceptions regarding the seven-period day; (d) faculty impact data: absentee rate and work load; (e) student impact data: dropout rate, student participation in school activities, number of students applying for college, number of discipline problems, and absentee rate; (f) data regarding cost of implementing the seven-period day at Abingdon High School; and (g) status of the seven-period day in Southwest Virginia schools and comments by administrators.

The findings from this study indicate that:

1. Students did take advantage of the opportunity to schedule an extra class when given the opportunity.
  - a. Thirty-three percent of all students took seven subjects.

- b. Fifty-nine percent of tenth graders took seven subjects.
  - c. Forty-eight percent of ninth graders took seven subjects.
  - d. Thirty percent of eleventh graders took seven subjects.
  - e. Twenty percent of twelfth graders took seven subjects.
  - f. Three percent of eighth graders took seven subjects.
  - g. Eighty-three percent of all students took either six or seven subjects in 1985-86 compared to 75% who took six subjects in 1984-85. The greatest increases were in foreign language, business, art, language arts, and science.
2. The mean grade point average for all students remained the same at 2.6 for 1984-85 and 1985-86. There were, however, shifts in departmental grade point average ranging from  $-.80$  in home economics to  $+.59$  in music.
- a. There were shifts in overall grade point averages for students taking the maximum number of subjects in 1984-85 compared to grade point averages of students taking the maximum number of subjects in 1985-86. These shifts in grade

point average ranged from +.71 for eleventh graders to -.51 for ninth graders.

- b. More females than males in 1985-86 took advantage of the opportunity to schedule extra courses.
  - c. Females who took maximum subjects had higher grade point averages than males in every grade except the eighth.
3. The faculty perception of the seven-period day was favorable in the following areas:
- a. Helps meet graduation requirements - 66%
  - b. Helps meet diploma requirements - 69%
  - c. Additional subjects justify costs - 64%
  - d. More efficient - 53%
  - e. Adopt permanently - 52%
  - f. Adequate for planning - 62%
  - g. No additional teaching period assigned - 83%
  - h. Had no more students to teach - 55%
  - i. Sufficient time for students to change class - 72%

Unfavorable perceptions of the seven-period day were noted in the following:

- a. Seven-period day more stressful - 57%
- b. Insufficient time for extracurricular activities - 53%

Student perceptions of the seven-period day were favorable in the following areas:

- a. Helps meet graduation requirements - 71%
- b. Helps meet diploma requirements - 72%
- c. More efficient schedule - 61%
- d. Provides opportunity to participate in extracurricular activities - 58%

Unfavorable responses were noted in the following areas:

- a. Sufficient time to eat - 64%
- b. Sufficient time to change classes - 80%
- c. More stressful - 67%
- d. Adopt on a permanent basis - 47%

Eleventh and twelfth graders viewed the seven-period day less favorably than the lower grades. They also recommended not to adopt the seven-period day on a permanent basis. Students who took seven subjects recommended adoption on a permanent basis. Females seemed to take advantage of the opportunity to schedule more subjects more often than males.

College-bound students had a more favorable view of the seven-period day. Town residents perceived the seven-period day more favorably than county residents.

4. The seven-period day did not adversely affect drop-out rate. The percentage of drop-out was 5% for both years. There was a slight increase in number of students planning to go to college, 65% in 1984-85 and 67% in 1985-86. This was true for both males and females. Participation in student activities increased in 1985-86 in all general areas except for athletics. The number of students involved in minor and major discipline problems decreased in 1985-86.
5. The number of teaching periods did not change for faculty members; however, the number of students the teacher taught increased in every department except industrial arts. Newly created non-teaching assignments, as a result of the seven-period day, brought about increased workloads with study hall, cafeteria, and related supervision duties. There was an overall reduction in teacher absenteeism in 1985-86. This was true for males and females.
6. Using certain identifiable costs such as salary, benefits, and instruction, and adjusting to eliminate salary changes not related to conversion, the cost to implement the seven-period day at Abingdon High School was \$47,740 which represented a 3% increase over the 1984-85 costs. A second

approach to costing was based upon the addition of 1.8 FTE faculty and the average 1985-86 salary, and the additional materials cost. Cost of implementing the seven-period day using this method was estimated at \$54,494. The per course enrollment cost in the seven-period day was \$15.48 less per student per class than the per course enrollment cost for a six-period day.

7. Seven school divisions of the 20 contacted were using the six-period day. Twelve of the 20 divisions studied are currently (1986-87) using a seven-period day. One division has their two smaller high schools on a seven-period day and the largest high school on a six-period day. School administrators whose divisions were operating on a seven-period day indicated the cost of implementing the seven-period day was negligible. Those who had not changed gave the following reasons: (a) cost of adding staff; (b) adequacy of the six-period day to meet students' needs; and (c) shorter class periods in lieu of the larger class period in a six-period day.

## CHAPTER 5

### Summary, Conclusions, and Recommendations

The data collected for this study and the analysis of that data provided the basis for formulating conclusions regarding the evaluation questions and the making of recommendations relative to the implementation of the seven-period day at Abingdon High School. The problem of this study was to evaluate the seven-period day as implemented at Abingdon High School. In order to facilitate the evaluation, several areas of inquiry were necessary. The following inquiries were addressed specifically:

1. Student course enrollment data;
2. Student performance and related grade distribution data;
3. Student and faculty perceptions regarding the seven-period day;
4. Faculty impact (absentee rate and workload);
5. Student impact (drop-out rate, student participation in school activities, number of students applying to college, number of discipline problems, and absentee rate);
6. Cost of implementing the seven-period day at Abingdon High School; and

7. Status of the seven-period day in Southwest Virginia school divisions.

Data collected to answer the above areas of inquiry included (a) student enrollment data for both years studied; (b) grade point averages for all students at all grade levels; (c) grade point averages of students taking the maximum number of subjects in each of the two years; (d) grade point averages by department for each year; (e) responses to two 13-question surveys, one given to all faculty members with 58 responses (76%), and the other given to all students with 977 responses (82%); (f) responses from open-ended interviews conducted by the principal with 25 students from each grade level and 20 faculty members; (g) attendance data; (h) workload data as shown by the master schedule and class rolls of Abingdon High School for the two years; (i) student participation in extra-curricular activities; (j) student drop-out rate; (k) number of students applying for college; (l) discipline records of students for both years; (m) cost of implementing the seven-period day at Abingdon High School; and (n) status and comments regarding the seven-period day by Southwest Virginia School administrators.

A review of the literature and related research indicated that proponents of the seven-period day cited the following advantages over the six-period day:

1. Increases flexibility in scheduling;
2. Increases opportunity to enroll in additional courses;
3. Increases opportunity for smaller schools to offer a wider variety of courses;
4. Provides more time for teachers to engage in activities with individual students;
5. Increases opportunity for students to meet stronger state graduation requirements;
6. Increases opportunity for students who failed classes early in their high school years to have a chance to graduate on time by taking additional subjects. (Frechtling, 1983)

Opponents of the seven-period day argued that the cost of implementing the schedule would outweigh any benefits derived from it (Mazzarella, 1984). This was the concern expressed by most school administrators surveyed in school divisions which had not implemented the seven-period day. These school administrators also felt the six-period day was sufficient to meet student needs. The concern about shortened class periods was also voiced by school administrators. The majority of 661 superintendents polled in Spectrum's (1984) study believed the average six-hour, 180-day calendar was adequate.

Frechtling (1983) listed the following disadvantages of the seven-period day:

1. Provides teachers with an additional non-teaching period. Schools may implement an instructionally related activity schedule. It is possible that this time will not be used wisely and will be wasted.
2. The seven-period schedule requires that a school increase its staff and, thereby, increases financial burden.
3. The seven-period schedule shortens the instructional period. Classes such as physical education and laboratories which require extended start-up and close-down times are especially adversely affected by the seven-period schedule.
4. Eleventh and twelfth graders who are not motivated by school will have even greater problems establishing an acceptable schedule. This may lead to increased discipline, behavior, and supervisory problems (p. 2).

### Findings and Conclusions

The following are findings and conclusions based on the analysis of the data pertinent to this study:

1. Course enrollments

#### Findings

- A. Thirty-three percent of all students at Abingdon High School enrolled in seven subjects.
- B. Fifty-nine percent of tenth graders enrolled in seven subjects.
- C. Forty-eight percent of ninth graders enrolled in seven subjects.
- D. Thirty percent of eleventh graders enrolled in seven subjects.
- E. Twenty percent of twelfth graders enrolled in seven subjects.
- F. Three percent of eighth graders enrolled in seven subjects.
- G. Eighty-three percent of all students enrolled in either six or seven subjects in 1985-86 as compared to 75% who enrolled in six subjects in 1984-85. The foreign language department increased its enrollment by 121 students while the business department increased by 113 students. The art department showed the next highest increase with an enrollment increase of 104 students. All departments showed an increase in enrollment except social studies and industrial arts. The social studies department decreased in enrollment by 102 students while the industrial arts department decreased in

enrollment by 16 students. Total enrollment by subjects in 1985-86 increased by 564 students.

### Conclusion

When given the opportunity, students will take additional courses. Students seemed to use the opportunity to enroll in courses which would allow them to acquire skills related to more effective functioning in business and home settings. Also, additional courses were taken to increase vocational opportunities as well as to obtain additional academic credits. This study indicated that 83% of the students at Abingdon High School took six or more subjects, while 33% enrolled in seven subjects. These results were similar to the findings in the Goldberg (1983) and Loper (1984) studies.

## 2. Student Performance

- A. The mean grade point average for all students remained approximately the same at 2.63 for 1984-85, and 2.65 for 1985-86. There were, however, shifts in departmental grade point averages ranging from  $-.80$  in home economics to  $.59$  in music.
- B. There were shifts in overall grade point averages for students taking the maximum number of subjects in 1984-85 compared to grade point

averages of students taking the maximum number of subjects in 1985-86. These shifts ranged from .71 for eleventh graders to -.51 for ninth graders.

- C. The overall failure rate was 5.5% in 1984-85 and 5.8% in 1985-86. A slight increase in the failure rate was noted in the language arts, mathematics, science, music, business, and distributive education departments. Reductions in failure rate were noted in the social studies, foreign language, physical education, agriculture, art, home economics, and industrial arts departments.
- D. More females than males in 1985-86 took advantage of the opportunity to schedule extra courses.
- E. Females who took maximum subjects had a higher grade point average than males in every grade except the eighth.

#### Conclusion

Grade point average generally remained the same at 2.6 for both years studied. However, there were shifts in departmental grade point averages.

Differences which occurred in departmental grade

point averages were probably the result of other factors and not heavier course loads.

3. Faculty perceptions of the seven-period day

Findings (favorable)

- A. Helps meet graduation requirements - 66%
- B. Helps meet diploma requirements - 69%
- C. The additional courses justify cost - 64%
- D. The seven-period schedule is more efficient - 53%
- E. The seven-period schedule should be permanently adopted - 52%
- F. Faculty has as much time for planning - 62%
- G. Faculty does not have additional teaching period - 83%
- H. Faculty had no additional students to teach - 55%
- I. Four minutes is sufficient time for students to change class - 72%

Findings (unfavorable)

- A. Seven-period schedule is more stressful - 57%
- B. Insufficient time for extracurricular activities - 53%

Conclusion

Although a slight majority of the faculty thought the seven-period day was more stressful, they were

generally positive. A slight majority (52%) of the faculty wanted to adopt the seven-period day permanently.

4. Student perceptions of the seven-period schedule

Findings (favorable)

- A. The seven-period day helps meet graduation requirements - 71%
- B. The seven-period day helps meet diploma requirements - 72%
- C. The seven-period schedule is more efficient - 61%
- D. The seven-period day provides as much opportunity to participate in extracurricular activities as in old six-period schedule - 58%
- E. Students who took seven subjects recommended adoption of the seven-period schedule on a permanent basis.
- F. Females took advantage of the opportunity to schedule more subjects more often than males.
- G. College-bound students had a more favorable view of the seven-period schedule than non-college bound students.

Findings (unfavorable)

- A. The seven-period day does not provide sufficient amount of time for lunch - 64%

- B. The seven-period day does not provide sufficient amount of time to change classes - 80%
- C. The seven-period schedule is more stressful - 67%
- D. The seven-period schedule should be adopted on a permanent basis - 47%
- E. Eleventh and twelfth graders viewed the seven-period day less favorably than the lower (ninth and tenth) grades. They also recommended not to adopt the seven-period schedule on a permanent basis.

#### Conclusion

Students were slightly less favorable toward the seven-period schedule than the faculty. Only 47% of the students wanted to adopt the schedule on a permanent basis. They also thought they were rushed during lunch and class period changes. In spite of these displeasures, the students did take advantage of the seven-period schedule, more so in the earlier grades (ninth and tenth) than the later grades (eleventh and twelfth). The older students may not have taken as many additional courses because their plan of studies had already been formulated and, therefore, they did not need other courses. Females and college-bound students also perceived the

seven-period schedule more favorably than the former six-period schedule.

## 5. Student impacts study

### Findings

- A. The seven-period schedule apparently had little effect on the drop-out rate. The rate was approximately 5% for both years studied.
- B. There was a slight increase in the number of students planning to go to college, 65% in 1984-85 and 67% in 1985-86. This was true for males and females.
- C. Participation in extracurricular activities increased in 1985-86 in all areas except athletics.
- D. The number of students involved in minor and major discipline problems decreased in 1985-86.

### Conclusions

The seven-period schedule seemed to have little, if any, negative impact on students. The drop-out rate for students was 5% for both years studied. The percent of students planning to attend college actually increased slightly (2%) in 1985-86. Participation in extracurricular activities increased in every major area in 1985-86, except athletics. Discipline problems, both major and

minor, showed a reduction in the number of offenses and number of days served in both detention and suspension.

Results of the research concerning the above student impacts show no evidence that the seven-period day is inferior to the six-period day.

#### 6. Faculty impact study

- A. The number of teaching periods did not change for faculty members in 1985-86; however, the number of students the teacher taught increased in every department except industrial arts. Newly created non-teaching assignments, as a result of the seven-period schedule, brought about increased workloads with study hall, cafeteria and related supervisory duties.
- B. There was an overall decline in teacher absenteeism in 1985-86. This was true for males and females.

#### Conclusions

Although the number of teaching periods for faculty members did not change in 1985-86, the number of students taught per teacher increased in every department except industrial arts. The largest increase occurred in the art department where there was an increase of 57 students per teacher. The

business department's average daily enrollment per teacher increased by 34 students. Agriculture and horticulture showed an increase of 25 students, while the physical education department increased average daily student enrollment by 24 students. The remaining departments showed increases ranging from 4 students per teacher in mathematics to 17 students per teacher in home economics. The industrial arts department showed a decline of 16 students taught per teacher in 1985-86.

#### Conclusion

Even though almost every faculty member taught a greater number of students in 1985-86 and had additional supervisory duties, they remained generally positive regarding the seven-period schedule. This may be attributed to the faculty's recognition of the advantages afforded students in a seven-period schedule.

#### 7. Cost of implementation

##### Findings

- A. Using certain identifiable costs, such as salary, benefits, instruction, and adjusting to eliminate salary changes not related to conversion, the cost to implement the seven-period day at Abingdon High School was

\$47,740 which represented a 3% increase over the cost in 1984-85.

- B. A second approach to analyzing cost was based upon the addition of 1.8 full-time equivalent faculty and the average 1985-86 salary as well as the additional materials cost. Using that approach, cost of implementation of the seven-period day was \$54,494.
- C. The per course enrollment cost in the seven-period schedule was \$15.48 less per student per class than the cost per course enrollment in a six-period day.

#### Conclusion

The cost of implementing the seven-period day was not prohibitive. When total enrollment was considered, the seven-period day was less expensive than the six-period day. This schedule, when analyzed by this method, was not only less expensive but offered more options for the students. This factor is extremely important when the new Virginia graduation requirements are considered. The requirements of adding subjects in mathematics, science, foreign language, and a computer exploratory class make the seven-period day even more desirable.

8. Status of 20 school divisions of Southwest Virginia regarding the seven-period schedule

Findings

- A. Seven school divisions of the 20 contacted were using the six-period day.
- B. Twelve of the 20 school divisions were currently (1986-87) using a seven-period schedule.
- C. One division had their smaller high schools on a seven-period schedule and the largest high school on a six-period schedule.

Conclusion

The Southwest Virginia school divisions seem to be following a state-wide trend toward implementing a seven-period day. This has arisen from the new graduation requirements mandated by the Virginia State Board of Education in July, 1983. Most school divisions feel they can better meet these graduation requirements and the needs of their students by making certain adjustments within the school day, by extending the day, and by adding a few minutes in the morning and in the afternoon. The majority of school divisions contacted indicated this could be accomplished at minimal or no additional cost.

These findings and conclusions would be incomplete without an observation by the researcher concerning the

findings of the study. The conclusions presented in this study were based on the implementation of a seven-period day schedule at Abingdon High School, one of four high schools in Washington County, Virginia. This was a pilot study conducted to determine the feasibility of adopting the seven-period schedule on a permanent basis for all Washington County high schools.

There were subjective factors involved in the study. Qualities such as the newness of the seven-period day and change itself cannot be measured quantitatively and may have affected the results of the study. Aside from these considerations, no evidence was revealed by the research which indicated the seven-period day was less effective than the six-period day. Even though some students do take advantage of the opportunity to schedule extra courses, students who do not take extra courses must be assigned study halls resulting in teachers having additional assignments in this area and, therefore, larger workloads. It is noteworthy that with increased workloads for many faculty members, the seven-period day was generally perceived favorably.

### Recommendations

The following recommendations have been formulated as a result of this study:

1. That the Washington County School Board adopt on a permanent basis the seven-period day schedule for all county high schools.
2. That the Washington County School Board initiate a long-range study of the seven-period day to determine what percentage of the students graduate early as a result of taking additional subjects.

## REFERENCES

- Adachi, M. & Kim, J. (1985). An alternative with retrenchment and declining enrollment. National Association of Secondary Principals, February, pp. 73-77.
- Brubacher, R. G., & Stiverson, C. L. (1982). Colorado's Alternative School Calendar Program and the Four-Day Week. Colorado State Department of Education, January, p. 7.
- Ellis, T. I. (1984). Extending the school year and day. ERIC Clearinghouse on Educational Management, p. 3.
- Feldhausen, T. (1981). The four-day school week: A partial solution to today's energy crisis and declining state funding to education. Liberty School District, Spangle, Washington, June, p. 15.
- Gilman, D. A., & Knoll, S. (1983). Increasing instructional time: What are the priorities and how do they affect the alternatives? National Association of Secondary Principals, March, pp. 41-44.
- Gladstone, I. (1976). Modified scheduling and foreign language. National Association of Secondary Principals, November, 1966, p. 11.
- Goldberg, J. (1983). Research plan for the study of senior high school alternative scheduling systems. Montgomery

County Public Schools, Rockville, Maryland, January, p. 38.

Goodlad, J. I. (1983). A place called school. New York: McGraw-Hill Book Company, p. 99.

Justiz, M. J. (1984). It's time to make every minute count. Phi Delta Kappan, 65(7), 483-485.

Levin, H. M. (1984). Clocking instruction: A reform whose time has come? IEG Policy Perspectives, p. 5.

Loper, C. (1985). The eight period day in Rangely: Year two. Case, Colorado Association of Secondary School Principals, pp. 9-10.

Mazzarella, J. (1984). Longer day, longer year: Will they make a difference? Principal, May, pp. 14-20.

Pompeo, J. (1981). Here's a four-day week that works. American School Board Journal, 168, 37.

Quartarola, B. (1984). A research paper on time on task and the extended school day/year and their relationship to improving student achievement. Association of California School Administrators, May, p. 11.

Spectrum, Educational Research Service. (1984). Lengthening the school day and the school year: superintendent's opinions, 2(N3), pp. 35-36.

Stufflebeam, D. L. et. al. (1971). Phi Delta Kappa National Study Committee on Evaluation. Educational Evaluation

and Decision Making. Itasca, IL: F. E. Peacock Publishers, Inc.

The cost of reform: Fiscal implications of "A Nation at Risk". (1983). American Association of School Administrators, November, p. 15.

The National Commission on Excellence in Education. (1983).

A Nation at Risk. U.S. Department of Education, p. 24.

Virginia State Department of Education. (1986). Executive Summary. Feasibility study of revising regulation to facilitate a seven-period extended day for high schools.

## **Appendix A**

FACULTY SURVEY

Your responses to the following statements will aid in evaluating the seven-period day as implemented at Abingdon High School during the 1985-86 school year. Please mark the responses which best describe your true feelings about the various statements.

CIRCLE THE CORRECT SYMBOL WHICH BEST EXPRESSES YOUR FEELINGS.

A - AGREE      TA - TEND TO AGREE      TD - TEND TO DISAGREE  
D - DISAGREE      NA - NOT APPLICABLE

DEPARTMENT \_\_\_\_\_

MALE \_\_\_\_\_ FEMALE \_\_\_\_\_

AGE: (Circle one) A. 20-30    B. 31-40    C. 41-50    D. 51-60  
E. 61-70    F. 71 & over

1. I believe the seven-period day better enables the students at Abingdon High School to meet new graduation requirements.

A      TA      TD      D      NA

2. I believe the seven-period day allows every student at Abingdon High School the opportunity to qualify for the various types of state diplomas.

A      TA      TD      D      NA

3. I believe the opportunity for students to take additional subjects as a result of the seven-period day justifies the additional cost of adding staff.

A      TA      TD      D      NA

4. The seven-period day is more stressful for me than the six-period day.

A      TA      TD      D      NA

5. I believe the seven-period day is more efficient than the six-period day.

A      TA      TD      D      NA

6. The seven-period day allows me just as much time to fulfill my extra-curricular duties.

A            TA            TD            D            NA

7. I believe the Washington County School Board should implement the seven-period day on a permanent basis at Abingdon High School.

A            TA            TD            D            NA

8. When compared to the six-period day, I have just as much time for teacher conferences and for planning since the seven-period schedule was implemented.

YES \_\_\_\_\_ NO \_\_\_\_\_

9. The number of my teaching periods has increased since the seven-period day was implemented.

YES \_\_\_\_\_ NO \_\_\_\_\_

10. The number of students I teach each day has increased since the seven-period day was implemented.

YES \_\_\_\_\_ NO \_\_\_\_\_

11. The four minutes for me to change classes between periods is:

A. too long    B. too short    C. OK as is

12. I believe the four minutes for students to change classes is:

A. too long    B. too short    C. about right

13. I believe the biggest advantage and/or disadvantage of the seven-period day is:

ADVANTAGE

DISADVANTAGE



(Use back if necessary.)

## **Appendix B**

STUDENT SURVEY

Your responses to the following statements will aid in evaluating the seven-period day as implemented at Abingdon High School during the 1985-86 school year. Please mark the responses which best describe your true feelings about the various statements.

CIRCLE THE CORRECT SYMBOL WHICH BEST EXPRESSES YOUR FEELINGS.

A - AGREE      TA - TEND TO AGREE      TD - TEND TO DISAGREE  
D - DISAGREE      NA - NOT APPLICABLE

GRADE \_\_\_\_\_ NUMBER OF SUBJECTS YOU ARE TAKING THIS YEAR \_\_\_\_\_

MALE \_\_\_\_\_ FEMALE \_\_\_\_\_

WILL YOU ATTEND COLLEGE? YES \_\_\_ NO \_\_\_

DO YOU LIVE IN TOWN \_\_\_\_\_ OR COUNTY \_\_\_\_\_

1. The seven-period day better enables me to meet new graduation requirements.

A      TA      TD      D      NA

2. The seven-period day enables me to qualify for all the various state diplomas.

A      TA      TD      D      NA

3. The seven-period day places additional demands on me than the former six-period day.

A      TA      TD      D      NA

4. The 30-minute lunch period is sufficient time to eat my lunch.

A      TA      TD      D      NA

5. The four minutes between classes is sufficient time for me to change classes.

A      TA      TD      D      NA

6. Because of additional courses being offered, I believe the seven-period day more effectively meets my scheduling needs.

A            TA            TD            D            NA

7. The seven-period day is more stressful for me than the six-period day.

A            TA            TD            D            NA

8. I believe Abingdon High School should permanently remain on the seven-period day.

A            TA            TD            D            NA

9. If you took an additional course or courses, did your grade average

A. increase            B. decrease            C. stayed about the same  
D. did not take additional courses

10. As a result of the seven-period day, my opportunity to participate in extra-curricular activities has:

A. increase            B. decrease            C. stayed about the same

11. What additional courses were you able to take as a result of implementation of the seven-period day? (You may circle more than one.)

A. Agriculture, Home Economics, Distributive Education, Horticulture, Business  
B. Foreign Language  
C. Art  
D. Music  
E. English, Math, Science & Social Studies  
F. Did not take any additional courses

12. I spend more time on homework assignments than I did last year.

YES \_\_\_\_\_ NO \_\_\_\_\_

13. I spend more time on homework because

A. I am taking more courses.  
B. The courses I take require more homework.  
C. Teachers are assigning more homework.  
D. I am not spending more time on homework.

## **Appendix C**

## FACULTY INTERVIEW

Name \_\_\_\_\_ Department \_\_\_\_\_

Sex \_\_\_\_\_ Number of years of teaching experience \_\_\_\_\_

1. What do you consider the advantages/disadvantages of the seven-period day?
  
  
  
  
  
  
  
  
  
  
2. Now that you have taught with this seven-period schedule in place, have you changed your opinion about any aspect of the seven-period day?
  
  
  
  
  
  
  
  
  
  
3. In your opinion, how should the non-teaching assignment be used?
  
  
  
  
  
  
  
  
  
  
4. How does the non-teaching assignment benefit students?
  
  
  
  
  
  
  
  
  
  
5. What effect, if any, does the seven-period schedule have on other system policies and practices and vice versa?

**Appendix D**

## STUDENT INTERVIEW

Name \_\_\_\_\_ Grade \_\_\_\_\_ Sex \_\_\_\_\_

1. What do you consider the advantages/disadvantages of the seven-period schedule?
  
2. Have you changed your opinion about any aspect of the seven-period schedule since its implementation?
  
3. What kinds of extracurricular activities are you eligible for and participated in because of the seven-period day?
  
4. What changes should be made in order to make an improved schedule for students at Abingdon High School?
  
5. How does the seven-period day increase flexibility in scheduling classes for you and the school?

## **Appendix E**

RECOMMENDED  
COLLEGE PREPARATORY OPTION  
WASHINGTON COUNTY PUBLIC SCHOOLS

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
1. CP English	CP English	CP English	CP English	CP English
2. *CP Math	CP Math	CP Math	CP Math	CP Math
3. Health/PE	Health/PE/Driver Training	Chemistry	Physics	Physics
4. Science ESCP	Biology	Virginia/U.S. History	Virginia/U.S. Government	Virginia/U.S. Government
5. World History/Geography	**Foreign Language	**Foreign Language	**Foreign Language	**Foreign Language
6. Elective	Elective	Elective	Elective	Elective
7. Elective of SH	Elective or SH	Elective or SH	Elective or SH	Elective or SH

\* Algebra I, if taken in the 8th grade, counts as one of the required Math courses but not as one of the 22 required credits.

\*\*Three years of one foreign language or two years of each of two foreign languages is the minimum requirement for a 22 credit diploma.

REQUIRED FOR GRADUATION  
22 CREDIT DIPLOMA

ABOVE  
SCHEDULE EARNS

English	4 Credits	4 Credits	In general, a college preparatory student should take English (College Preparatory) each year, mathematics each year (beginning with Algebra I in Grade 8 if possible), science each year, a foreign language each year (if available), world geography and/or world history. Teachers and counselors should promote the idea that even this rigorous program is "general education" to the college preparatory student.
Math (from approved sequence)	3 Credits	4 Credits	"Calculus is an advanced placement course and does not require pre-calculus as a prerequisite. Exceptionally well-motivated and successful students should be strongly encouraged to enroll in calculus after trig-analysis.
Science (from approved sequence)	3 Credits	4 Credits	
Social Studies	3 Credits	3 Credits	
Health and PE	2 Credits	2 Credits	
Foreign Language	3 or 4 Credits	3 Credits	
Electives	4 or 3 Electives	8 Credits Possible	
		22 = Graduation	

NOTE: High school credits earned in the 8th grade count toward completion of the minimum requirements but do not count toward the 20/22 credits a student must earn in grades 9-12.

We encourage a dialogue between student, parents, and the school so that the best possible information is available to the student prior to the selection of a schedule.

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