BLOCK SCHEDULING STUDY: YEAR THREE (BSS-3)

2007-2008

Clark County School District

Preliminary Executive Summary

Revised November 19, 2008

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The Clark County School District concluded year three of the Block Scheduling Study (BSS-3) which primarily examines the effect of block scheduling on student outcomes. This study also addresses other teacher and administrator outcomes related to block scheduling. Student academic achievement outcomes include increased credit-sufficiency, graduation rates, Nevada High School Proficiency Exam (NHSPE) pass rates, and Iowa Test of Educational Development (ITED) scores. Other important intervening variables such as teacher and administrator attitudes toward teaching in a block scheduling environment; and student attitudes towards learning, their teachers, and their school are examined. In addition, BSS-3 used survey data to explore student, teacher, and principal attitudes and beliefs about the block schedule and their relationship to instructional practices.[1]

The effects of block scheduling on student academic outcomes were measured by comparing block school student's scores from the IOWA Test of Education Development (ITED) and pass rates from the Nevada High School Proficiency Exam (NHSPE) to students in traditional (non-block) schools. The effects of block scheduling were then isolated and estimated by controlling for other variables known to affect student performance. Either an Ordinary Least Squares (OLS) regression model or a Logistic regression model was used, depending on the endogenous dependent variable of interest (i.e., ITED scores or NHSPE percent pass rate). Specifically, control variables included student ethnicity, gender, whether the student had an Individualized Education Plan (IEP), or were designated as Limited English Proficient (LEP). Additional control variables included whether students qualified for Free or Reduced Lunch (FRL) or for gifted and talented program services (GTAL).

[1] Data for graduation rate changes, drop-out rate changes, and student course selection patterns, particularly for credit deficient students, were not available for this summary. As these data become available, additional results will be reported.

In general, recent literature shows mixed effects of block scheduling on student, school staff, and school-wide outcomes. These mixed effects were also reflected in the previous CCSD BSS Year One and BSS Year Two study. Additionally, there were some noteworthy positive effects on student academic outcomes – specifically on the NHSPE. The current BSS Year Three study approximates the some of the same positive effects on the NHSPE as well. **The general conclusion is that the effect of block scheduling varies according to the test being examined (ITED or NHSPE) and what subject scores (reading, math or science) are being analyzed. These specific conclusions will be discussed through the report and summarized in the last section.** Student test score data was available for use and analysis in this report. A final report will be submitted as data for graduation, credit sufficiency, and drop out become available.

Model Specifications for BSS Year Three

Several models were used to estimate effects of block scheduling on student outcomes due the varying contexts in block schools. Most importantly, CCSD block schedule schools did not convert from a traditional to a block schedule in the same year. Some literature suggests that there is a "temporal lag", or that it takes time for any new school-wide reform to show effects on student outcomes (Borman, G.D., Hewes, G.M., Overman, L.T., & Brown, S., 2003; George, M. P., White, G.P., & Schlaffer, J. J., 2007; McDougall, D., Saunders, W. M., & Goldenberg, C., 2007; Schlechty, P.C., 2001; Shadish, 2006; Stevens and Zvoch, forthcoming). ***In fact, recent research on this "temporal lag" suggests that it can take from three to five years to see effects with regard to student outcomes.*** Therefore, the length of time a school has been in a block schedule could be significant with regard to effect on student outcomes. With this in mind, researchers of this study created three models based on disaggregating student data into "experienced" block schools, "inexperienced" block schools, and traditional schools. Comparisons of the three discrete groups were analyzed using three different models:

- **Model 1:** Student attending every block school were compared to students attending traditional schools.

- **Model 2:** Students in "experienced" block schools [either 3 or more years experience (first section) or 4 or more years experience (second section) in a block schedule] were compared to students in "inexperienced" block schools.

- **Model 3:** Students in experienced block schools compared to students in traditional schools.

Each of these models is analyzed in the sections below based on the number of years that defined "experienced" block schedule schools.

- In Section One Results, models A1, B1, and C1, define experienced block as schools that have been using a block schedule for **THREE or more years**.

- In Section Two Results, models D1, E1, and F1 define experienced block schools as schools that have been using a block schedule for **FOUR or more years**.

RESULTS

The summary of results is divided into two sections. The first section, *Three or More Years since Implementation* is an analysis of student outcomes with block schedule schools divided into *experienced block schools* and *inexperienced block schools*. Experienced block schools are defined as schools that have been implementing a block schedule for three or more years.

The second section, *Four or More Years since Implementation* also divides block schools into experienced and inexperienced categories, except that schools are considered experienced block schools if they were implementing a block schedule for four or more years. ***Because the recent research suggests that the temporal lag effects of school wide programs may occur anywhere from three to five years from implementation, this study took the opportunity to examine whether there were differences in the impact of block scheduling depending on the number of years since implementation.***

Section 1 Results: THREE or More Years since Implementation

The following section is an analysis of findings when experienced block schools are defined as having implemented a block schedule in the previous THREE OR MORE years.

All Block Schools Compared to Traditional Schools

The following compares the test scores of students who attended ALL block schools - both inexperienced and experienced – to students who attended traditional schools. The comparisons are based on analyses using OLS. The method determines whether attending a block schedule school has a significant effect on both ITED and NHSPE student test scores when compared to traditional student test scores.

Table A1 presents the OLS regression coefficients for the block schedule schools (versus traditional) variable for each ITED and NHSPE subject area. The coefficients for the control variables are not presented here and are included in the full Block Schedule Year Three report.

In tables A1 below and A2 below and on the following page:

- *Figures in* **bold** *indicate statistical significance.*
- *Figures in* **red** *indicate statistically significant differences that show students who attended block schedule schools are scoring lower than students in traditional schools.*

Table A1. All Block versus Traditional Students: Standard Score OLS Regression Model Coefficients for the Block Variable (three years or more experience)

Exam and Subject	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	BLOCK	Standard Error	Beta		
ITED Reading Standard Score	-.814	.488	-.011	-1.668	.095
ITED Mathematics Standard Score	**-2.010*** **	**.500**	**-.027**	**-4.020**	**.000**
ITED Science Standard Score	.859	.649	.010	1.324	.185
NHSPE Reading Standard Score	**3.456*** **	**.749**	**.028**	**4.615**	**.000**
NHSPE Math Standard Score	-.201	.738	-.002	-.272	.786

* = statistically significant at the .05 level (two-tailed test).
** = statistically significant at the .01 level (two-tailed test).
*** = statistically significant at the .001 level (two-tailed test).

Table A2. All Block versus Traditional Students: Pass Rate Logistic Regression Model Coefficients for the Block Variable (Three Years or More Experience)

NHSPE Reading (Pass-Fail)	B	Standard Error	Wald	Degree of Freedom	Significance
[CONSTANT]	-16.776	10673.046	.000	1	.999
BLOCK (1)	**.160*** **	**.042**	**14.539**	**1**	**.000**
NHSPE Mathematics (Pass-Fail)	**B**	**Standard Error**	**Wald**	**Degree of Freedom**	**Significance**
[CONSTANT]	1.076	1.172	.844	1	.358
BLOCK (1)	-.018	.033	.318	1	.573

The dependent variable is a dichotomous variable (NHSPE Reading or Math Pass-Fail) where Pass =1 and Fail = 0. All other variables were dichotomous variables.
Block is a dichotomous variable where Traditional Student = 0 and Block Student = 1.
* = Significant at .05 level (two-tailed test).
** = Significant at the .01 level (two-tailed test).
*** = Significant at the .001 level (two-tailed test).

Tables A1 and A2 show that:

- In comparing ALL block schools (inexperienced and experienced) to traditional student test scores, block scheduling had a ***statistically significant positive effect on NHSPE reading exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing ALL block schools (inexperienced and experienced) to traditional student test scores, block scheduling had a ***statistically significant positive effect on the likelihood of passing the NHSPE reading exam*** when controlling for other factors suspected to impact student performance.

- In comparing ALL block schools (inexperienced and experienced) to traditional student test scores, block scheduling had a ***statistically significant negative effect on ITED math exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing ALL block schools (inexperienced and experienced) to traditional student test scores, block scheduling had no statistical impact on students when comparing all block schools (experienced block and inexperienced block schools) to traditional schools on ITED reading exam scores, ITED science exam scores, NHSPE math scores, and NHSPE math percent passing.

THREE or More Years since Implementation
Experienced Block Schools Compared to Inexperienced Block Schools

The following compares the test scores of students who attended experienced block schedule schools to test scores of students who attended inexperienced block schedule schools. The comparisons are based on analyses using OLS. The method determines whether attending an experienced block schedule school has a significant effect on both ITED and NHSPE student test scores when compared to traditional schools.

Table B1 presents the OLS regression coefficients for the experienced block schools (versus inexperienced) variable for each. The coefficients for the control variables are not presented here and are included in the full Block Schedule Year Three report.

In table B1 and B2 below and on the following page:

- *Figures in* **bold** *indicate statistical significance.*
- *Figures in* **red** *indicate statistically significant differences that show students who attend experienced block schedule school are scoring lower than students in inexperienced block schedule schools.*

Table B1. Experienced versus Inexperienced Block Students: Standard Score OLS Regression Model Coefficients for the Experienced Block Variable (three years or more experience)

Exam and Subject	Unstandardized Coefficients		Standardized Coefficients	T	Significance
	Experienced Block	Standard Error	Beta		
ITED Reading Standard Score	.636	.775	.007	.821	.412
ITED Mathematics Standard Score	**2.823*** **	**.797**	**.030**	**3.542**	**.000**
ITED Science Standard Score	**6.638*** **	**.964**	**.062**	**6.884**	**.000**
NHSPE Reading Standard Score	**2.986** **	**1.138**	**.020**	**2.624**	**.009**
NHSPE Math Standard Score	-.374	1.133	-.002	-.330	.741

* = statistically significant at the .05 level (two-tailed test).
** = statistically significant at the .01 level (two-tailed test).
*** = statistically significant at the .001 level (two-tailed test).

Table B2. Experienced versus Inexperienced Block Students: Pass Rate Logistic Regression Model Coefficients for the Block Variable (Three Years or More Experience)

NHSPE Reading (Pass-Fail)	B	Standard Error	Wald	Degree of Freedom	Significance
[CONSTANT]	-17.331	12615.167	.000	1	.999
BLOCK (1)	.016	.066	.059	1	.808
NHSPE Mathematics (Pass-Fail)	**B**	**Standard Error**	**Wald**	**Degree of Freedom**	**Significance**
[CONSTANT]	-17.250	12598.335	.000	1	.999
BLOCK (1)	-.018	.049	.132	1	.717

The dependent variable is a dichotomous variable (NHSPE Reading or Math Pass-Fail) where Pass =1 and Fail = 0.
All other variables were dichotomous variables.
Block is a dichotomous variable where Traditional Student = 0 and Block Student = 1.
* = Significant at .05 level (two-tailed test).
** = Significant at the .01 level (two-tailed test).
*** = Significant at the .001 level (two-tailed test).

Tables B1 and B2 show that:

- In comparing experienced block to inexperienced block student test scores, block scheduling had a ***statistically significant positive effect on ITED reading exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing experienced block to inexperienced block student test scores, block scheduling had a ***statistically significant positive effect on ITED mathematics exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing experienced block to inexperienced block student test scores, block scheduling had a ***statistically significant positive effect on ITED science exam scores*** when controlling for other factors suspected to impact student performance.

- There were no statistically significant differences between experienced block and inexperienced block students on the ITED reading, NHSPE math score portions, and both math and reading NHSPE percent passing.

THREE or More Years since Implementation
Experienced Block Schools compared to Traditional Schools

For many administrators, the real heart of the block scheduling issue comes down to whether block students, once the school has completed the (two-year) transition to block, perform better on tests than traditional schedule students.

The following compares the test scores of students who attended experienced block schedule schools to test scores of students who attended traditional schedule schools. The comparisons are based on analyses using OLS. The method determines whether attending an experienced block schedule school has a significant effect on both ITED and NHSPE student test scores when compared to traditional schools.

Table C1 presents the OLS regression coefficients for the experienced block schools (versus traditional) variable for each exam. The coefficients for the control variables are not presented here and are included in the full Block Schedule Year Three report.

In table C1 and C2 below and on the following page:

- *Figures in* **bold** *indicate statistical significance.*
- *Figures in* **red** *indicate statistically significant differences that show students who attend experienced block schedule schools are scoring lower than students in traditional schools.*

Table C1. Experienced Block versus Traditional Students: Standard Score OLS Regression Model Coefficients for the Experienced Block Variable (Three Years or More Experience)

Exam and Subject	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	Experienced Block	Standard Error	Beta		
ITED Reading Standard Score	-.666	.508	-.009	-1.311	.190
ITED Mathematics Standard Score	**-1.470****	**.518**	**-.020**	**-2.839**	**.005**
ITED Science Standard Score	**2.227*****	**.677**	**.026**	**3.288**	**.001**
NHSPE Reading Standard Score	**2.844*****	**.804**	**.023**	**3.537**	**.000**
NHSPE Math Standard Score	**-1.609***	**.796**	**-.013**	**-2.021**	**.043**

* = statistically significant at the .05 level (two-tailed test).
** = statistically significant at the .01 level (two-tailed test).
*** = statistically significant at the .001 level (two-tailed test).

Table C2. Experienced Block versus Traditional Students: Pass Rate Logistic Regression Model Coefficients for the Block Variable (Three Years or More Experience)

NHSPE Reading (Pass-Fail)	B	Standard Error	Wald	Degree of Freedom	Significance
[CONSTANT]	-16.815	11521.378	.000	1	.999
BLOCK (1)	**.106***	**.046**	**5.383**	**1**	**.020**
NHSPE Mathematics (Pass-Fail)	**B**	**Standard Error**	**Wald**	**Degree of Freedom**	**Significance**
[CONSTANT]	-17.816	11495.084	.000	1	.999
BLOCK (1)	**-.072**	**.035**	**4.240**	**1**	**.039**

The dependent variable is a dichotomous variable (NHSPE Reading or Math Pass-Fail) where Pass =1 and Fail = 0.
All other variables were dichotomous variables.
Block is a dichotomous variable where Traditional Student = 0 and Block Student = 1.
* = Significant at .05 level (two-tailed test).
** = Significant at the .01 level (two-tailed test).
*** = Significant at the .001 level (two-tailed test).

Tables C1 and C2 show that:

- In comparing experienced block to traditional student test scores, block scheduling had a ***statistically significant positive effect on ITED <u>science</u> exam scores*** when controlling for other factors suspected to impact student performance.
- In comparing experienced block to traditional student test scores, scheduling had a ***statistically positive effect on NHSPE <u>reading</u> exam scores*** when controlling for other factors suspected to impact student performance.
- In comparing experienced block to traditional student test scores, scheduling had a ***statistically negative effect on ITED <u>mathematics</u> exam scores*** when controlling for other factors suspected to impact student performance.
- In comparing experienced block to traditional student test scores, scheduling had a ***statistically negative effect on NHSPE <u>mathematics</u> exam scores*** when controlling for other factors suspected to impact student performance.
- There were no statistically significant differences between experienced block and traditional block students on ITED reading scores.
- In comparing experienced block to traditional student test scores, scheduling had a ***statistically significant positive effect on the likelihood of passing NHSPE <u>reading</u>*** when controlling for other factors suspected to impact student performance.
- In comparing experienced block to traditional student test scores, block scheduling had a ***statistically significant negative effect on the likelihood of passing NHSPE <u>mathematics</u>*** when controlling for other factors suspected to impact student performance.

Section 2 Results: FOUR or More Years since Implementation

The following section is an analysis of findings when experienced block schools are defined as having implemented a block schedule in the previous FOUR OR MORE years.

All Block Schools Compared to Traditional Schools

The following compares the test scores of students who attended ALL block schools - both inexperienced and experienced – to test scores of students who attended traditional schools. The comparisons are based on analyses using Ordinary Least Squares (OLS) and logistic regression. This method allows us to test whether attending a block schedule school has a significant effect on both ITED and NHSPE student test scores when compared to traditional students test scores.

Tabled D1 and D2 present the OLS regression and logistic regression coefficients for the block (versus traditional) variable for each exam. The coefficients for the control variables are not presented here and are included in the full Block Schedule Year Three report.

In table D1 and D2 below and on the following page:

- *Figures in* **bold** *indicate statistical significance.*
- *Figures in* **red** *indicate statistically significant differences that show students who attended block schedule schools are scoring lower than students in traditional schools.*

Table D1. All Block versus Traditional Students: Standard Score OLS Regression Model Coefficients for the Block Variable (Four Years or More Experience)

Exam and Subject	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	BLOCK	Standard Error	Beta		
ITED Reading Standard Score	-.814	.488	-.011	-1.668	.095
ITED Mathematics Standard Score	**-2.010*** **	**.500**	**-.027**	**-4.020**	**.000**
ITED Science Standard Score	.859	.649	.010	1.324	.185
NHSPE Reading Standard Score	**3.456*** **	**.749**	**.028**	**4.615**	**.000**
NHSPE Math Standard Score	-.201	.738	-.002	-.272	.786

* = statistically significant at the .05 level (two-tailed test).
** = statistically significant at the .01 level (two-tailed test).
*** = statistically significant at the .001 level (two-tailed test).

Table D2. All Block versus Traditional Students: Pass Rate Logistic Regression Model Coefficients for the Block Variable (Four Years or More Experience)

NHSPE Reading (Pass-Fail)	B	Standard Error	Wald	Degree of Freedom	Significance
[CONSTANT]	-16.776	10673.046	.000	1	.999
BLOCK (1)	**.160*** **	**.042**	**14.539**	**1**	**.000**
NHSPE Mathematics (Pass-Fail)	**B**	**Standard Error**	**Wald**	**Degree of Freedom**	**Significance**
[CONSTANT]	1.076	1.172	.844	1	.358
BLOCK (1)	-.018	.033	.318	1	.573

The dependent variable is a dichotomous variable (NHSPE Reading or Math Pass-Fail) where Pass =1 and Fail = 0. All other variables were dichotomous variables.
Block is a dichotomous variable where Traditional Student = 0 and Block Student = 1.
* = Significant at .05 level (two-tailed test).
** = Significant at the .01 level (two-tailed test).
*** = Significant at the .001 level (two-tailed test).

Tables D1 and D2 show that:

- In comparing ALL block schools (inexperienced and experienced) to traditional student test scores, block scheduling had a ***statistically positive effect on NHSPE reading exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing All block schools (inexperienced and experienced) to traditional student test scores, block scheduling had a ***statistically significant positive effect on the likelihood of passing NHSPE reading*** when controlling for other factors suspected to impact student performance.

- In comparing All block schools (inexperienced and experienced) to traditional student test scores, block scheduling had a ***statistically significant negative effect on ITED math exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing All block schools (inexperienced and experienced) to traditional student test scores, there were no statistically significant differences between ALL block and traditional school students on ITED reading scores, ITED Science scores, NHSPE math score, and NHSPE math percent pass rate.

FOUR or More Years since Implementation

Experienced Block Schools Compared to Inexperienced Block Schools

The following compares the test scores of students who attended experienced block schedule schools to test scores of students who attended inexperienced block schedule schools. The comparisons are based on analyses using OLS. The method determines whether attending an experienced block schedule school has a significant effect on both ITED and NHSPE student test scores when compared to traditional schools.

Tables E1 and E2 present the OLS regression and logistic regression coefficients for the experienced block schools (versus inexperienced) variable for each exam with the control variables included in the model. The coefficients for the control variables are not presented here and are included in the full Block Schedule Year Three report.

In table E1 and E2 below and on the following page:

- *Figures in* **bold** *indicate statistical significance.*
- *Figures in* **red** *indicate statistically significant differences that show students who attend experienced block schedule school are scoring lower than students in inexperienced block schedule schools.*

Table E1. Experienced versus Inexperienced Block Students: Standard Score OLS Regression Model Coefficients for the Experienced Block Variable (Four Years or More Experience)

Exam and Subject	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	BLOCK	Standard Error	Beta		
ITED Reading Standard Score	**2.809*** **	**.597**	**.038**	**4.708**	**.000**
ITED Mathematics Standard Score	**3.471*** **	**.612**	**.048**	**5.672**	**.000**
ITED Science Standard Score	**2.847*** **	**.805**	**.032**	**3.537**	**.000**
NHSPE Reading Standard Score	**3.206*** **	**.887**	**.027**	**3.612**	**.000**
NHSPE Math Standard Score	**2.250***	**.881**	**.019**	**2.553**	**.011**

* = statistically significant at the .05 level (two-tailed test).
** = statistically significant at the .01 level (two-tailed test).
*** = statistically significant at the .001 level (two-tailed test).

Table E2. Experienced versus Inexperienced Block Students: Pass Rate Logistic Regression Model Coefficients for the Block Variable (Four Years or More Experience)

NHSPE Reading (Pass-Fail)	B	Standard Error	Wald	Degree of Freedom	Significance
[CONSTANT]	-17.361	12619.46	2.894	1	.999
EXPERIENCED BLOCK (1)	.085	.050	2.894	1	.089
NHSPE Mathematics (Pass-Fail)	**B**	**Standard Error**	**Wald**	**Degree of Freedom**	**Significance**
[CONSTANT]	-17.284	12610.995	.000	1	.999
EXPERIENCED BLOCK (1)	**.121**	**.039**	**9.801**	**1**	**.002**

The dependent variable is a dichotomous variable (NHSPE Reading or Math Pass-Fail) where Pass =1 and Fail = 0.
All other variables were dichotomous variables.
Block is a dichotomous variable where Traditional Student = 0 and Block Student = 1.
* = Significant at .05 level (two-tailed test).
** = Significant at the .01 level (two-tailed test).
*** = Significant at the .001 level (two-tailed test).

Tables E1 and E2 show that:

- In comparing experienced block schools and inexperienced block schools student test scores, block scheduling had a ***statistically positive effect on NHSPE reading exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing experienced block schools and inexperienced block schools student test scores, block scheduling had a ***statistically positive effect on NHSPE math exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing experienced block schools and inexperienced block schools student test scores, block scheduling had a ***statistically positive effect on ITED reading exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing experienced block schools and inexperienced block schools student test scores, block scheduling had a ***statistically positive effect on ITED math exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing experienced block schools and inexperienced block schools student test scores, block scheduling had a ***statistically positive effect on ITED science exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing experienced block schools and inexperienced block schools student test scores, there were no statistically significant differences between experienced block and inexperienced block students on NHSPE reading portion but a statistically positive effect on the NHSPE math pass rate.

FOUR or More Years since Implementation

Experienced Block Schools compared to Traditional Schools

For many administrators, the real heart of the block scheduling issue comes down to whether block students, once the school has completed the (four-year) transition to block, perform better on tests than traditional schedule students.

The following compares the test scores of students who attended experienced block schedule schools to test scores of students who attended traditional schedule schools. The comparisons are based on analyses using OLS and logistic regression. These methods determine whether attending an experienced block schedule school has a significant effect on both ITED and NHSPE student test scores when compared to traditional schools.

Tables F1 and F2 presents the OLS and logistic regression coefficients for the experienced block schools (versus traditional) variable for each exam with the control variables included in the model. The coefficients for the control variables are not presented here and are included in the full Block Schedule Year Three report.

In table F1 and F2 below and on the following page:

- *Figures in* **bold** *indicate statistical significance.*
- *Figures in* **red** *indicate statistically significant differences that show students who attend experienced block schedule schools are scoring lower than students in traditional schools.*

Table F1. Experienced Block versus Traditional Students: Standard Score OLS Regression Model Coefficients for the Experienced Block Variable (Four Years or More Experience)

Exam and Subject	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	Experienced Block	Standard Error	Beta		
ITED Reading Standard Score	.473	.552	.006	.856	.392
ITED Mathematics Standard Score	-.468	.563	-.007	-.832	.406
ITED Science Standard Score	**1.961****	**.718**	**.023**	**2.732**	**.006**
NHSPE Reading Standard Score	**3.663*****	**.850**	**.031**	**4.308**	**.000**
NHSPE Math Standard Score	-.604	.838	-.005	-.720	.471

* = statistically significant at the .05 level (two-tailed test).
** = statistically significant at the .01 level (two-tailed test).
*** = statistically significant at the .001 level (two-tailed test).

Table F2. Experienced Block versus Traditional Students: Pass Rate Logistic Regression Model Coefficients for the Block Variable (Four Years or More Experience)

NHSPE Reading (Pass-Fail)	B	Standard Error	Wald	Degree of Freedom	Significance
[CONSTANT]	[CONSTANT]	-16.488	12604.665	.000	1
EXPERIENCED BLOCK (1)	**.145****	**.050**	**8.581**	**1**	**.003**
NHSPE Mathematics (Pass-Fail)	**B**	**Standard Error**	**Wald**	**Degree of Freedom**	**Significance**
[CONSTANT]	-17.950	12592.301	.000	1	.999
EXPERIENCED BLOCK (1)	-.019	.037	.247	1	.619

The dependent variable is a dichotomous variable (NHSPE Reading or Math Pass-Fail) where Pass =1 and Fail = 0. All other variables were dichotomous variables.
Block is a dichotomous variable where Traditional Student = 0 and Block Student = 1.
* = Significant at .05 level (two-tailed test).
** = Significant at the .01 level (two-tailed test).
*** = Significant at the .001 level (two-tailed test).

Tables F1 and F2 show that:

- In comparing experienced block to traditional student test scores, block scheduling had a ***statistically positive effect on NHSPE reading exam scores*** when controlling for other factors suspected to impact student performance.

- In comparing experienced block to traditional student test scores, scheduling had a ***statistically significant positive effect on the likelihood of passing NHSPE reading*** when controlling for other factors suspected to impact student performance.

- In comparing experienced block to traditional student test scores, block scheduling had a ***statistically positive effect on ITED science exam scores*** when controlling for other factors suspected to impact student performance.

- There were no statistically significant differences between experienced block and traditional block students on ITED reading scores, ITED math scores, NHSPE math scores or NHSPE math pass rate.

Conclusions

The CCSD *Block Schedule Study – Year Three* (2007-2008) reflects much of the current research on the effect of block scheduling on student achievement outcomes. This research suggests that for reading and in many cases science norm referenced tests, students in block schedule schools perform better than students in traditional schools. This holds true regardless of how many years, either three or four, that a school has been in a block schedule. In addition, **the percent of student passing the NHSPE in reading is significantly greater in block schedule schools. Mathematics performance is either approximately the same, or somewhat worse when student attend block schedule schools.**

When experienced block schools were defined as being only three or more years in a block schedule, rather than four or more years, the positive effects of block scheduling were not clear. **Positive effects of block schedule on student outcomes were stronger when schools were considered experienced when they had FOUR or more years in the block schedule.** As in the previous CCSD Block Schedule Study, this finding is reflected in the recent block scheduling research.

In the tables below, the areas in green are those in which students who attended experienced block schedule schools had larger positive academic outcomes than students who attended traditional schools. The areas in red are those in which students in traditional schools had larger positive outcomes than experienced block schools. The areas in blue were not significant.

Test Type	Reading		Mathematics		Science	
	3+ Years Experience	4+ Years Experience	3+ Years Experience	4+ Years Experience	3+ Years Experience	4+ Years Experience
ITED	X	ns*	O	ns*	X	X
NHSPE Score	ns*	X	O	ns*	Not given	
NHSPE Pass/Fail	X	X	O	ns*	Not given	

*ns = not significant

The general conclusion still holds for the current BSS Year Three: that the effect of block scheduling varies according to the test being examined (ITED or NHSPE) and what subject (reading, math or science) is being analyzed.