

Florida SpringBoard[®] Schools Efficacy Study

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COLLEGE BOARD RESEARCH

Statistical Report 2015-1

Introduction

In this study, we compare Spring Board[®] (SB) schools that had continuously used the SB English Language Arts (ELA) curriculum for at least three years with comparable non-SB schools. For high schools, the outcomes examined were school-level AP[®] participation and performance for a) all AP subjects, b) ELA and social science AP subjects, and c) ELA only subjects. AP performance was defined as the percentage of students among graduating seniors scoring 3 or higher in at least one AP Exam. We report comparison results for all students in schools, and for three subgroups — black, Hispanic, and first-generation college-going students. For middle schools, the outcome examined was school-level FCAT reading scores among eighth-graders.

High Schools

Data and Methods

Based on SB purchasing records through 2012, there were a total of 138 SB schools in Florida, 42 of which had used the SB ELA curriculum for at least three years counting back from 2012. Two-hundred four non-SB schools were identified to serve as comparison schools based on high school characteristics including urbanicity, Title 1 and magnet school status, enrollment size, percentage of students receiving free or reduced-priced lunch, race/ethnicity composition, and ninth-grade FCAT reading and math scores in the 2007-08 academic year. These 204 non-SB schools had statistically similar characteristics as the 42 SB schools (see Table 1). Difference in difference calculations were made for each comparison of SB and non-SB schools.

Results

All AP. Figure 1 reports differences in participation and performance in all AP subjects for high school senior cohorts from 2008 to 2012 between 42 SB schools and 204 comparable non-SB schools. From 2008 to 2012, AP participation and performance among 12th-graders improved both for SB schools and comparable non-SB schools. AP participation and performance were statistically significantly higher for first-generation students in SB schools than in non-SB schools. Note that students self-reported their own race/ethnicity as well as first-generation status when they registered for the AP Exams. Also, students may be both first-generation as well as fall into one of the racial/ethnic subgroups.

ELA and Social Science AP. Figure 2 reports differences in AP participation and performance in 11 ELA and social science subjects. As was seen in the results for all AP subjects, AP participation and performance on ELA and social science among 12th-graders improved both for SB schools and comparable non-SB schools from 2008 to 2012, statistically so for first-generation students in SB schools.

ELA Only AP. Figure 3 reports differences in AP participation and performance in ELA subjects only. Results indicate statistically significant increases for SB schools, compared to non-SB schools for all students as well as Hispanic and first-generation students. First-generation students also showed significantly more growth in AP ELA performance in SB schools than non-SB schools.

Table 1. High School Characteristics (2007-08 Academic Year)

	Non-SB	SB	<i>Difference</i>
<i>N</i>	204	42	<i>p</i> value
Urbanicity			
Urban	20	29	0.19
Suburb	48	50	0.82
Town	10	5	0.17
Rural	22	17	0.43
Title I School			
Yes	55	55	0.94
Magnet School			
Yes	27	26	0.87
Enrollment			
Size	1,892	1,986	0.48
Poverty Status			
% Free/Reduced-Price Lunch	40	37	0.36
Race/Ethnicity Composition			
% White	47	43	0.35
% Black	25	25	0.9
% Hispanic	23	26	0.49
% Asian	2	3	0.06
Prior Achievement			
FCAT Reading (9th-graders)	1,912	1,905	0.67

Figure 1. AP Participation and Performance

Note: * $p < 0.05$

In calculating AP participation and performance for 2011-12 cohort, 12th-grader counts in 2010-11 were used.

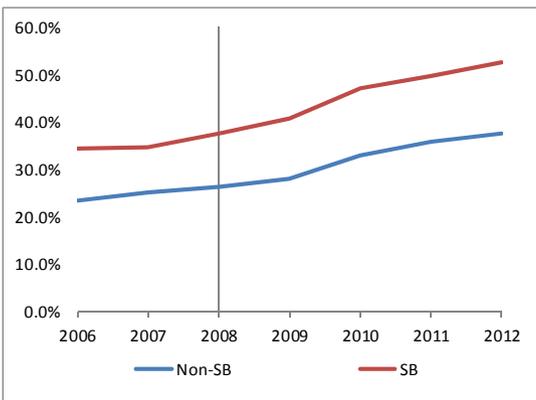
In calculating AP participation among first-generation college-going students, total 12th-grader counts were used.

In calculating AP participation among black and Hispanic college-going students, total 12th-grader black and Hispanic counts were used.

ALL

AP Participation

	Non-SB	SB
2006	23.5%	34.5%
2007	25.2%	34.6%
2008	26.3%	37.5%
2009	28.2%	40.7%
2010	33.0%	47.1%
2011	35.9%	49.8%
2012	37.6%	52.5%
<i>N</i>	204	42



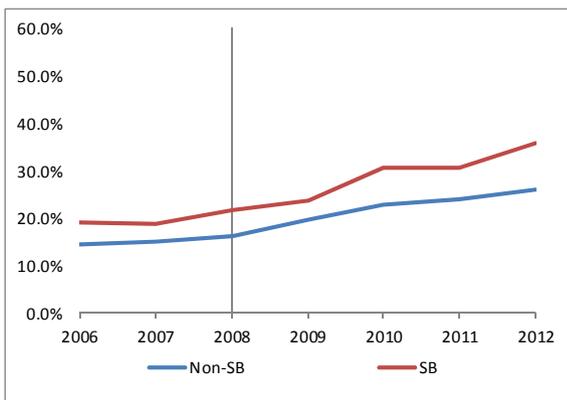
Difference in part. growth 2008 to 2012, SB vs. Non-SB = 3.8%

BLACK

(for schools with at least one black student 2006–2012)

AP Participation

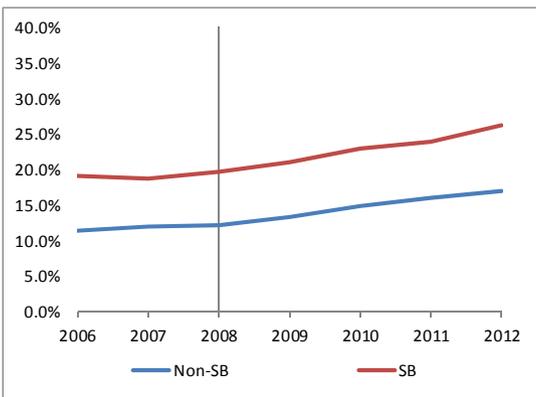
	Non-SB	SB
2006	14.5%	18.9%
2007	15.0%	18.9%
2008	16.2%	21.6%
2009	19.6%	23.8%
2010	22.9%	30.7%
2011	24.1%	30.7%
2012	26.1%	35.8%
<i>N</i>	153	40



Difference in part. growth 2008 to 2012, SB vs. Non-SB = 4.3%

AP Performance (% 12th-graders with at least one 3 or higher)

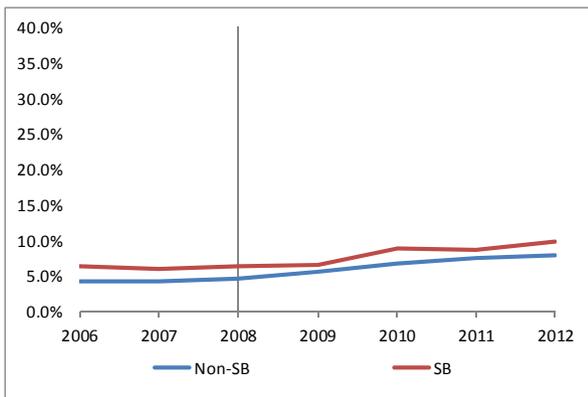
	Non-SB	SB
2006	11.4%	19.0%
2007	11.9%	18.8%
2008	12.2%	19.7%
2009	13.3%	21.0%
2010	14.9%	22.8%
2011	16.0%	24.0%
2012	16.9%	26.2%
<i>N</i>	204	42



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 1.7%

AP Performance (% 12th-graders with at least one 3 or higher)

	Non-SB	SB
2006	4.1%	6.3%
2007	4.3%	5.9%
2008	4.7%	6.4%
2009	5.5%	6.6%
2010	6.7%	8.9%
2011	7.5%	8.7%
2012	7.9%	9.8%
<i>N</i>	153	40



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 0.2%

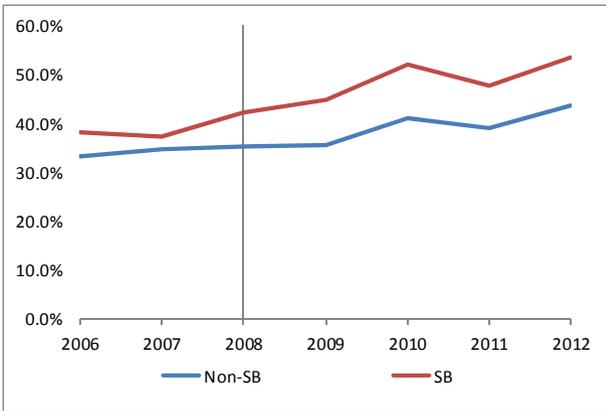
Figure 1. AP Participation and Performance (continued)

HISPANIC

(for schools with at least one Hispanic student 2006–2012)

AP Participation

	Non-SB	SB
2006	33.2%	38.1%
2007	34.7%	37.2%
2008	35.1%	42.1%
2009	35.5%	44.8%
2010	41.0%	51.9%
2011	39.1%	47.7%
2012	43.7%	53.6%
N	169	41

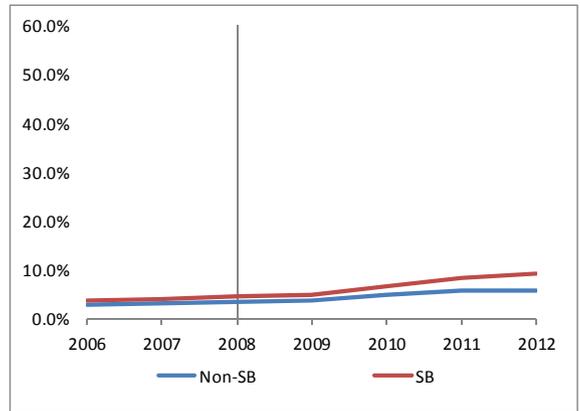


Difference in part. growth 2008 to 2012, SB vs. Non-SB = 2.9%

FIRST-GENERATION COLLEGE-GOING STUDENT

AP Participation

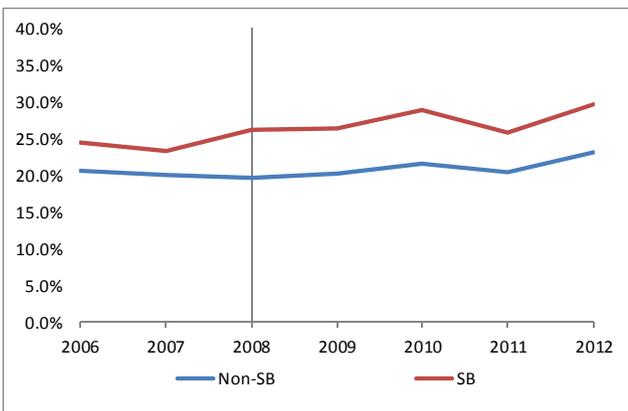
	Non-SB	SB
2006	2.9%	3.8%
2007	3.2%	4.0%
2008	3.3%	4.7%
2009	3.8%	4.8%
2010	4.8%	6.6%
2011	5.7%	8.5%
2012	5.7%	9.2%
N	204	42



Difference in part. growth 2008 to 2012, SB vs. Non-SB = 2.1%*

AP Performance (% 12th-graders with at least one 3 or higher)

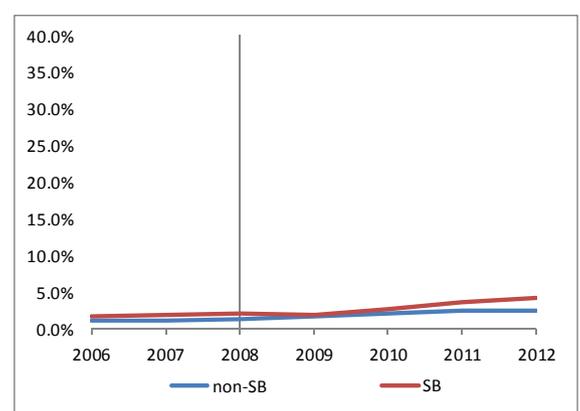
	Non-SB	SB
2006	20.5%	24.5%
2007	20.0%	23.3%
2008	19.6%	26.2%
2009	20.2%	26.3%
2010	21.7%	28.8%
2011	20.4%	25.8%
2012	23.2%	29.6%
N	169	41



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = -0.2%

AP Performance (% 12th-graders with at least one 3 or higher)

	non-SB	SB
2006	1.1%	1.7%
2007	1.2%	1.9%
2008	1.3%	2.1%
2009	1.6%	2.0%
2010	2.0%	2.7%
2011	2.5%	3.7%
2012	2.5%	4.2%
N	204	42



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 0.9%*

Figure 2. AP ELA and Social Science Participation and Performance Note: * $p < 0.05$

In calculating AP participation and performance for 2011-12 cohort, 12th-grader counts in 2010-11 were used.

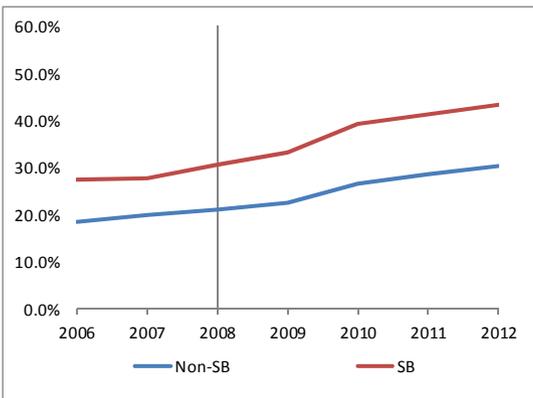
In calculating AP participation among first-generation college-going students, total 12th-grader counts were used.

In calculating AP participation among black and Hispanic college-going students, total 12th-grader black and Hispanic counts were used.

ALL

AP Participation

	Non-SB	SB
2006	18.4%	27.4%
2007	19.9%	27.8%
2008	21.2%	30.5%
2009	22.7%	33.2%
2010	26.7%	39.2%
2011	28.6%	41.3%
2012	30.2%	43.4%
<i>N</i>	204	42



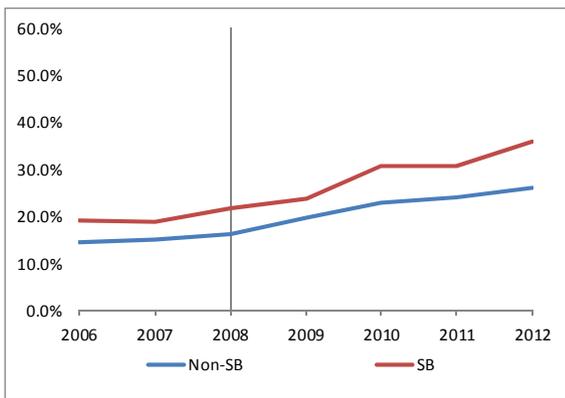
Difference in part. growth 2008 to 2012, SB vs. Non-SB = 3.8%

BLACK

(for schools with at least one black student 2006-2012)

AP Participation

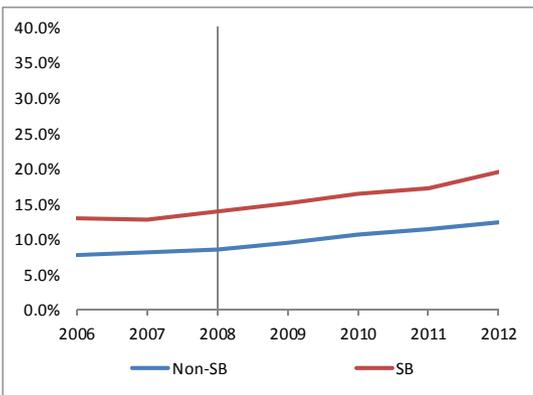
	Non-SB	SB
2006	14.5%	18.9%
2007	15.0%	18.9%
2008	16.2%	21.6%
2009	19.6%	23.8%
2010	22.9%	30.7%
2011	24.1%	30.7%
2012	26.1%	35.8%
<i>N</i>	153	40



Difference in part. growth 2008 to 2012, SB vs. Non-SB = 4.3%

AP Performance (% 12th-graders with at least one 3 or higher)

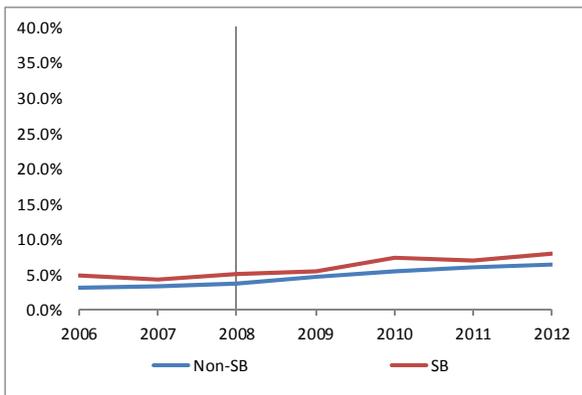
	Non-SB	SB
2006	7.6%	13.0%
2007	8.1%	12.8%
2008	8.5%	13.8%
2009	9.5%	15.0%
2010	10.6%	16.5%
2011	11.4%	17.2%
2012	12.3%	19.4%
<i>N</i>	204	42



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 1.7%

AP Performance (% 12th-graders with at least one 3 or higher)

	Non-SB	SB
2006	3.1%	4.8%
2007	3.3%	4.2%
2008	3.7%	5.0%
2009	4.5%	5.3%
2010	5.3%	7.3%
2011	6.0%	6.9%
2012	6.3%	7.8%
<i>N</i>	153	40



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 0.2%

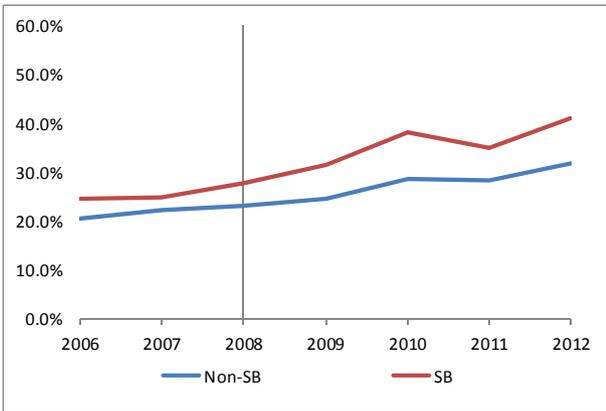
Figure 2. AP Participation and Performance (continued)

HISPANIC

(for schools with at least one Hispanic student 2006–2012)

AP Participation

	Non-SB	SB
2006	20.6%	24.5%
2007	22.4%	24.9%
2008	23.2%	27.7%
2009	24.6%	31.5%
2010	28.5%	38.1%
2011	28.2%	35.0%
2012	31.8%	41.0%
N	169	41

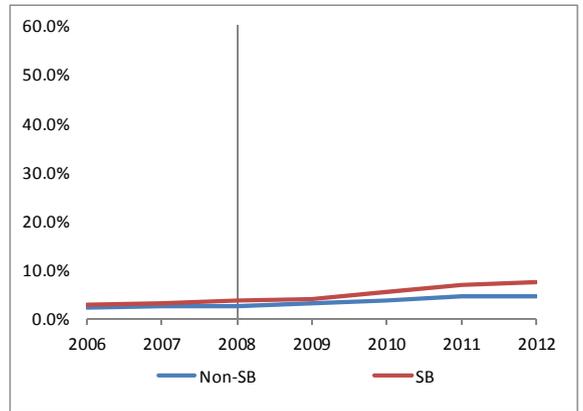


Difference in part. growth 2008 to 2012, SB vs. Non-SB = 4.7%

FIRST-GENERATION COLLEGE-GOING STUDENT

AP Participation

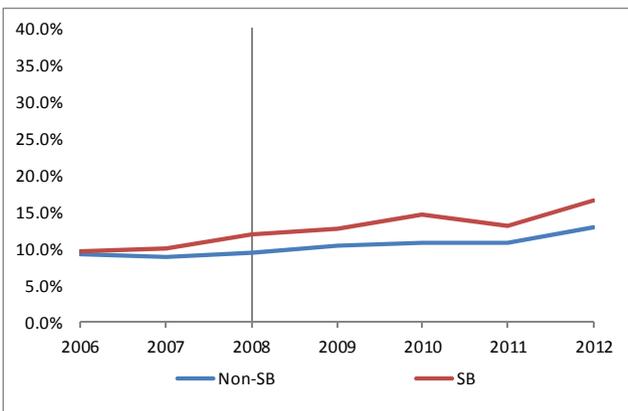
	Non-SB	SB
2006	2.2%	2.9%
2007	2.5%	3.2%
2008	2.7%	3.9%
2009	3.1%	4.0%
2010	3.9%	5.6%
2011	4.7%	7.0%
2012	4.7%	7.6%
N	204	42



Difference in part. growth 2008 to 2012, SB vs. Non-SB = 1.6%*

AP Performance (% 12th-graders with at least one 3 or higher)

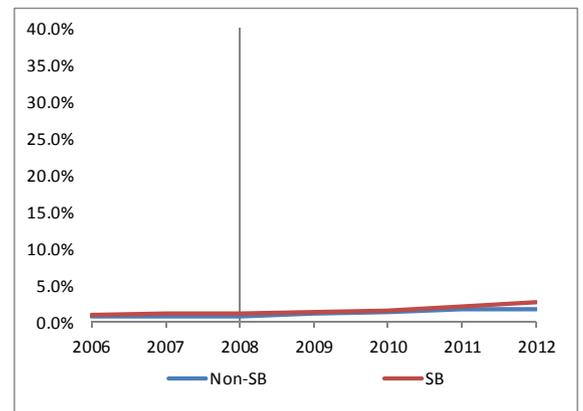
	Non-SB	SB
2006	9.1%	9.7%
2007	8.8%	10.1%
2008	9.4%	12.0%
2009	10.5%	12.7%
2010	10.8%	14.7%
2011	10.9%	13.1%
2012	12.9%	16.6%
N	169	41



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 1.1%

AP Performance (% 12th-graders with at least one 3 or higher)

	Non-SB	SB
2006	0.7%	1.0%
2007	0.8%	1.1%
2008	0.9%	1.2%
2009	1.1%	1.3%
2010	1.3%	1.6%
2011	1.6%	2.2%
2012	1.6%	2.6%
N	204	42



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 0.6%*

Figure 3. AP ELA Participation and Performance

Note: * $p < 0.05$

In calculating AP participation and performance for 2011-12 cohort, 12th-grader counts in 2010-11 were used.

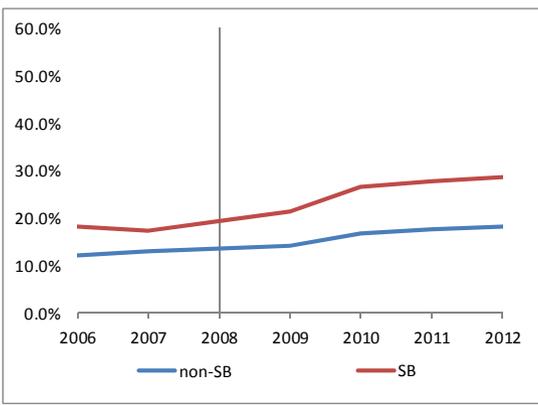
In calculating AP participation among first-generation college-going students, total 12th-grader counts were used.

In calculating AP participation among black and Hispanic college-going students, total 12th-grader black and Hispanic counts were used.

ALL

AP Participation

	non-SB	SB
2006	12.2%	18.2%
2007	12.9%	17.4%
2008	13.5%	19.3%
2009	14.2%	21.4%
2010	16.7%	26.5%
2011	17.6%	27.7%
2012	18.2%	28.6%
N	204	42



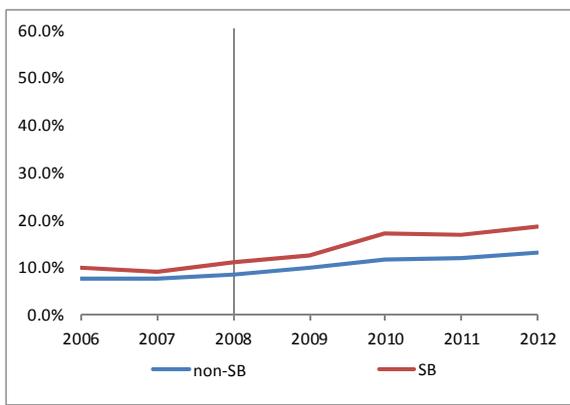
Difference in part. growth 2008 to 2012, SB vs. Non-SB = 4.5%*

BLACK

(for schools with at least one black student 2006–2012)

AP Participation

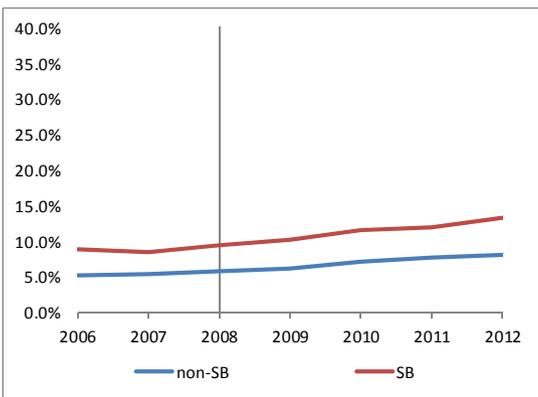
	non-SB	SB
2006	7.5%	9.8%
2007	7.5%	8.9%
2008	8.5%	10.9%
2009	9.7%	12.5%
2010	11.6%	17.2%
2011	11.8%	16.8%
2012	13.0%	18.6%
N	153	40



Difference in part. growth 2008 to 2012, SB vs. Non-SB = 3.3%

AP Performance (% 12th-graders with at least one 3 or higher)

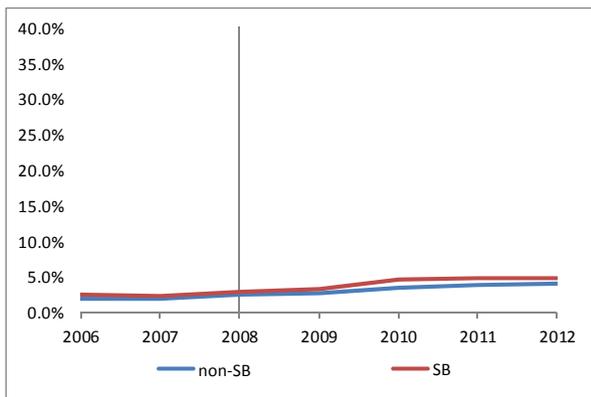
	non-SB	SB
2006	5.2%	8.9%
2007	5.4%	8.4%
2008	5.8%	9.5%
2009	6.2%	10.2%
2010	7.1%	11.6%
2011	7.6%	12.0%
2012	8.1%	13.2%
N	204	42



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 1.4%

AP Performance (% 12th-graders with at least one 3 or higher)

	non-SB	SB
2006	2.0%	2.5%
2007	1.9%	2.2%
2008	2.4%	2.9%
2009	2.7%	3.3%
2010	3.5%	4.6%
2011	3.8%	4.8%
2012	3.9%	4.7%
N	153	40



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 0.3%

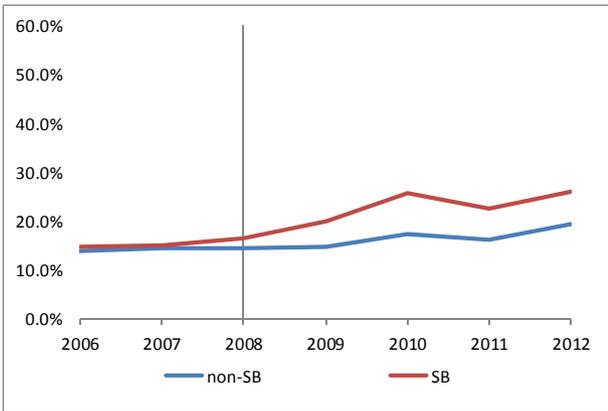
Figure 3. AP Participation and Performance (continued)

HISPANIC

(for schools with at least one Hispanic student 2006–2012)

AP Participation

	non-SB	SB
2006	13.7%	14.7%
2007	14.4%	15.1%
2008	14.5%	16.4%
2009	14.8%	19.8%
2010	17.2%	25.6%
2011	16.3%	22.5%
2012	19.2%	25.9%
N	169	41

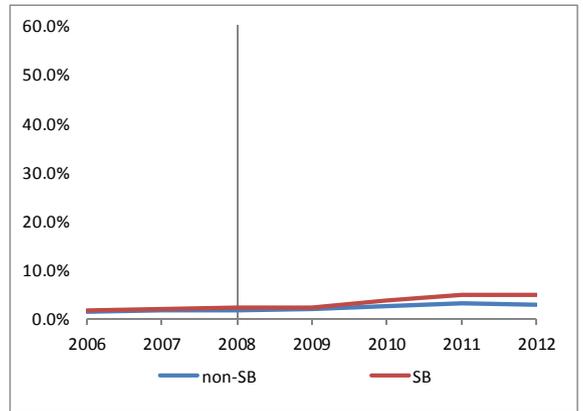


Difference in part. growth 2008 to 2012, SB vs. Non-SB = 4.7%*

FIRST-GENERATION COLLEGE-GOING STUDENT

AP Participation

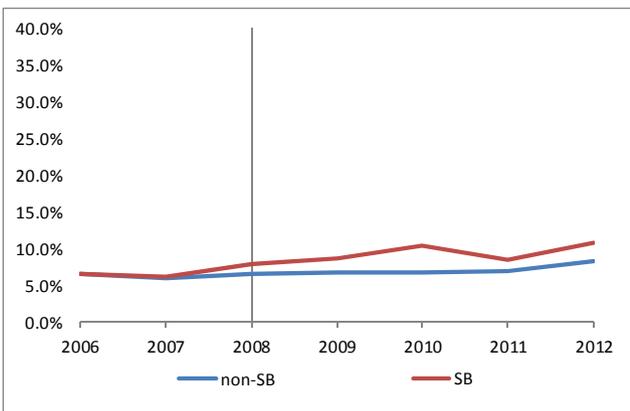
	non-SB	SB
2006	1.5%	1.8%
2007	1.6%	2.0%
2008	1.7%	2.3%
2009	2.0%	2.4%
2010	2.5%	3.8%
2011	3.0%	4.9%
2012	2.9%	5.0%
N	204	42



Difference in part. growth 2008 to 2012, SB vs. Non-SB = 1.5%*

AP Performance (% 12th-graders with at least one 3 or higher)

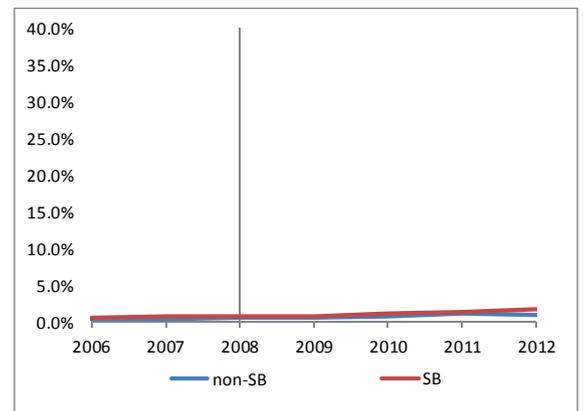
	non-SB	SB
2006	6.5%	6.5%
2007	6.0%	6.1%
2008	6.5%	7.9%
2009	6.7%	8.6%
2010	6.8%	10.3%
2011	6.9%	8.4%
2012	8.2%	10.8%
N	169	41



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 1.2%

AP Performance (% 12th-graders with at least one 3 or higher)

	non-SB	SB
2006	0.4%	0.7%
2007	0.5%	0.7%
2008	0.6%	0.7%
2009	0.7%	0.8%
2010	0.8%	1.1%
2011	1.1%	1.3%
2012	1.0%	1.7%
N	204	42



Difference in perf. growth 2008 to 2012, SB vs. Non-SB = 0.5%*

Middle Schools

Data and Methods

Based on SB purchasing records, by 2012 there were a total of 320 SB middle schools in Florida, and 29 SB schools had used the SB ELA curriculum for at least three years counting back from 2010. Since the FCAT 2.0 test was used for 2011 and 2012 cohorts and the FCAT 2.0 test differs from FCAT both in content and scale, we dropped the 2011 and 2012 cohorts. Three years of continuous purchase of the SB ELA curriculum was counted back from 2010.

Based on middle school characteristics, including urbanicity, Title 1 and magnet school status, enrollment size, percentage of students receiving free or reduced-price lunch, race/ethnicity composition, and sixth-grader FCAT reading and math scores in the 2007-08 academic year, 109 non-SB schools were identified to serve as comparison schools. These matched non-SB schools had statistically similar characteristics as SB schools (see Table 2). Difference in difference calculations were made for each comparison of SB and non-SB schools.

Table 2. Middle School Characteristics (2007-08 Academic Year)

	Non-SB	SB	<i>Difference</i>
<i>N</i>	109	29	<i>p</i> value
Urbanicity			
Urban	40	31	0.36
Suburb	41	52	0.32
Town	6	3	0.55
Rural	12	14	0.79
Title I School			
Yes	95	86	0.18
Magnet School			
Yes	20	28	0.39
Enrollment			
Size	1,010	1,086	0.22
Poverty Status			
% Free/Reduced-Price Lunch	59	58	0.75
Race/Ethnicity Composition			
% White	33	39	0.26
% Black	38	34	0.44
% Hispanic	23	22	0.95
% Asian	2	2	0.03
Prior Achievement			
FCAT Reading (6th-graders)	1,647	1,654	0.69

Results

Figure 4 reports differences in FCAT reading mean scores for eighth-graders from 2006 to 2010 from SB and matched non-SB schools. From 2006 to 2010, FCAT reading and math scores among eighth-graders improved both for SB schools and matched non-SB schools; however, there were no statistically significant differences between SB and non-SB schools in FCAT score growth over time.

Figure 4. FCAT Reading and Math Scores of 8th-Graders

Note: * $p < 0.05$

Regular schools with outcome data for 2006–2010

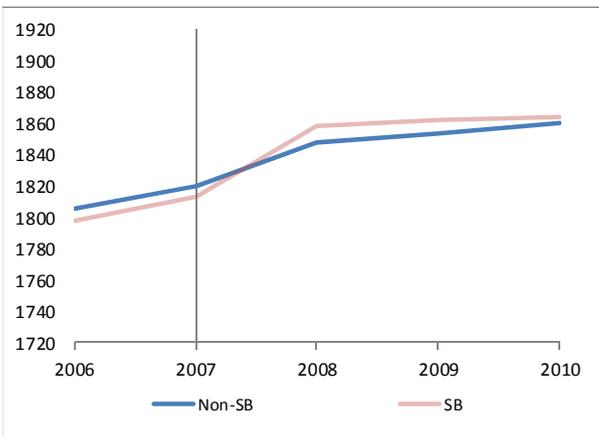
FCAT Reading

Mean Score

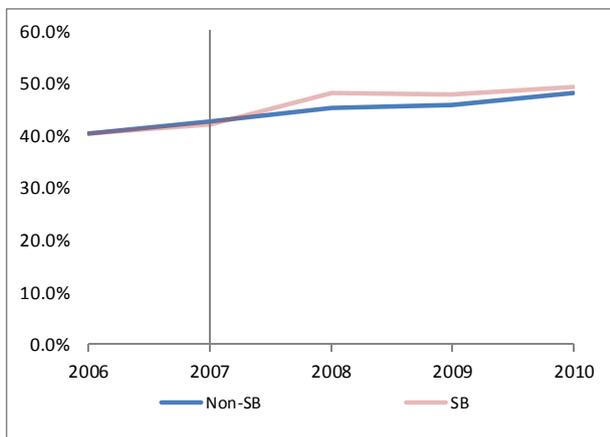
	Non-SB	SB
2006	1805	1797
2007	1819	1813
2008	1847	1858
2009	1853	1862
2010	1860	1864
<i>N</i>	109	29

Percentage category 3+

	Non-SB	SB
2006	40.2%	40.2%
2007	42.5%	42.0%
2008	45.1%	48.1%
2009	45.6%	47.7%
2010	48.0%	49.2%
<i>N</i>	109	29



Difference in perf. growth 2007 to 2010, SB vs. Non-SB = 11



Difference in perf. growth 2007 to 2010, SB vs. Non-SB = 1.7%

Summary

Compared to non-SB schools with similar characteristics, SB schools that had continuously used the SB ELA curriculum for at least three years showed significant growth in AP participation and performance for first-generation students when examining all AP subjects, ELA and social science subjects, and ELA only. In addition, SB schools had significantly higher AP ELA participation for all students and for Hispanic students. There were no differences found between SB and non-SB middle schools in growth in FCAT reading scores.