ABSTRACT
                The block scheduling program used in a high school in a
small Midwestern city was evaluated, considering the "hard" data of effects
on grade point average (GPA) and attendance, but not information about
student attitudes and perceptions. Data were available for approximately 500
students from the classes of 1997 (before the block scheduling), 2000, 2001,
and 2001. The relationship between block scheduling and cumulative GPA was
not significant, but there was a significant positive relationship in terms
of the four individual subject areas. Data suggested that block scheduling
had an influence on passage of the Ohio Proficiency Test (OPT) for those
students who did not pass the test before starting high school. Trends
relating block scheduling to attendance were not clear. Also studies was the
relationship between participating in the school band and student grades. The
relationship was significant in mathematics, English, and social studies, but
not in science. The block schedule did not appear to affect this
relationship, and the relationship between participating in band and passing
the OPT was a matter of chance. All the data that were significant were
supportive of block scheduling, but not all data were significant. Six
appendixes contain tables of study data. (SLD)

EVALUATION OF AN ON-GOING BLOCK

SCHEDULING PROGRAM

By

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Evaluation of a Block Scheduling program in place in the high school of a small, mid-western city. Description of the context of the evaluation, data selection rationale, methodology used for data analysis and interpretation, reporting to stakeholders, and the findings will comprise the principal content of this presentation. Based on the requirements of the client, only "hard" data were considered, for example, grade point average and attendance. Such things as attitudes and perceptions were not considered. All the data that were significant were supportive of block scheduling; but not all the data were significant. The impact of the evaluation, as perceived by the evaluators, and lessons learned will be discussed.

EVALUATION OF AN ON-GOING BLOCK SCHEDULING PROGRAM

By

Louis Trenta and Isadore Newman

Introduction

Within the context of reform of education, one of the attributes of the traditional educational system that has been a focus for systemic change has been the use of time. While some efforts have focused on, seeking ways to add time to the academic year and the academic day, other efforts have focused on redeploying the time already in the calendar. One set of efforts has centered on the daily schedule offering modifications commonly called "Block Scheduling" in which modifications are made to allow for larger (typically 80 to over 100 minutes) blocks of time per class/subject period.

There are a number of variations since schools that adopt such a plan are not bound to a particular pattern but can adapt it to meet their unique circumstances. Nonetheless, several variations are more common than others. The two most common ones are the 4 x 4 schedule and the AB schedule. In the 4 x 4 schedule, four extended length periods are scheduled for each day and students typically take four courses each semester—hence 4 by 4. Each semester course in this variation is equivalent to a full year course in the traditional 8 period day. The AB schedule

typically has the same 4 period day, but all courses are taught all year long, on alternate days—the A day schedule has four classes and the B day schedule has four different classes.

Over the last decade, a number of studies and evaluations have been done on block scheduling with some finding evidence of improved student achievement under block scheduling and others finding so significant improvement or a significant decline in achievement. In 1996 the Office of Program Evaluation for the Chesapeake Public Schools reported that in the studied high school failure rates declined in 60% of the school's departments and the percent of A's and B's increased (p. 5. See also Mutter, Chase, and Nichols, 1997.). A 1997 study commissioned by the Metropolitan Educational Research Consortium in Richmond, VA found that grades seemed to improve under both AB and 4 x4 block scheduling although more so in the 4 x 4 schools (Pisapia and Westfall, p. 27). David Snyder in a paper presented at the 1997 Annual Meeting of MWERA reported that student grades in the studied high school improved and significantly more students were on the honor rolls under block scheduling than during the baseline years before block scheduling (p. 4). Stanley and Gifford in their review of the literature on 4 x 4 block scheduling cited nine other studies that found that intensive block scheduling resulted in improvements in student achievement (1998, p. 8). R. Brian Cobb, Stacy Abate, and Dennis Baker (1999, February) reported a study of a junior high block scheduling program that had been in operation for four years. They reported consistently higher grade point averages in favor of block scheduling in all subject areas studied except for mathematics where students in block scheduling performed less well than those on the traditional schedule. Going further they noted that the data suggests block scheduling has a more positive effect on male students than female and on 10th and 11th graders than on 8th and 9th graders (p. 15).

On the other hand, Guskey and Kifer in a 1995 interim report presented at the AERA annual meeting noted that grades generally remained much the same after the introduction of block scheduling at the studied high school (p. 11). Laura Williams (1999) studied one high school whose students experienced traditional scheduling as 9th graders and 4 x 4 block scheduling as 10th graders. In comparing the course grades, she found no significant difference between the 9th and 10th grade scores in English and math; the core courses of English, science, math, and social studies; or in overall grade point average. Lawrence and McPherson, on the other hand, found a significant difference but one that favored the traditional schedule when mean scores on four end-of-course tests were compared in two high schools. Both schools provided data from two years under traditional scheduling and two years under block scheduling for Algebra I, biology, English I, and U. S. history (2000, pp. 179-181).

To the point of this study. The administration and faculty of high school of a small mid-west city initiated a 4 x 4 block schedule for the 1997-1998 school year with the approval of the local board of education. Over the years since, critics of the schedule have pressed for a return to the traditional schedule. During the 2000-2001 school year, the Board requested an evaluation of the program prior to making a decision about continuing, terminating, or modifying the program. Since they had received reports that the great majority of the faculty and students preferred the block schedule, they were not looking for more qualitative information, rather they wanted an evaluation based on what might be called "hard data," data not derived from opinions or attitudes of either supporters or critics but rather data that was a measure of achievement. A tangential request from the Board was for the evaluators to report on the relationships with participation in Band. Finally, there was a request for the number of Studied Community Foundation merit scholarships that were renewed by graduates who had experienced block scheduling.

Thus, there were three key questions to guide the inquiry and data analysis:

1. What is the relationship between block scheduling and (a) student grades, (b) Ohio Proficiency Test scores, (c) ACT scores, and (d) attendance?

2. What is the relationship of participation in Band and (a) student grades, (b) Ohio Proficiency Test scores, (c) ACT scores, and (d) attendance?

3. What is the number of graduates who experienced block scheduling who also received and renewed Studied Community Foundation merit scholarships?

Focus of the Evaluation

This evaluation began with one foundational question, "What is the relationship of block scheduling and student grades, Ohio Proficiency Test scores, ACT scores, and attendance?" A second question was put forward about the relationship of the arts programs and student performance. For the purpose of this evaluation and due to limitations in applicable data, the second evaluative question was stated as, "What is the relationship of participation in Band and student grades, Ohio Proficiency Test scores, ACT scores, and attendance?"

Data Needed to Complete the Evaluation

In general the information needed to respond to the evaluative questions was duration of exposure to classes in the block scheduling format and the selected performance measures for each student selected for the sample. More particularly, data gathered from each selected student's transcript included years experience under the block scheduling paradigm; cumulative grade point average (GPA); courses taken and grades in math, science, social studies, and English; ACT scores, if taken; number of days absent for each year at the High School; whether the student had passed the ninth grade Ohio Proficiency Test in reading, writing, math, science, and citizenship; and whether the student participated in band. From the courses taken and grades

received in the four specified subject areas, the evaluators generated a GPA for each of the four subject areas.

Overview of Evaluation Plan and Procedures

This evaluation began with the Board's request for statistical data related to the relationship of block scheduling and student performance as measured by four specified methods—student grade point average, student attendance, ACT test scores, and Ohio Proficiency Test scores. The district provided transcript data for a sampling of approximately 500 students from the classes of 1997, 2000, 2001, and 2002. Information related to the four factors plus band participation and duration in school under block scheduling was entered into a database. The data was analyzed for statistically significant relationships.

Conclusions

Going back to the key questions that were used as the starting point for gathering and reporting the data contained in this report, we can point out some conclusions. The two key, focusing questions were

1. What is the relationship of block scheduling with student grades, Ohio Proficiency Test scores, ACT scores, and attendance?

2. What is the relationship of participation in Band and student grades, Ohio Proficiency Test scores, ACT scores, and attendance?

Since the two questions asked about eight potential relationships, in essence, we dealt with eight questions and will present the results as responses to those eight questions. **First, is there a relationship between block scheduling and student grades?** A review of the data summarized in Chart A and Table 1 below leads to the conclusion is that there is a positive and significant relationship and a positive trend in the four academic subject areas (see Appendix B:

Correlations: Total Sample and Appendix C: Regression: Total Sample for additional regression

analyses, pages 18 and 19). Since correlations only show relationships and do not determine

cause, it is not possible to say block scheduling was the cause of the greater degree of the

relationship. There is reason to say there is support for the inference of "an influence" on

academic success. On the other hand, the relationship between block scheduling and the

cumulative GPA was not significant. Students did not tend to do either significantly better or

worse in terms of their cumulative GPA but did show a significant positive relationship in terms

of the four individual academic subject areas.

Chart A: Grade Point Averages
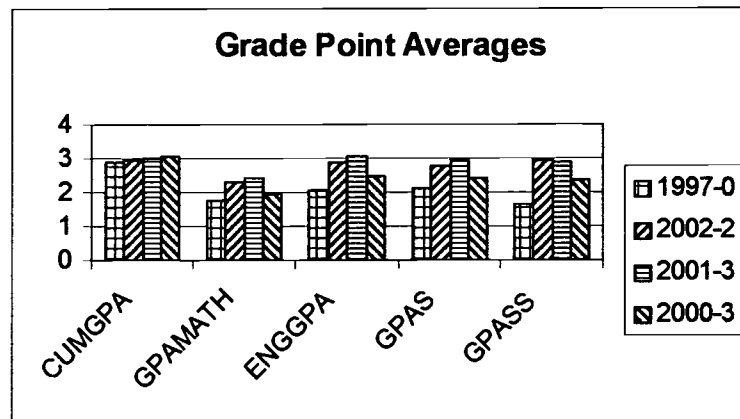
The year is the class graduation year. The numeral after
the year is the number of years in block scheduling.

Table 1: Block Schedule and Grade Point Average*

		CUMGPA	GPAMATH	ENGGPA	GPAS	GPASS
YRBLOCK	Pearson Correlation	.057	.149	.228	.178	.359
	Sig. (2-tailed)	.205	.001	.000	.000	.000
	N	500	500	500	500	500

*See Appendix A, page 17, for a list of the Variables.

Another way of looking for potential influence by block scheduling on academic

performance was to speculate that if there were a positive effect, there would be more significant

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positive correlations between the selected indicators of success after block scheduling than existed before it was implemented. We sorted the sample population according to years in block scheduling (zero years, two years, and three years). Then we looked for correlations, positive or negative, between the factors. There were 66 potential pairs for the zero class (there was no OPT Science examination when they were tested) and 78 for the other two groups. As can be seen in Chart B below, the class that did not experience block scheduling had significant positive relationships between approximately 58% of the potential pairs. The class with two years of block scheduling had approximately 64% of their potential 78 pairs showing a significant positive relationship. In the classes with three years under block scheduling we found approximately 72% of the pairs of indicators had significant positive relationships. The "presumed" add-ons in the chart are to account for OPT tests where there was no variability since all the students in the sample had passed the test. In those cases, we presumed a significant positive relationship. See Appendices D and E, pages 20 and 23, for correlations with years in block scheduling.

Chart B: Significant, Positive Academic Relationships

Per Cent of Potential Significant, Positive Academic Relationships
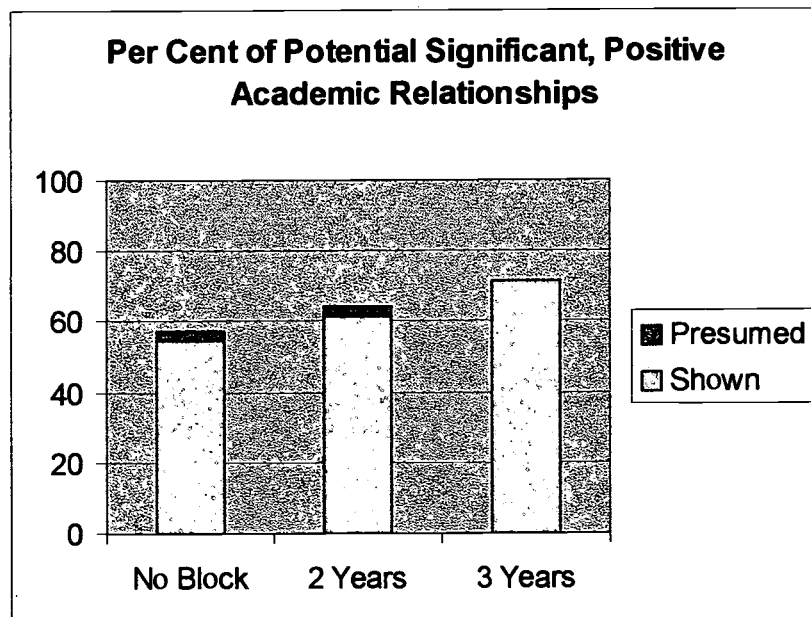
Second, is there a relationship between block scheduling and OPT scores?

Considering that the OPT examinations are given starting in the spring of the eighth grade and block scheduling does not begin until the ninth grade (tenth grade for the Class of 2000), one could not expect anything but a chance relationship between block scheduling and passage of the OPT tests. Chart C and Table 2 below bears this out. It would be very unusual to find a significant relationship between the two. However, indirect inferences can be made from a relationship that exists between GPA in the academic subject areas of math, English, social studies, and science and passage of the OPT and the relationship that exists between block scheduling and the GPA in those subjects. This double relationship with academic GPA supports the inference that block scheduling may have "an influence" on passage of the OPT for those who did not pass it before starting high school.

Chart C: Passing the Ninth Grade Ohio Proficiency Tests
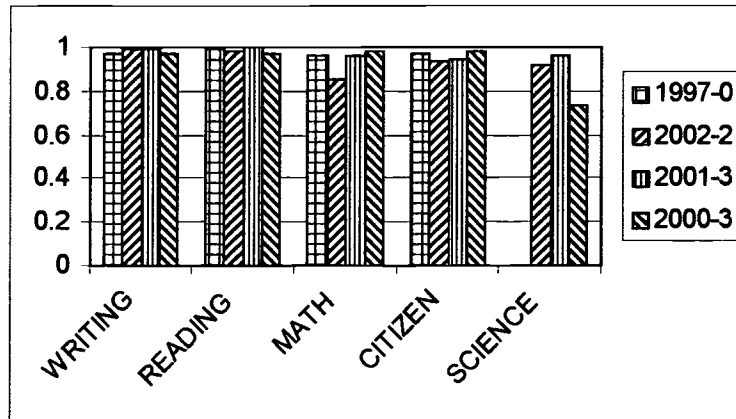
The year is the class graduation year. The numeral after the year is the number of years in block scheduling.

Table 2: Block Schedule and Passage of Ohio Proficiency Tests

		WRITING	READING	MATH	CITIZEN	SCIENCE
	Pearson Correlation	.013	-.028	.007	-.025	-.097
YRBLOCK	Sig. (2-tailed)	.780	.538	.869	.582	.062
	N	499	499	499	499	373

Third, is there a relationship between block scheduling and ACT scores? There was no significant relationship between years in block scheduling and ACT scores. A related question raised during the process of preparing this evaluation was, **"Are the recent declines in ACT scores related to block scheduling?"** Since not all students take the ACT and those that do self-select, this creates potential for underlying variation in ability to cloud relationships with other factors such as time in block scheduling. To peer beyond the effect of ability on ACT, the initial abilities of the students taking the test were held constant. When this was done, the decline was not significant. That is, when variations related to ability are removed, the variation that remained was so slight as not to be significant. Chart D below shows the similarity in outcomes one would expect from a comparison of ability and ACT scores. Cumulative GPA tended to follow the same pattern although GPA is on a different scale than the other two. The ability score is on a 3-point scale with 3 being high and 1 low. ACT scores were divided by 10 so they would fit on roughly the same scale as GPA and the derived ability score.

Chart D: Cumulative GPA, Ability, and ACT
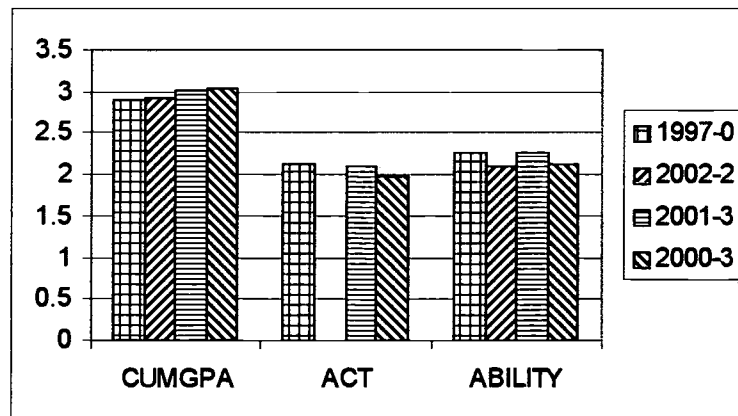
The year is the class graduation year. The numeral after the year is the number of years in block scheduling.

Fourth, is there a relationship between block scheduling and attendance? As can be seen in Chart E and Table 3, the multiple directions of average attendance, varied by grade level,

did not seem to be significantly related to time in block scheduling. There were so many cross currents of movement up and down in attendance patterns, that trends relating block scheduling to attendance were not clear.

Chart E: Average Days Absent
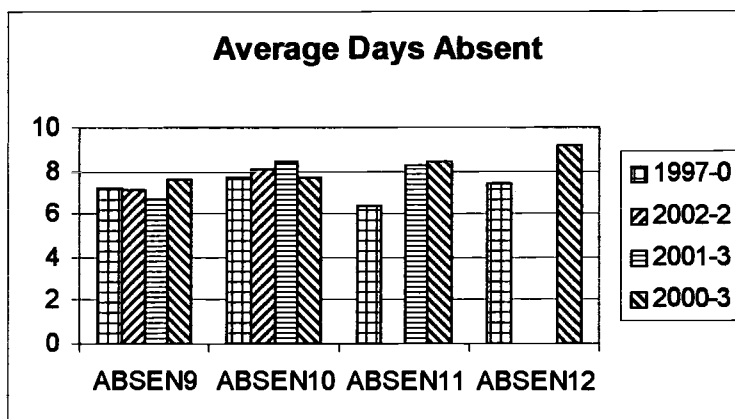
Average Days Absent

The year is the class graduation year. The numeral after the year is the number of years in block scheduling.

Table 3: Block Schedule and Days Absent by Year

		ABSEN9	ABSEN10	ABSEN11	ABSEN12
YRBLOCK	Pearson Correlation	-.002	.022	.119	-.013
	Sig. (2-tailed)	.970	.621	.008	.803
	N	490	496	497	375

Fifth, is there a relationship between Band and student grades? Band showed a positive relationship with the four academic subject areas and the cumulative GPA. The relationship was significant in math, English, and social studies but not in science.

Table 4: Credits earned in Band and Grade Point Average

		CUMGPA	GPAMATH	ENGGPA	GPAS	GPASS
BAND	Pearson Correlation	.178	.109	.088	.075	.092
	Sig. (2-tailed)	.000	.015	.049	.096	.041
	N	499	499	499	499	499

Another version of the fifth question was raised during the preparation of this report, "**How does the relationship between band students' academic achievement under block scheduling compare with their achievement outside/before block scheduling?**" Overall, Band students had essentially the same GPAs cumulatively and in the four academic subject areas whether they were in or out of block scheduling with the exception of English and social studies where those in block scheduling did better than those not in block scheduling. See BBLOCK in Appendix F, page 27.

Sixth, is there a relationship between Band and passage of OPT scores? Just as with block scheduling, students typically begin participation in the High School Band after they start high school while the OPT is given before they start high school. The relationship between the passage of the OPT and participation in Band was a matter of chance, especially for those students who passed one or more of the OPT sub-tests in the eighth grade.

Table 5: Band Credits and Passage of Ohio Proficiency Tests

		WRITING	READING	MATH	CITIZEN	SCIENCE
BAND	Pearson Correlation	.005	.012	-.027	.004	-.065
	Sig. (2-tailed)	.903	.796	.555	.926	.208
	N	499	499	499	499	373

Seventh, is there a relationship between Band and ACT scores? The number of credits earned in Band and scores on the ACT test seemed to head in the same direction. However, this correlation is not strong enough to be considered significant.

Table 6: Band and ACT Scores

		ACT
BAND	Pearson Correlation	.117
	Sig. (2-tailed)	.075
	N	234

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Eighth, is there a relationship between Band and attendance? The collected data did

not show a significant relationship between participation in Band and attendance. Whether

attendance was up or down for band participants over time was merely a matter of chance.

Limitations

This was an evaluation of a program that had been operating since the 1997-1998 school

year. In order to establish a causal relationship between block scheduling and improved

performance, it would have been necessary to begin a research protocol before beginning the

program. In these situations, the best we can do is establish support for a concept/program but

not direct evidence of cause and effect

Block scheduling had been in place for only three years; hence, no graduation class had

experienced and left records of a full high school career on block scheduling. Graduates in the

class of 2000 were in block scheduling for grades 10, 11, and 12. The class of 2001 has records

for their experience in grades 9, 10, and 11. Since their senior year was underway during the

study, year-end data was not available. The class of 2002 had two years of experience and

records under block scheduling, grades 9 and 10. Those students were experiencing their third

year in block scheduling at the time of the study.

The evaluation was based on a sampling of the total student population from the classes

of 2000, 2001, 2002, and the pre-block scheduling class of 1997 (used as a control).

The statistical analyses comparing block scheduling and student grades, proficiency

scores, ACT scores, and attendance yielded correlations, not proof of cause and effect.

Band had far fewer participants than the general student population, as one would expect

since band members are a subset of the total student body. This meant there were fewer scores

to consider and more questions to raise about any relationship between participation in band and

the four selected performance measures. In addition, it was not possible to determine how many students would have taken band but for the block schedule. Available data only documents what was done, not what might have been done given other circumstances.

The ACT test is typically taken during the student's junior year at school. This meant that for this evaluation, those students with the most years in the block scheduling environment, the class of 2000, would have had only one year before they took the test and been in its second year in block scheduling. Only the class of 2001 would have had two years before taking the test. The class of 2002 had a few students take the ACT earlier than normal. In the sample there were 12. Since the earlier ACT takers are not likely to be representative of the ability of the full class, reliance on their scores as indicative of class performance was not appropriate.

Finally, identifying the number of block scheduling graduates who renewed Studied Community Trust merit scholarships offered little information without a track record for graduates who did not experience block scheduling. Additionally, the graduation class that experienced more than half their high school years in block scheduling just graduated the spring before the study began and had not yet sought to renew their scholarships. Therefore, the third question raised by the Board was beyond the scope of available data and not considered further.

Summary Conclusion

The literature that included statistical analysis of data was mixed in relating improvement in student achievement and block scheduling. Many variables beyond the schedule, both in the school and in the community or home, can and almost certainly have influenced student achievement. Left unexamined were variables related to preparation or in-service of the teachers for teaching in the block format, the teaching methodologies used by the teachers, and the effect of moving from an older cramped building to a new, spacious high school building.

The goal of this study was to provide the reader with a careful, detailed analysis of some of the measurable effects that might be related to block scheduling in one mid-western high school. In this case, the students who were being educated in a block-scheduling environment appeared to do as well as students in the traditional environment in most indicator areas and showed a significant positive relationship with better achievement in the academic subject areas. Hence, there is support for the inference that block scheduling has "an influence" on academic success in this high school.

References

Chesapeake Public Schools. (1996, October). *4 x 4 block schedule evaluation.* ERIC Document Reproduction Service. (ERIC No. ED427037)

Cobb, R. b, Abate, S. and Baker, D. (1999, February). Effects on students of a 4 x 4 junior high school block scheduling program. *Education Policy Analysis Archives, 7*(3). Retrieved September 24, 2001, from http://epaa.asu.edu/epaa/v7n3.html

Guskey, T. R. and Kifer, E. (1995, April). *Evaluation of a high school block schedule restructuring program.* Paper presented at the annual meeting of the American Educational Research Association. (ERIC Document Reproduction Service No. ED384652)

Lawrence, W. W. and McPherson, D. (2000, September). A comparative study of block scheduling and traditional scheduling on academic achievement. *Journal of Instructional Psychology, 27*(3), 178-182.

Mutter, D. W., Chase, E., and Nichols, W. R. (1997, Winter). Evaluation of a 4 x 4 block schedule. *ERS Spectrum, 15*(1), 3-8.

Pisapia, J. and Westfall, A. L. (1997, January). *Alternative high school scheduling: Student achievement and behavior. Research report.* Richmond, VA: Metropolitan Educational Research Consortium. (ERIC Document Reproduction Service No. ED411337)

Snyder, D. (1997, October). *4-block scheduling: A case study of data analysis of one high school after two years.* Paper presented at the annual meeting of the Midwest Educational Research Association. (ERIC Document Reproduction Service No. ED414626)

Stanley, A. and Gifford, L. J. (1998, November). *The feasibility of 4x4 block scheduling in secondary schools: A review of the literature.* Paper presented at the annual meeting of the Mid-South Educational Research Association. (ERIC Document Reproduction Service No. ED429333)

Williams, L. M. (1999). *Effects of block scheduling on grade point averages.* ERIC document Reproduction Service. (ERIC No. ED432039)

Table of Appendices

Appendix A: Variables List

Year	Class year
Yrblock	Years in block scheduling
Cumgpa	Overall GPA; Cumulative GPA
ACT	ACT scores
Ansence9-12	Number of days absent from school for each school year
Writing	Passed or not passed Writing on the OPT
WTT	Number of times needed to pass Writing
Reading	Passed or not passed Reading on the OPT
RTT	Number of times needed to pass Reading on the OPT
Math	Passed or not passed Math on the OPT
MTT	Number of times needed to pass Math on the OPT
Citizen	Passed or not passed Citizenship on the OPT
CTT	Number of times needed to pass Citizenship on the OPT
Science	Passed or not passed Science on the OPT
STT	Number of times needed to pass Science on the OPT
Band	If they were in Band and how many credits earned
Ability	IQ score placed in range from 1 (low) to 3 (high)
GPAMath	Overall GPA for Math
ENGGPA	Overall GPA for English
GPAS	Overall GPA for Science
GPASS	Overall GPA for Social Studies
BBlock	Band member before (1) or during (2) Block Scheduling

Appendix B: Correlations: Total Sample

Correlations

Variable	Statistic	YRBLOCK	CUMGPA	ACT	ABSEN9	ABSEN10	ABSEN11	ABSEN12	WRITING	READING	MATH	CITIZEN	SCIENCE	BAND	ABILITY	GPAMATH	ENGGPA	GPAS	GPASS
YRBLOCK	Pearson Correlation	1.000	.057	-.097	-.002	.022	.119*	-.013	.013	-.028	.007	-.025	-.097	.106*	-.066	.149**	.228**	.178**	.359**
	Sig. (2-tailed)		.205	.139	.970	.621	.008	.803	.780	.538	.869	.582	.139	.018	.142	.001	.000	.000	.000
	N	500	205	234	490	496	497	375	499	499	499	499	373	499	500	500	500	500	500
CUMGPA	Pearson Correlation	.057	1.000	.743**	-.267**	-.318**	-.308**	-.339**	.143**	.137**	.283**	.207**	.249**	.178**	.530**	.819**	.837**	.860**	.779**
	Sig. (2-tailed)	.205		.000	.000	.000	.000	.000	.001	.002	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	500	500	234	490	496	497	375	499	499	499	499	373	499	500	500	500	500	500
ACT	Pearson Correlation	-.097	.743**	1.000	-.052	-.096	-.158*	-.266**	.114	.114	.281**	.129*	.281**	.117	.696**	.660**	.573**	.620**	.494**
	Sig. (2-tailed)	.139	.000		.431	.141	.016	.000	.081	.081	.000	.049	.000	.075	.000	.000	.000	.000	.000
	N	234	234	234	232	234	234	222	234	234	157	234	157	234	234	234	234	234	234
ABSEN9	Pearson Correlation	-.002	-.267**	-.052	1.000	.787**	.522**	.389**	-.167**	-.185**	-.148**	-.196**	-.121*	-.035	-.166**	-.184**	-.200**	-.234**	-.201**
	Sig. (2-tailed)	.970	.000	.431		.000	.000	.000	.000	.000	.001	.000	.021	.444	.000	.000	.000	.000	.000
	N	490	490	232	490	490	489	367	490	490	490	490	365	490	490	490	490	490	490
ABSEN10	Pearson Correlation	.022	-.318**	-.096	.787**	1.000	.533**	.341**	-.103*	-.103*	-.081	-.090*	-.050	-.084	-.171**	-.222**	-.217**	-.262**	-.219**
	Sig. (2-tailed)	.621	.000	.141	.000		.000	.000	.022	.022	.071	.045	.340	.062	.000	.000	.000	.000	.000
	N	496	496	234	490	496	494	372	496	496	496	496	370	496	496	496	496	496	496
ABSEN11	Pearson Correlation	.119*	-.308**	-.158*	.522**	.533**	1.000	.498**	-.110*	-.147**	.000	-.061	-.135**	-.035	-.112*	-.248**	-.219**	-.274**	-.233**
	Sig. (2-tailed)	.008	.000	.016	.000	.000		.000	.014	.001	.992	.177	.009	.436	.012	.000	.000	.000	.000
	N	497	497	234	489	494	497	374	497	497	497	497	372	497	497	497	497	497	497
ABSEN12	Pearson Correlation	-.013	-.339**	-.266**	.389**	.341**	.498**	1.000	-.103*	-.105*	-.025	-.022	-.186**	-.101	-.199**	-.287**	-.309**	-.315**	-.302**
	Sig. (2-tailed)	.803	.000	.000	.000	.000	.000		.046	.041	.625	.677	.003	.050	.000	.000	.000	.000	.000
	N	375	375	222	367	372	374	375	375	375	375	375	250	375	375	375	375	375	375
WRITING	Pearson Correlation	.013	.143**	.114	-.167**	-.103*	-.110*	-.103*	1.000	.624**	.353**	.433**	.135**	.005	.239**	.101*	.119*	.130**	.132**
	Sig. (2-tailed)	.780	.001	.081	.000	.022	.014	.046		.000	.000	.000	.009	.903	.000	.025	.008	.004	.003
	N	499	499	234	490	496	497	375	499	499	499	499	373	499	499	499	499	499	499
READING	Pearson Correlation	-.028	.137**	.114	-.185**	-.103*	-.147**	-.105*	.624**	1.000	.335**	.236**	.135**	.012	.227**	.082	.091*	.098*	.122**
	Sig. (2-tailed)	.538	.002	.081	.000	.022	.001	.041	.000		.000	.000	.009	.796	.000	.068	.042	.029	.006
	N	499	499	234	490	496	497	375	499	499	499	499	373	499	499	499	499	499	499
MATH	Pearson Correlation	.007	.283**	.281**	-.148**	-.081	.000	-.025	.353**	.335**	1.000	.473**	.330**	-.027	.305**	.213**	.197**	.231**	.151**
	Sig. (2-tailed)	.869	.000	.000	.001	.071	.992	.625	.000	.000		.000	.000	.555	.000	.000	.000	.000	.001
	N	499	499	157	490	496	497	375	499	499	499	499	373	499	499	499	499	499	499
CITIZEN	Pearson Correlation	-.025	.207**	.129*	-.196**	-.090*	-.061	-.022	.433**	.236**	.473**	1.000	.287**	.004	.238**	.108*	.148**	.179**	.125**
	Sig. (2-tailed)	.582	.000	.049	.000	.045	.177	.677	.000	.000	.000		.000	.926	.000	.015	.001	.000	.005
	N	499	499	234	490	496	497	375	499	499	499	499	373	499	499	499	499	499	499
SCIENCE	Pearson Correlation	-.097	.249**	.281**	-.121*	-.050	-.135**	-.186**	.135**	.135**	.330**	.287**	1.000	-.065	.253**	.245**	.313**	.301**	.264**
	Sig. (2-tailed)	.139	.000	.000	.021	.340	.009	.003	.009	.009	.000	.000		.208	.000	.000	.000	.000	.000
	N	373	373	157	365	370	372	250	373	373	373	373	373	373	373	373	373	373	373
BAND	Pearson Correlation	.106*	.178**	.117	-.035	-.084	-.035	-.101	.005	.012	-.027	.004	-.065	1.000	.035	.109*	.088*	.075	.092*
	Sig. (2-tailed)	.018	.000	.075	.444	.062	.436	.050	.903	.796	.555	.926	.208		.441	.015	.049	.096	.041
	N	499	499	234	490	496	497	375	499	499	499	499	373	499	499	499	499	499	499
ABILITY	Pearson Correlation	-.066	.530**	.696**	-.166**	-.171**	-.112*	-.199**	.239**	.227**	.305**	.238**	.253**	.035	1.000	.442**	.437**	.452**	.394**
	Sig. (2-tailed)	.142	.000	.000	.000	.000	.012	.000	.000	.000	.000	.000	.000	.441		.000	.000	.000	.000
	N	500	500	234	490	496	497	375	499	499	499	499	373	499	500	500	500	500	500
GPAMATH	Pearson Correlation	.149**	.819**	.660**	-.184**	-.222**	-.248**	-.287**	.101*	.082	.213**	.108*	.245**	.109*	.442**	1.000	.766**	.767**	.724**
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.000	.000	.025	.068	.000	.015	.000	.015	.000		.000	.000	.000
	N	500	500	234	490	496	497	375	499	499	499	499	373	499	500	500	500	500	500
ENGGPA	Pearson Correlation	.228**	.837**	.573**	-.200**	-.217**	-.219**	-.309**	.119*	.091*	.197**	.148**	.313**	.088*	.437**	.766**	1.000	.825**	.823**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.008	.042	.000	.001	.000	.049	.000	.000		.000	.000
	N	500	500	234	490	496	497	375	499	499	499	499	373	499	500	500	500	500	500
GPAS	Pearson Correlation	.178**	.860**	.620**	-.234**	-.262**	-.274**	-.315**	.130**	.098*	.231**	.179**	.301**	.075	.452**	.767**	.825**	1.000	.789**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.004	.029	.000	.000	.000	.096	.000	.000	.000		.000
	N	500	500	234	490	496	497	375	499	499	499	499	373	499	500	500	500	500	500
GPASS	Pearson Correlation	.359**	.779**	.494**	-.201**	-.219**	-.233**	-.302**	.132**	.122**	.151**	.125**	.264**	.092*	.394**	.724**	.823**	.789**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.003	.006	.001	.005	.000	.041	.000	.000	.000	.000	
	N	500	500	234	490	496	497	375	499	499	499	499	373	499	500	500	500	500	500

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

a. Cannot be computed because at least one of the variables is constant.

Appendix C: Regression: Total Sample

Variables Entered/Removed[b]			
Model	Variables Entered	Variables Removed	Method
1	GPAS, ABILITY, ACT, GPASS, GPAMATH, ENGGPA[a]	.	Enter

a All requested variables entered.

b Dependent Variable: YRBLOCK

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.595[a]	.354	.337	1.1350

a Predictors: (Constant), GPAS, ABILITY, ACT, GPASS, GPAMATH, ENGGPA

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	160.239	6	26.707	20.732	.000[a]
	Residual	292.414	227	1.288		
	Total	452.654	233			

a Predictors: (Constant), GPAS, ABILITY, ACT, GPASS, GPAMATH, ENGGPA

b Dependent Variable: YRBLOCK

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	2.290	.398		5.745	.000
	GPASS	.946	.141	.712	6.727	.000
	ABILITY	-.262	.198	-.099	-1.325	.186
	ACT	-.101	.028	-.321	-3.560	.000
	GPAMATH	-.185	.122	-.144	-1.509	.133
	ENGGPA	-5.367E-02	.151	-.042	-.355	.723
	GPAS	.122	.138	.097	.885	.377

a Dependent Variable: YRBLOCK

Appendix D: Correlations at Specified Years in Block Scheduling
Correlations When No Years in Block Scheduling

Correlations [b]

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
a. Cannot be computed because at least one of the variables is constant.
b. YRBLOCK = .00

Correlations When Two Years in Block Scheduling

Correlations[b]

		YRBLOCK	CUMGPA	ACT	ABSEN9	ABSEN10	ABSEN11	ABSEN12	WRITING	READING	MATH	CITIZEN	SCIENCE	BAND	ABILITY	GPAMATH	ENGGPA	GPAS	GPASS
YRBLOCK	Pearson Correlation	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]
	Sig. (2-tailed)																		
	N	125	125	12	124	124	124	1	124	124	124	124	124	124	125	125	125	125	125
CUMGPA	Pearson Correlation	.[a]	1.000	.529	-.292**	-.316**	-.276**	.[a]	.143	.197*	.456**	.304**	.369**	-.082	.383**	.857**	.876**	.912**	.869**
	Sig. (2-tailed)			.077	.001	.000	.002		.112	.029	.000	.001	.000	.364	.000	.000	.000	.000	.000
	N	125	125	12	124	124	124	1	124	124	124	124	124	124	125	125	125	125	125
ACT	Pearson Correlation	.[a]	.529	1.000	.308	.370	.449	.[a]							.678*	.463	.100	.697*	.198
	Sig. (2-tailed)		.077		.334	.238	.144								.016	.129	.758	.014	.541
	N	125	12	12	12	12	12	0	12	12	12	12	12	12	12	12	12	12	12
ABSEN9	Pearson Correlation	.[a]	-.292**	.308	1.000	.727**	.636**	.[a]	-.020	-.056	-.130	-.294**	-.278**	-.058	-.195*	-.198*	-.150	-.239**	-.329**
	Sig. (2-tailed)		.001	.334		.000	.000		.822	.539	.151	.001	.002	.522	.030	.039	.098	.008	.000
	N	124	124	12	124	124	124	1	124	124	124	124	124	124	124	124	124	124	124
ABSEN10	Pearson Correlation	.[a]	-.316**	.370	.727**	1.000	.728**	.[a]	.032	-.091	-.135	-.154	-.186	-.050	-.190*	-.202*	-.207*	-.253**	-.329**
	Sig. (2-tailed)		.000	.238	.000		.000		.720	.314	.138	.088	.085	.582	.035	.024	.021	.005	.000
	N	124	124	12	124	124	124	1	124	124	124	124	124	124	124	124	124	124	124
ABSEN11	Pearson Correlation	.[a]	-.276**	.449	.636**	.728**	1.000	.[a]	.004	.008	-.083	-.240**	-.188*	-.024	-.074	-.137	-.191*	-.198*	-.309**
	Sig. (2-tailed)		.002	.144	.000	.000			.964	.949	.357	.007	.036	.792	.416	.130	.034	.028	.000
	N	124	124	12	124	124	124	1	124	124	124	124	124	124	124	124	124	124	124
ABSEN12	Pearson Correlation	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]	.[a]
	Sig. (2-tailed)																		
	N	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WRITING	Pearson Correlation	.[a]	.143	.[a]	-.020	.032	.004	.[a]	1.000	-.012	.219*	-.024	.304**	.032	.178	.073	.102	.148	.105
	Sig. (2-tailed)		.112		.822	.720	.964			.889	.015	.794	.001	.727	.050	.422	.257	.101	.245
	N	124	124	12	124	124	124	1	124	124	124	124	124	124	124	124	124	124	124
READING	Pearson Correlation	.[a]	.197*	.[a]	-.056	-.091	.006	.[a]	-.012	1.000	.311**	-.034	.197*	-.176	.250**	.138	.128	.202*	.197*
	Sig. (2-tailed)		.029		.539	.314	.949		.889		.000	.711	.028	.051	.005	.128	.156	.025	.028
	N	124	124	12	124	124	124	1	124	124	124	124	124	124	124	124	124	124	124
MATH	Pearson Correlation	.[a]	.456**	.[a]	-.130	-.135	-.083	.[a]	.219*	.311**	1.000	.265**	.551**	-.269**	.360**	.410**	.391**	.467**	.398**
	Sig. (2-tailed)		.000		.151	.136	.357		.015	.000		.003	.000	.001	.000	.000	.000	.000	.000
	N	124	124	12	124	124	124	1	124	124	124	124	124	124	124	124	124	124	124
CITIZEN	Pearson Correlation	.[a]	.304**	.[a]	-.294**	-.154	-.240**	.[a]	-.024	-.034	.265**	1.000	.404**	-.021	.165	.176	.231*	.321**	.336**
	Sig. (2-tailed)		.001		.001	.088	.007		.794	.711	.003		.000	.817	.067	.050	.010	.000	.000
	N	124	124	12	124	124	124	1	124	124	124	124	124	124	124	124	124	124	124
SCIENCE	Pearson Correlation	.[a]	.369**	.[a]	-.279**	-.186*	-.198*	.[a]	.304**	.197*	.551**	.404**	1.000	-.062	.317**	.239**	.316**	.333**	.296**
	Sig. (2-tailed)		.000		.002	.085	.036		.001	.028	.000	.000		.495	.000	.008	.000	.000	.001
	N	124	124	12	124	124	124	1	124	124	124	124	124	124	124	124	124	124	124
BAND	Pearson Correlation	.[a]	-.082	.[a]	-.058	-.050	-.024	.[a]	.032	-.176	-.299**	-.021	-.062	1.000	-.182*	-.054	-.148	-.154	-.077
	Sig. (2-tailed)		.364		.522	.582	.792		.727	.051	.001	.817	.495		.043	.550	.101	.087	.398
	N	124	124	12	124	124	124	1	124	124	124	124	124	124	124	124	124	124	124
ABILITY	Pearson Correlation	.[a]	.383**	.678*	-.195*	-.190*	-.074	.[a]	.178	.250**	.360**	.165	.317**	-.182*	1.000	.328**	.372**	.355**	.349**
	Sig. (2-tailed)		.000	.016	.030	.035	.418		.050	.005	.000	.087	.000	.043		.000	.000	.000	.000
	N	125	125	12	124	124	124	1	124	124	124	124	124	124	125	125	125	125	125
GPAMATH	Pearson Correlation	.[a]	.857**	.463	-.186*	-.202*	-.137	.[a]	.073	.138	.410**	.176	.239**	-.054	.328**	1.000	.734**	.778**	.718**
	Sig. (2-tailed)		.000	.129	.038	.024	.130		.422	.128	.000	.050	.008	.550	.000		.000	.000	.000
	N	125	125	12	124	124	124	1	124	124	124	124	124	124	125	125	125	125	125
ENGGPA	Pearson Correlation	.[a]	.876**	.100	-.150	-.207*	-.191*	.[a]	.102	.128	.391**	.231*	.316**	-.148	.372**	.734**	1.000	.774**	.781**
	Sig. (2-tailed)		.000	.758	.096	.021	.034		.257	.156	.000	.010	.000	.101	.000	.000		.000	.000
	N	125	125	12	124	124	124	1	124	124	124	124	124	124	125	125	125	125	125
GPAS	Pearson Correlation	.[a]	.912**	.697*	-.239**	-.253**	-.198*	.[a]	.148	.202*	.487**	.321**	.333**	-.154	.355**	.778**	.774**	1.000	.791**
	Sig. (2-tailed)		.000	.014	.008	.005	.028		.101	.025	.000	.000	.000	.087	.000	.000	.000		.000
	N	125	125	12	124	124	124	1	124	124	124	124	124	124	125	125	125	125	125
GPASS	Pearson Correlation	.[a]	.869**	.198	-.329**	-.328**	-.309**	.[a]	.105	.197*	.398**	.336**	.296**	-.077	.349**	.718**	.781**	.791**	1.000
	Sig. (2-tailed)		.000	.541	.000	.000	.000		.245	.028	.000	.000	.001	.398	.000	.000	.000	.000	
	N	125	125	12	124	124	124	1	124	124	124	124	124	124	125	125	125	125	125

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

a. Cannot be computed because at least one of the variables is constant.

b. YRBLOCK = 2.00

Correlations When Three Years in Block Scheduling

Correlations [b]

		YRBLOCK	CUMGPA	ACT	ABSEN9	ABSEN10	ABSEN11	ABSEN12	WRITING	READING	MATH	CITIZEN	SCIENCE	BAND	ABILITY	GPAMATH	ENGGPA	GPAS	GPASS
YRBLOCK	Pearson Correlation		. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]	. [a]
	Sig. (2-tailed)																		
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
CUMGPA	Pearson Correlation	. [a]	1.000	.733**	-.257**	-.333**	-.362**	-.309**	.150*	.143*	.188**	.173**	.219**	.251**	.605**	.823**	.866**	.873**	.852**
	Sig. (2-tailed)			.000	.000	.000	.000	.000	.018	.024	.003	.008	.001	.000	.000	.000	.000	.000	.000
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
ACT	Pearson Correlation	. [a]	.733**	1.000	-.080	-.094	-.147	-.201*	.143	.143	. [a]	.163	.281**	.163	.734**	.876**	.632**	.694**	.585**
	Sig. (2-tailed)		.000		.344	.281	.079	.015	.085	.085		.050	.001	.050	.000	.000	.000	.000	.000
	N	145	145	145	143	145	145	145	145	145	145	145	145	145	145	145	145	145	145
ABSEN9	Pearson Correlation	. [a]	-.257**	-.080	1.000	.804**	.503**	.387**	-.239**	-.285**	-.226**	-.211**	-.082	-.063	-.163*	-.192**	-.253**	-.247**	-.218**
	Sig. (2-tailed)		.000	.344		.000	.000	.000	.000	.000	.000	.001	.203	.329	.011	.003	.000	.000	.001
	N	241	241	143	241	241	240	241	241	241	241	241	241	241	241	241	241	241	241
ABSEN10	Pearson Correlation	. [a]	-.333**	-.094	.804**	1.000	.500**	.374**	-.085	-.105	-.085	-.075	-.014	-.125	-.134*	-.244**	-.282**	-.295**	-.243**
	Sig. (2-tailed)		.000	.281	.000		.000	.000	.181	.100	.183	.240	.825	.051	.038	.000	.000	.000	.000
	N	247	247	145	241	247	245	248	247	247	247	247	248	247	247	247	247	247	247
ABSEN11	Pearson Correlation	. [a]	-.362**	-.147	.503**	.500**	1.000	.572**	-.133*	-.158*	-.059	-.025	-.099	-.097	-.142*	-.295**	-.264**	-.320**	-.254**
	Sig. (2-tailed)		.000	.079	.000	.000		.000	.037	.013	.357	.695	.119	.128	.028	.000	.000	.000	.000
	N	248	248	145	240	245	248	248	248	248	248	248	248	248	248	248	248	248	248
ABSEN12	Pearson Correlation	. [a]	-.309**	-.201*	.387**	.374**	.572**	1.000	-.078	-.116	.021	.037	-.186**	-.117	-.190**	-.309**	-.330**	-.326**	-.343**
	Sig. (2-tailed)		.000	.015	.000	.000	.000		.222	.069	.744	.568	.003	.065	.003	.000	.000	.000	.000
	N	249	249	145	241	248	248	249	249	249	249	249	249	249	249	249	249	249	249
WRITING	Pearson Correlation	. [a]	.150*	.143	-.239**	-.085	-.133*	-.078	1.000	.893**	.322**	.433**	.093	-.015	.270**	.103	.156*	.117	.166**
	Sig. (2-tailed)		.018	.085	.000	.181	.037	.222		.000	.000	.000	.144	.811	.000	.103	.013	.084	.009
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
READING	Pearson Correlation	. [a]	.143*	.143	-.285**	-.105	-.158*	-.116	.893**	1.000	.385**	.318**	.118	.064	.229**	.078	.131*	.088	.164**
	Sig. (2-tailed)		.024	.085	.000	.100	.013	.069	.000		.000	.000	.087	.317	.000	.220	.039	.174	.009
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
MATH	Pearson Correlation	. [a]	.188**	. [a]	-.226**	-.085	-.059	.021	.322**	.385**	1.000	.818**	.314**	.038	.247**	.109	.185**	.150*	.115
	Sig. (2-tailed)		.003		.000	.181	.357	.744	.000	.000		.000	.000	.574	.000	.084	.009	.017	.070
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
CITIZEN	Pearson Correlation	. [a]	.173**	.163	-.211**	-.075	-.025	.037	.433**	.318**	.818**	1.000	.281**	-.012	.275**	.087	.173**	.134*	.078
	Sig. (2-tailed)		.008	.050	.001	.240	.695	.568	.000	.000	.000		.000	.852	.000	.168	.008	.035	.219
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
SCIENCE	Pearson Correlation	. [a]	.219**	.281**	-.082	-.014	-.099	-.186**	.093	.118	.314**	.281**	1.000	-.049	.247**	.251**	.316**	.292**	.245**
	Sig. (2-tailed)		.001	.001	.203	.825	.119	.003	.144	.087	.000	.000		.441	.000	.000	.000	.000	.000
	N	249	249	145	241	248	248	249	249	249	249	249	249	249	249	249	249	249	249
BAND	Pearson Correlation	. [a]	.251**	.163	-.063	-.125	-.097	-.117	-.015	.064	.038	-.012	-.049	1.000	.054	.180**	.158*	.122	.151*
	Sig. (2-tailed)		.000	.050	.329	.051	.128	.085	.811	.317	.574	.852	.441		.398	.004	.013	.054	.017
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
ABILITY	Pearson Correlation	. [a]	.605**	.734**	-.163*	-.134*	-.142*	-.180**	.270**	.229**	.247**	.275**	.314**	.054	1.000	.555**	.583**	.814**	.575**
	Sig. (2-tailed)		.000	.000	.011	.038	.028	.003	.000	.000	.000	.000	.000	.398		.000	.000	.000	.000
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
GPAMATH	Pearson Correlation	. [a]	.823**	.876**	-.192**	-.244**	-.285**	-.309**	.103	.078	.109	.087	.251**	.180**	.555**	1.000	.782**	.776**	.744**
	Sig. (2-tailed)		.000	.000	.003	.000	.000	.000	.103	.220	.084	.168	.000	.004	.000		.000	.000	.000
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
ENGGPA	Pearson Correlation	. [a]	.866**	.632**	-.253**	-.282**	-.284**	-.330**	.156*	.131*	.165**	.173**	.316**	.158*	.583**	.782**	1.000	.887**	.844**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.013	.039	.009	.008	.000	.013	.000	.000		.000	.000
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
GPAS	Pearson Correlation	. [a]	.873**	.694**	-.247**	-.295**	-.320**	-.326**	.117	.088	.150*	.134*	.262**	.122	.814**	.776**	.887**	1.000	.807**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.064	.174	.017	.035	.000	.054	.000	.000	.000		.000
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250
GPASS	Pearson Correlation	. [a]	.852**	.585**	-.218**	-.243**	-.254**	-.343**	.166**	.164**	.115	.078	.245**	.151*	.575**	.744**	.844**	.807**	1.000
	Sig. (2-tailed)		.000	.000	.001	.000	.000	.000	.009	.009	.070	.219	.000	.017	.000	.000	.000	.000	
	N	250	250	145	241	247	248	249	250	250	250	250	249	250	250	250	250	250	250

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

a. Cannot be computed because at least one of the variables is constant.

b. YRBLOCK = 3.00

Appendix E

Table of Significant Correlations
Sorted by Years Experience in Block Scheduling
For those marked with an asterisk (*), the significance level is .05 (5%).
All others are significant at the .01 (1%) level.

No Block	2 Years in Block	3 Years in block
Cumulative GPA & ACT scores Cumulative GPA & OPT Math* Cumulative GPA & Band* Cumulative GPA & Ability Cumulative GPA & Math GPA Cumulative GPA & English GPA Cumulative GPA & Science GPA Cumulative GPA & Soc. St. GPA	Cumulative GPA & OPT Reading* Cumulative GPA & OPT Math Cumulative GPA & OPT Citizenship Cumulative GPA & OPT Science Cumulative GPA & Ability Cumulative GPA & Math GPA Cumulative GPA & English GPA Cumulative GPA & Science GPA Cumulative GPA & Soc. St. GPA	Cumulative GPA & ACT Scores Cumulative GPA & OPT Writing* Cumulative GPA & OPT Reading* Cumulative GPA & OPT Math Cumulative GPA & OPT Citizenship Cumulative GPA & OPT Science Cumulative GPA & Band Cumulative GPA & Ability Cumulative GPA & Math GPA Cumulative GPA & English GPA Cumulative GPA & Science GPA Cumulative GPA & Soc. St. GPA
ACT scores & Cumulative GPA ACT scores & Ability ACT scores & Math GPA ACT scores & English GPA ACT scores & Science GPA ACT scores & Soc. St. GPA	(None shown for OPT scores and Band because at least one of the variables was constant.) ACT scores & Ability* ACT scores & Science GPA*	ACT scores & Cumulative GPA ACT Scores & OPT Science ACT scores & Ability ACT scores & Math GPA ACT scores & English GPA ACT scores & Science GPA ACT scores & Soc. St. GPA
OPT Writing & OPT Reading OPT Writing & OPT Math OPT Writing & OPT Citizenship OPT Writing &Ability	OPT Writing & OPT Math* OPT Writing & OPT Science	OPT Writing & Cumulative GPA* OPT Writing & OPT Reading OPT Writing & OPT Math OPT Writing & OPT Citizenship OPT Writing & Ability OPT Writing & English GPA* OPT Writing & Soc. St. GPA
OPT Reading & OPT Writing OPT Reading & OPT Math OPT Reading & OPT Citizenship OPT Reading & Ability*	OPT Reading & Cumulative GPA* OPT Reading & OPT Math OPT Reading & OPT Science* OPT Reading & Ability OPT Reading & Science GPA* OPT Reading & Soc. St. GPA*	OPT Reading & Cumulative GPA* OPT Reading & OPT Writing OPT Reading & OPT Math OPT Reading & OPT Citizenship OPT Reading & Ability OPT Reading & English GPA* OPT Reading & Soc. St. GPA

No Block	2 Years in Block	3 Years in block
OPT Math & Cumulative GPA* OPT Math & OPT Writing OPT Math & OPT Reading OPT Math & OPT Citizenship OPT Math & Ability	OPT Math & Cumulative GPA OPT Math & OPT Writing* OPT Math & OPT Reading OPT Math & OPT Citizenship OPT Math & OPT Science OPT Math & Band (negative) OPT Math & Ability OPT Math & Math GPA OPT Math & English GPA OPT Math & Science GPA OPT Math & Soc. St. GPA	OPT Math & Cumulative GPA OPT Math & OPT Writing OPT Math & OPT Reading OPT Math & OPT Citizenship OPT Math & OPT Science OPT Math & Ability OPT Math & English GPA OPT Math & Science GPA*
OPT Citizenship & OPT Writing OPT Citizenship & OPT Reading OPT Citizenship & OPT Math OPT Citizenship & Ability	OPT Citizenship & Cumulative GPA OPT Citizenship & OPT Math OPT Citizenship & OPT Science OPT Citizenship & English GPA OPT Citizenship & Science GPA OPT Citizenship & Soc. St. GPA	OPT Citizenship & Cumulative GPA OPT Citizenship & OPT Writing OPT Citizenship & OPT Reading OPT Citizenship & OPT Math OPT Citizenship & OPT Science OPT Citizenship & Ability OPT Citizenship & English GPA OPT Citizenship & Science GPA*
OPT Science (none shown because at least one of the variables is constant)	OPT Science & Cumulative GPA OPT Science & OPT Writing OPT Science & OPT Reading* OPT Science & OPT Math OPT Science & OPT Citizenship OPT Science & Ability OPT Science & Math GPA OPT Science & English GPA OPT Science & Science GPA OPT Science & Soc. St. GPA	OPT Science & Cumulative GPA OPT Science & ACT Scores OPT Science & OPT Math OPT Science & OPT Citizenship OPT Science & Ability OPT Science & Math GPA OPT Science & English GPA OPT Science & Science GPA OPT Science & Soc. St. GPA
Band & Cumulative GPA* Band & Ability*	Band & OPT Math (negative) Band & Ability (negative)*	Band & Cumulative GPA Band & Math GPA Band & English GPA* Band & Soc. St. GPA*
Ability & Cumulative GPA Ability & ACT Scores Ability & OPT Writing Ability & OPT Reading* Ability & OPT Math Ability & OPT Citizenship Ability & Band* Ability & Math GPA Ability & English GPA Ability & Science GPA Ability & Soc. St. GPA	Ability & Cumulative GPA Ability & ACT Scores* Ability & OPT Reading Ability & OPT Math Ability & OPT Science Ability & Band (negative)* Ability & Math GPA Ability & English GPA Ability & Science GPA Ability & Soc. St. GPA	Ability & Cumulative GPA Ability & ACT Scores Ability & OPT Writing Ability & OPT Reading Ability & OPT Math Ability & OPT Citizenship Ability & OPT Science Ability & Math GPA Ability & English GPA Ability & Science GPA Ability & Soc. St. GPA

No Block	2 Years in Block	3 Years in block
Math GPA & Cumulative GPA Math GPA & ACT Scores Math GPA & Ability Math GPA & English GPA Math GPA & Science GPA Math GPA & Soc. T. GPA	Math GPA & Cumulative GPA Math GPA & OPT Math Math GPA & OPT Science Math GPA & Ability Math GPA & English GPA Math GPA & Science GPA Math GPA & Soc. T. GPA	Math GPA & Cumulative GPA Math GPA & ACT Scores Math GPA & OPT Science Math GPA & Band Math GPA & Ability Math GPA & English GPA Math GPA & Science GPA Math GPA & Soc. T. GPA
English GPA & Cumulative GPA English GPA & ACT Scores English GPA & Ability English GPA & Math GPA English GPA & Science GPA English GPA & Soc. St. GPA	English GPA & Cumulative GPA English GPA & OPT Math English GPA & OPT Citizenship English GPA & OPT Science English GPA & Ability English GPA & Math GPA English GPA & Science GPA English GPA & Soc. St. GPA	English GPA & Cumulative GPA English GPA & ACT Scores English GPA & OPT Writing* English GPA & OPT Reading* English GPA & OPT Math English GPA & OPT Citizenship English GPA & OPT Science English GPA & Band* English GPA & Ability English GPA & Math GPA English GPA & Science GPA English GPA & Soc. St. GPA
Science GPA & Cumulative GPA Science GPA & ACT Score Science GPA & Ability Science GPA & Math GPA Science GPA & English GPA Science GPA & Soc. St. GPA	Science GPA & Cumulative GPA Science GPA & ACT Score* Science GPA & OPT Reading* Science GPA & OPT Math Science GPA & OPT Citizenship Science GPA & OPT Science Science GPA & Ability Science GPA & Math GPA Science GPA & English GPA Science GPA & Soc. St. GPA	Science GPA & Cumulative GPA Science GPA & ACT Score Science GPA & OPT Math* Science GPA & OPT Citizenship* Science GPA & OPT Science Science GPA & Ability Science GPA & Math GPA Science GPA & English GPA Science GPA & Soc. St. GPA
Soc. St. GPA & Cumulative GPA Soc. St. GPA & ACT Score Soc. St. GPA & Ability Soc. St. GPA & Math GPA Soc. St. GPA & English GPA Soc. St. GPA & Science GPA	Soc. St. GPA & Cumulative GPA Soc. St. GPA & OPT Reading* Soc. St. GPA & OPT Math Soc. St. GPA & OPT Citizenship Soc. St. GPA & OPT Science Soc. St. GPA & Ability Soc. St. GPA & Math GPA Soc. St. GPA & English GPA Soc. St. GPA & Science GPA	Soc. St. GPA & Cumulative GPA Soc. St. GPA & ACT Scores Soc. St. GPA & OPT Writing Soc. St. GPA & OPT Reading Soc. St. GPA & OPT Science Soc. St. GPA & Band* Soc. St. GPA & Ability Soc. St. GPA & Math GPA Soc. St. GPA & English GPA Soc. St. GPA & Science GPA

No Block	2 Years in Block	3 Years in block
34 significantly correlated pairs 0 negative correlationships	46 significantly correlated pairs 2 of them negative correlationships	56 significantly correlated pairs 0 negative correlationships
Total potential pairs (OPT science was not required of this class and 4 ACT relationships were not identified due to a lack of variation in the OPT fields) = 62 pairs	Total potential pairs (the 5 OPT tests and the band relationships with the ACT Scores were not identified due to a lack of variation in either the OPT or ACT fields) = 72 pairs	Total potential = 78 pairs
54.8% of potential pairs are significantly correlated in a positive direction.	63.9% of potential of potential pairs are significantly correlated. 61.1% are significantly correlated in a positive direction.	71.8% of potential pairs are significantly correlated in a positive direction.
If the 4 pairs eliminated due to a lack of variation were considered as significantly correlated, then there would be 38 significantly correlated pairs out of a potential 66. Then 57.6% of the pairs would be significantly correlated.	If the 6 pairs eliminated due to a lack of variation were considered as significantly correlated, then there would be 52 significantly correlated pairs out of a potential 78. Then 66.7% of the pairs would be significantly correlated with 64.1% significantly correlated in a positive direction.	71.8% of potential pairs are significantly correlated.

Appendix F: Band Participants—Correlations Before and After Block Scheduling

		ACT	CUMGPA	ABSEN9	ABSEN10	ABSEN11	ABSEN12	GPAMATH	ENGGPA	GPAS	GPASS
ACT	Pearson Correlation	1.000	.746**	.032	-.025	-.033	-.052	.605**	.541**	.574**	.460**
	Sig. (2-tailed)		.000	.811	.845	.800	.691	.000	.000	.000	.000
	N	62	62	60	62	62	62	62	62	62	62
CUMGPA	Pearson Correlation	.746**	1.000	-.149	-.176	-.168	-.289**	.806**	.827**	.883**	.760**
	Sig. (2-tailed)	.000		.146	.082	.096	.007	.000	.000	.000	.000
	N	62	99	97	99	99	85	99	99	99	99
ABSEN9	Pearson Correlation	.032	-.149	1.000	.876**	.294**	.304**	-.101	-.119	-.159	-.140
	Sig. (2-tailed)	.811	.146		.000	.003	.005	.327	.246	.120	.173
	N	60	97	97	97	97	83	97	97	97	97
APSEN10	Pearson Correlation	-.025	-.176	.876**	1.000	.337**	.237**	-.109	-.125	-.139	-.125
	Sig. (2-tailed)	.845	.082	.000		.001	.029	.285	.218	.170	.219
	N	62	99	97	99	99	85	99	99	99	99
ABSEN11	Pearson Correlation	-.033	-.168	.294**	.337**	1.000	.664**	-.157	-.069	-.154	-.090
	Sig. (2-tailed)	.800	.096	.003	.001		.000	.120	.496	.129	.375
	N	62	99	97	99	99	85	85	99	99	99
ABSEN12	Pearson Correlation	-.052	-.289**	.304**	.237**	.664**	1.000	-.176	-.196	-.280**	-.209
	Sig. (2-tailed)	.691	.007	.005	.029	.000		.107	.072	.009	.055
	N	62	85	83	85	85	85	85	85	85	85
GPAMATH	Pearson Correlation	.605**	.806**	-.101	-.109	-.157	-.176	1.000	.753**	.770**	.668**
	Sq. (2-tailed)	.000	.000	.327	.285	.120	.107		.000	.000	.000
	N	62	99	97	99	99	85	99	99	99	99
ENGGPA	Pearson Correlation	.541**	.827**	-.119	-.125	-.069	-.196	.753**	1.000	.871**	.806**
	Sig. (2-tailed)	.000	.000	.246	.218	.496	.072	.000		.000	.000
	N	62	99	97	99	99	85	99	99	99	99
GPAS	Pearson Correlation	.574**	.883**	-.159	-.139	-.154	-.280**	.770**	.871**	1.000	.790**
	Sig. (2-tailed)	.000	.000	.120	.170	.129	.009	.000	.000		.000
	N	62	99	97	99	99	85	99	99	99	99
GPASS	Pearson Correlation	.460**	.760**	-.140	-.125	-.090	-.209	.668**	.806**	.790**	1.000
	Sig. (2-tailed)	.000	.000	.173	.219	.375	.055	.000	.000	.000	
	N	62	99	97	99	99	65	99	99	99	99
WRITING	Pearson Correlation	a	.108	-.009	.018	.006	.097	.121	.136	.143	.062
	Sig. (2-tailen)		.289	.928	.862	.950	.377	.232	.179	.157	.539
	N	62	99	97	99	99	85	99	99	99	99
READING	Pearson Correlation	a	.188	-.083	-.105	-.032	a	.076	.070	.171	.163
	Sig. (2-tailed)		.062	.419	.303	.753		.457	.493	.091	.107
	N	62	99	97	99	99	85	99	99	99	99
MATH	Pearson Correlation	a	.432**	.003	.031	.137	.075	.307**	.324**	.338**	.171
	Sig. (2-tailed)		.000	.975	.760	.176	.495	.002	.001	.001	.091
	N	62	76	74	76	76	62	76	76	76	99
CITIZEN	Pearson Correlation	a	.223*	.023	.076	.106	.122	.212*	.206*	.203*	.109
	Sig. (2-tailed)		.026	.825	.452	.295	.265	.035	.041	.044	.281
	N	62	99	97	99	99	85	99	99	99	99
SCIENCE	Pearson Correlation	.293	.438**	-.006	.022	-.160	-.182	.420**	.522**	.482**	.352**
	Sig. (2-tailed)	.051	.000	.962	.851	.169	.158	.000	.000	.000	.002
	N	45	76	74	76	76	62	76	76	76	76
BBLOCK	Pearson Correlation	-.135	-.024	-.046	-.018	.021	.012	.164	.229*	.097	.399**
	Sig. (2-tailed)	.296	.817	.654	.861	.835	.914	.105	.022	.340	.000
	N	62	99	97	99	99	85	99	99	99	99

Appendix F: Band Participants—Correlations Before and After Block Scheduling

		WRITING	READING	MATH	CITIZEN	SCIENCE	BBLOCK
ACT	Pearson Correlation	.a	.a	.a	.a	.293	-.135
	Sig. (2-tailed)					.051	.296
	N	62	62	62	62	45	62
CUMGPA	Pearson Correlation	.108	.188	.432**	.223*	.438**	-.024
	Sig. (2-tailed)	.289	.062	.000	.026	.000	.817
	N	99	99	99	99	76	99
ABSEN9	Pearson Correlation	-.009	-.083	.003	.023	-.006	-.046
	Sig. (2-tailed)	.928	.419	.975	.825	.962	.654
	N	97	97	97	97	74	97
ABSEN10	Pearson Correlation	.018	-1.000	.031	.076	.022	-.018
	Sig. (2-tailed)	.862	.303	.760	.452	.851	.861
	N	99	99	99	99	76	99
ABSEN11	Pearson Correlation	.006	-.032	.137	.106	-.160	.021
	Sig. (2-tailed)	.950	.753	.176	.295	.169	.835
	N	99	99	99	99	76	99
ABSEN12	Pearson Correlation	.097	.a	.075	.122	-.182	.012
	Sig. (2-tailed)	.377		.495	.265	.158	.914
	N	85	85	85	85	62	85
GPAMATH	Pearson Correlation	.121	.076	.307**	.212*	.420**	.164
	Sig. (2-tailed)	.232	.457	.002	.035	.000	.105
	N	99	99	99	99	76	99
ENGGPA	Pearson Correlation	.136	.070	.324**	.206*	.522**	.229*
	Sq. (2-tailed)	.179	.493	.001	.041	.000	.022
	N	99	99	99	99	76	99
GPAS	Pearson Correlation	.143	.171	.338**	.203*	.482**	.097
	Sig. (2-tailed)	.157	.091	.001	.044	.000	.340
	N	99	99	99	99	76	99
GPASS	Pearson Correlation	.062	.163	.171	.109	.352*	.399**
	Sig. (2-tailed)	.539	.107	.091	.281	.002	.000
	N	99	99	99	99	76	99
WRITING	Pearson Correlation	1.000	-.010	-.028	.571**	-.057	-.056
	Sig. (2-tailed)		.920	.784	.000	.623	.585
	N	99	99	99	99	76	99
READING	Pearson Correlation	-.010	1.000	.366**	-.018	-.057	-.056
	Sig. (2-tailed)	.920		.000	.861	.623	.585
	N	99	99	99	99	76	99
MATH	Pearson Correlation	-.028	.366**	1.000	.411**	.185	-.152
	Sig. (2-tailed)	.784	.000		.000	.110	.134
	N	99	99	99	99	76	99
CITIZEN	Pearson Correlation	.571**	-.018	.411**	1.000	.069	-.097
	Sig. (2-tailed)	.000	.861	.000		.552	.338
	N	99	99	99	99	76	99
SCIENCE	Pearson Correlation	-.057	-.057	.185	.069	1.000	.a
	Sig. (2-tailed)	.623	.623	.110	.552		
	N	76	76	76	76	76	76
BBLOCK	Pearson Correlation	-.056	-.056	-.152	-.097	.a	1.000
	Sig. (2-tailed)	.585	.585	.134	.338		
	N	99	99	99	99	76	99

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed)
a. Cannot be computed because at least one of the variables is constant

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