



Salem Public Schools 2016 PARCC & MCAS Data Overview

Salem Public Schools
School Committee Presentation
October 24, 2016

SALEM PUBLIC SCHOOLS

Performance Measures Overview

- **2015-16 Assessments**
 - Students in grades 3-8 took the PARCC ELA and Math tests.
 - Students in grade 10 took MCAS ELA and Math tests.
 - Students in grades 5, 8 and 10 took the MCAS Science test.
- **Scores on PARCC have been equated to MCAS to enable year to year comparisons of student performance. Combined MCAS/PARCC performance for 2015-16 is reported here and compared with previous years MCAS performance.**
- **Multiple measures are used to look at different dimensions of student, school and district performance.**
 - Achievement Level (Advanced, Proficient, Needs Improvement, Warning/Failing)
 - Composite Performance Index (CPI)
 - Student Growth Percentile (SGP)

Performance Measures

General Achievement Level Definitions

Student test scores are reported according to the following four achievement levels:

- **Advanced:** Students at this level demonstrate a comprehensive and in-depth understanding of rigorous subject matter, and provide sophisticated solutions to complex problems.
- **Proficient:** Students at this level demonstrate a solid understanding of challenging subject matter and solve a wide variety of problems.
- **Needs Improvement:** Students at this level demonstrate a partial understanding of subject matter and solve some simple problems.
- **Warning (Grades 3–8)/Failing (High School):** Students at this level demonstrate a minimal understanding of subject matter and do not solve simple problems.

For accountability purposes, students scoring at the Proficient or Advanced level are classified as having achieved proficiency. For this reason, Advanced and Proficient are often combined when reporting student performance.

Performance Measures

Composite Performance Index (CPI)

CPI shows progress toward the goal of narrowing proficiency gaps. **The CPI is a number between 0 and 100 which indicates how close a school or district came to having all their students score Proficient/Advanced.**

Example: To calculate the CPI for a particular school, each student is assigned points (100, 75, 50, 25, or 0) based how close he/she came to scoring Proficient/Advanced. The points assigned to each student in the school are added together then divided by the number of students assessed in the school. The result is a number between 0 and 100. A CPI of 100 means that all students scored Proficient/Advanced.

Performance Measures

Student Growth Percentile (SGP)

Student Growth Percentile (SGP) is a measure of student progress that compares changes in a student's MCAS/PARCC scores to changes in MCAS/PARCC scores of other students with similar scores in prior years (called "academic peers.")

Growth percentiles range from 1 to 99. A higher SGP means the student progressed at a higher rate than academic peers, while a lower SGP means the student progressed at a lower rate than academic peers.

Example: How much did John improve in mathematics from 5th grade to 6th grade, relative to his academic peers? If John improved more than 65 percent of his academic peers, then his student growth percentile would be 65.

School and district growth percentiles represent the growth of the median, or middle, student in the school or district. **Most school and district median SGPs tend to range between 40 and 60. Schools outside of that range are showing less or more growth than the typical school in Massachusetts.**

Performance Measures

Each measure answers a different question

- **Achievement Level:** How did students fare relative to grade level standards in a given year?
- **CPI:** How close is a school or district to having all students be Proficient/Advanced in a given year?
- **SGP:** How did students change from one year to the next relative to other students with similar test score histories?

Accountability Designations

School/District Designations

All Massachusetts schools and districts are classified into one of five accountability and assistance levels:

- **Level 1:** Meeting gap narrowing goals (for all and high needs students)
- **Level 2:** Not meeting gap narrowing goals (for all and/or high needs students)
- **Level 3:** Lowest performing 20% of schools (including lowest performing subgroups)
- **Level 4:** Lowest performing schools (subset of Level 3)
- **Level 5:** Chronically underperforming schools (subset of Level 4)

School Percentile Rank

School percentiles (1-99) are an indication of the school's overall performance relative to other schools that serve the same or similar grades.

Improvement Highlights

Accountability Designations

- Salem improved its designation, moving from Level 4 to Level 3.
- Two schools improved their designations in 2016, all but one of the remaining schools maintained their level designation.

Accountability Level

School	2012	2013	2014	2015	2016
Bates	Level 2	Level 1	Level 2	Level 2	Level 2
Bentley	Level 4	Level 4	Level 4	Level 4	Level 1
Bowditch	Level 3	Level 3	Level 3	Level 3	Level 3
Carlton	Level 3	Level 3	Level 3	Level 1	Level 1
Collins	Level 3	Level 3	Level 3	Level 3	Level 3
Horace Mann	Level 3	Level 2	Level 3	Level 3	Level 2
Saltonstall	Level 3	Level 2	Level 2	Level 2	Level 2
Witchcraft	Level 2	Level 2	Level 2	Level 2	Level 2
School	2012	2013	2014	2015	2016
Salem High	Level 3	Level 3	Level 3	Level 1	Level 3

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Improvement Highlights

School Percentile Rank

All but two schools improved their percentile rank. While there have been some ups and downs since 2012, relative to other schools that serve the same or similar grades, our schools have shown steady progress and improvement.

School	2012	2013	2014	2015	2016
Bates	23	30	27	33	34
Bentley	4	3	7	13	24
Bowditch	15	21	14	8	12
Carlton	8	6	15	21	34
Collins	13	13	6	17	29
Horace Mann	27	23	12	15	22
Saltonstall	57	57	58	54	63

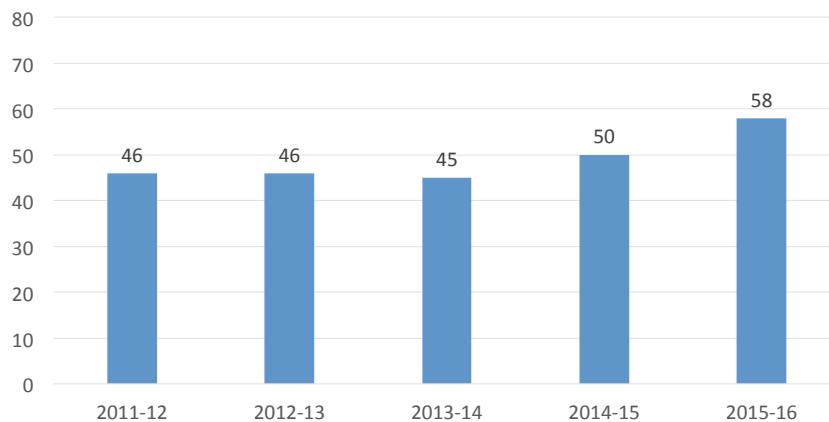
School	2012	2013	2014	2015	2016
Salem High	11	16	15	24	20
Witchcraft	58	55	61	60	54

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District: Improvement Highlights

ELA SGP increased from 50 to 58, highest since 2013.

ELA SGP, All Students 2012-16



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District: Improvement Highlights

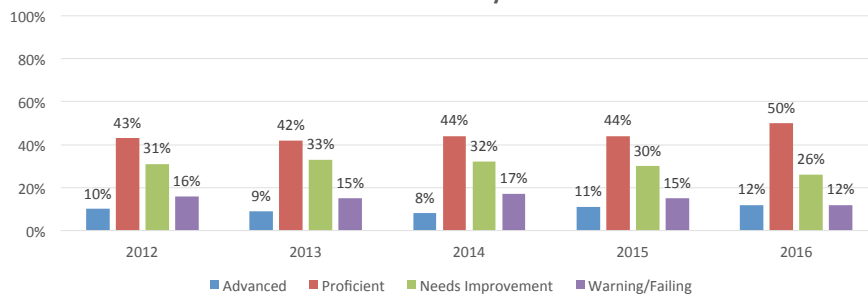
ELA

- Nearly two-thirds (62%) of SPS students are now either proficient or advanced in ELA.
- Proficient/Advanced increased by 7%, higher than any other year since 2012.
- CPI increased from 77.9 to 82.3, highest since 2012

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District: Improvement Highlights

SPS Distribution of ELA Achievement
All Students by Year



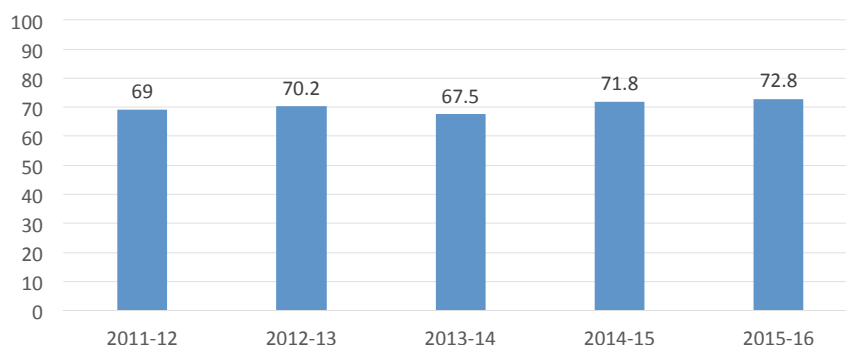
	2012		2013		2014		2015		2016	
	District	State	District	State	District	State	District	State	District	State
CPI	77.2	86.7	76.6	86.8	76.1	86.7	77.9	86.8	82.3	87.2
Median SGP	46	50	46	51	45	50	50	50	58	50

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District: Improvement

We continue to see modest, incremental improvements in Math with CPI increasing slightly to 72.8, highest since 2012. For the first time, half of SPS students (50%) are now either proficient or advanced in Math.

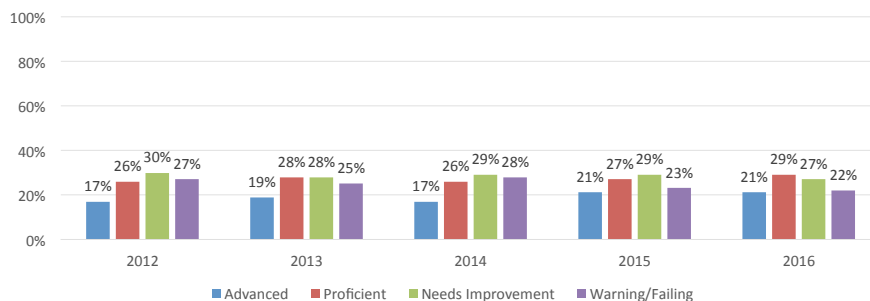
Math CPI, All Students 2012-16



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District: Improvement

SPS Distribution of Math Achievement, All Students by Year



	2012		2013		2014		2015		2016	
	District	State	District	State	District	State	District	State	District	State
CPI	69.0	79.9	70.2	80.8	67.5	80.3	71.8	80.7	72.8	81.5
Median SGP	52	50	47	51	43	50	53	50	49.5	50

Sub Groups: SWD

Steady growth and CPI increases in both ELA and Math among **students with disabilities**, who account for 23% of students tested.

ELA

SGP increase from 44 to 52
CPI increase from 56.5 to 63

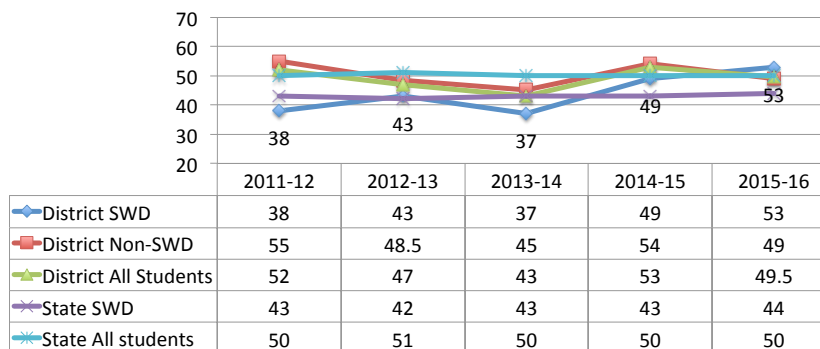
Math

SGP increase from 49 to 53
CPI increase from 47.2 to 48.6

Sub Groups: SWD

For the first time, our SWD have surpassed the statewide median SGP in Math which means that they are performing better than the majority of their peers in the state with similar test histories.

Math Growth by Disability Status
All Grades, 2012-16



Note: SGP values run from 0 to 99. Data shown cluster around the middle of the range so chart axis truncated to improve readability.

Sub Groups: ELLs

Steady CPI increases in ELA and Math among **English Language Learners**, who account for 13% of students tested

ELA

CPI increase from 51.8 to 63.6

SGP increase from 54 to 64.5

Math

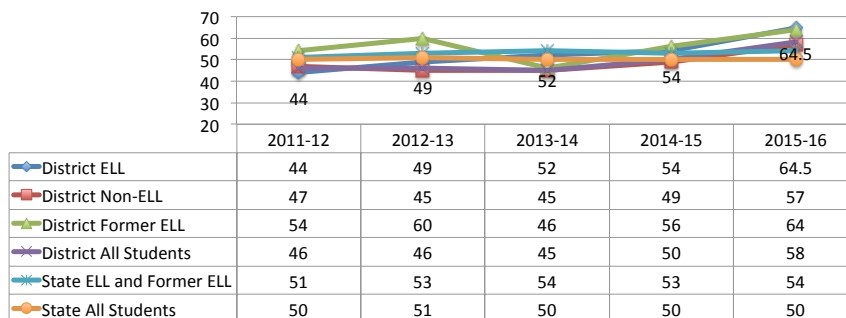
CPI increase from 47.9 to 50.7

SGP decrease from 54 to 51

Sub Groups: ELLs

In ELA, our ELLs show impressive growth and CPI gains. They continue to surpass the statewide median SGP in ELA which means that they are performing better than the majority of their peers in the state with similar test histories.

ELA Growth by ELL Status
All Grades, 2012-16



Note: SGP values run from 0 to 99. Data shown cluster around the middle of the range so chart axis truncated to improve readability.

Sub Groups: ED

Steady CPI increases in ELA and Math among economically disadvantaged students, who account for 51% of students tested

ELA

CPI increase from 71.2 to 76.5

SGP increase from 50 to 56

Math

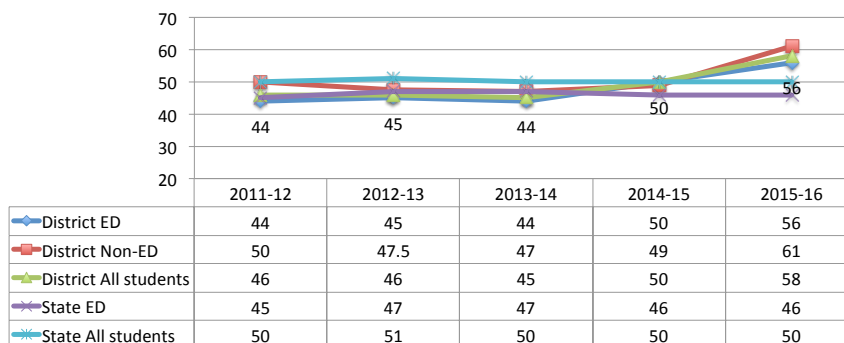
CPI increase from 63.3 to 64.6

SGP decrease from 53 to 47

Sub Groups: ED

In ELA, our ED students continue to surpass the statewide median SGP in ELA which means that they are performing better than the majority of their peers in the state with similar test histories.

**ELA Growth by Economic Status
All Grades, 2012-16**



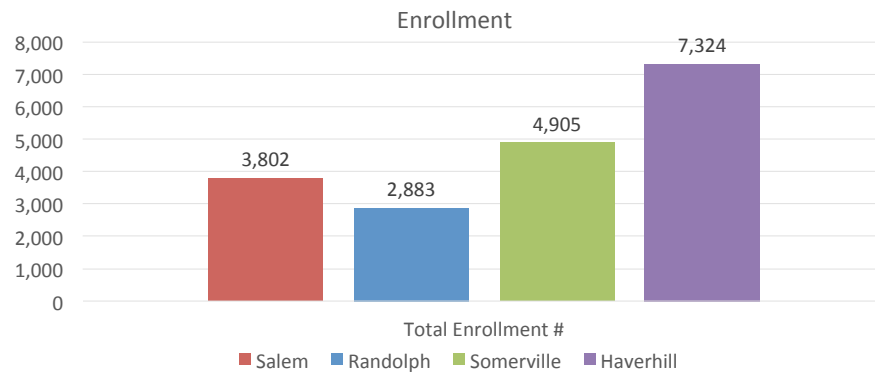
Note: SGP values run from 0 to 99. Data shown cluster around the middle of the range so chart axis truncated to improve readability.

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Comparison to Similar Districts

Comparison group includes:

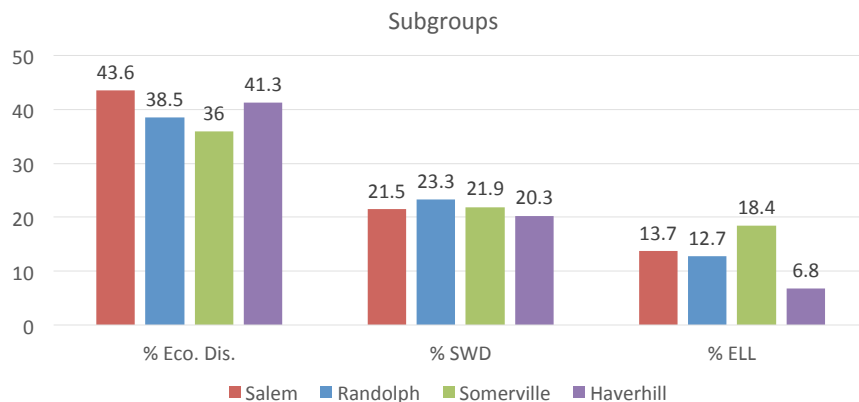
- **Somerville and Haverhill: larger districts**
- **Randolph: smaller district**



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Comparison to Similar Districts

- **Haverhill: Closest % economic disadvantage**
- **Randolph: Closest % ELL**
- **All three have a comparable % SWD to Salem**

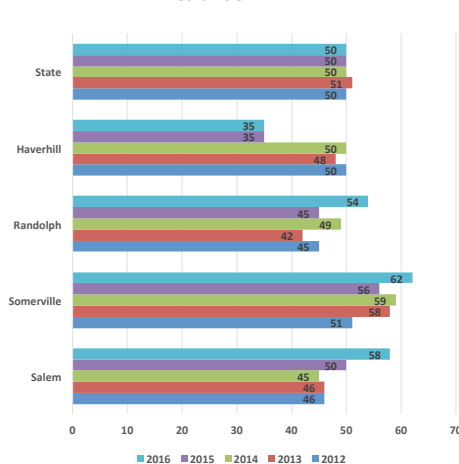


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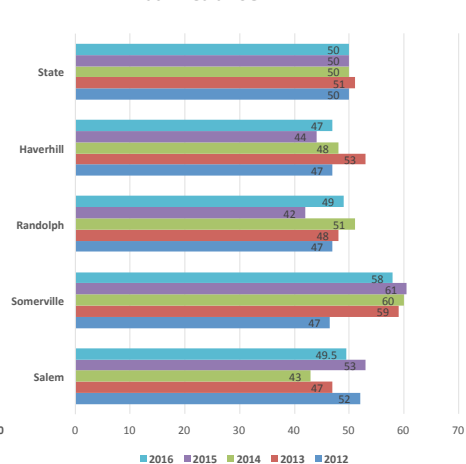
Comparison to Similar Districts

- Salem is the only district that experienced steady ELA growth since 2014
- Like Salem, Somerville experienced a drop in Math SGP this year

ELA Median SGP



Math Median SGP



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CPI Gap

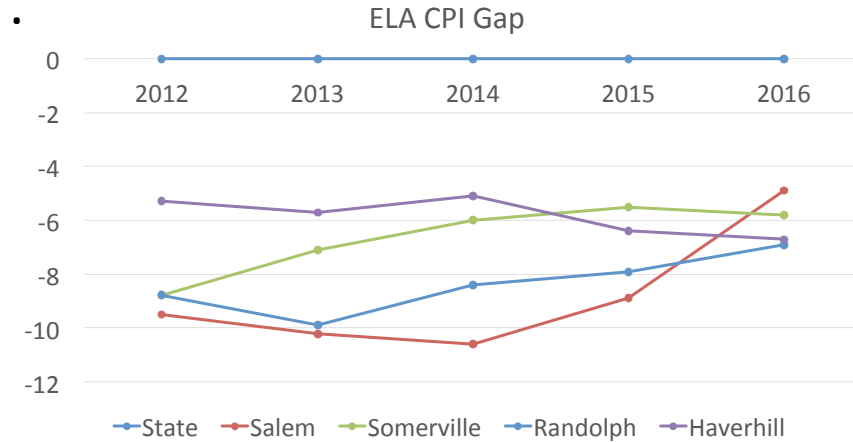
- In ELA, Salem is closing the gap between its CPI and the statewide CPI. The gap is down from -10.6 in 2014 to -4.9 in 2016.
- In Math, the gap between Salem's CPI and the statewide CPI did not change much from 2015 to 2016.

	2012	2013	2014	2015	2016
State ELA CPI	86.7	86.8	86.7	86.8	87.2
Salem ELA CPI	77.2	76.6	76.1	77.9	82.3
ELA CPI Gap	-9.5	-10.2	-10.6	-8.9	-4.9
State Math CPI	79.9	80.8	80.3	80.7	81.5
Salem Math CPI	69.0	70.2	67.5	71.8	72.8
Math CPI Gap	-10.9	-10.6	-12.8	-8.9	-8.7

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Comparison to Similar Districts

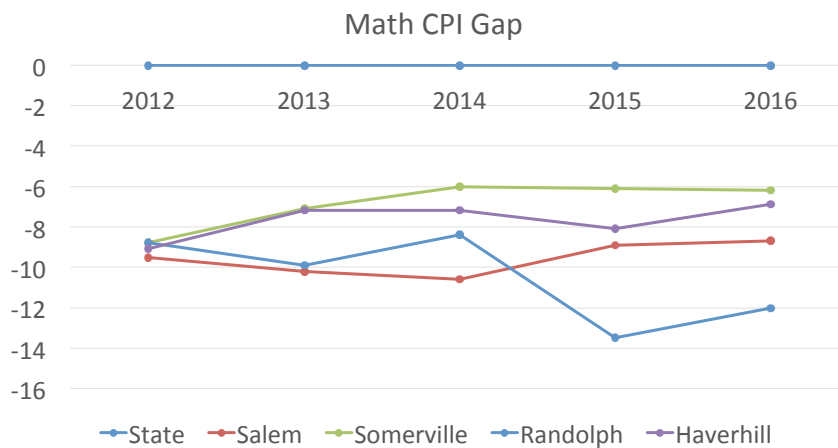
Historically, Salem has had the largest ELA CPI gap among the four districts. However, over the last 2 years, Salem has made more progress closing our ELA CPI gap than Somerville, Randolph and Haverhill.



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Comparison to Similar Districts

Salem has historically had the largest Math CPI gap among the four districts. Salem narrowed the gap in 2015. Both Salem and Somerville made little progress narrowing their gaps in 2016.



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School: Improvement Highlights

Elementary and K-8 Schools

Bates Elementary

- School percentile ranking (34) is highest since 2012
- Achieved highest CPI in the school's history for both ELA (79.8) and Math (82.1)
- Math CPI (82.1) is 9 points higher than the district CPI (72.8)

Bentley Academy Charter School (BACS)

- Moved from Level 4 to Level 1 & improved its percentile ranking from 13 to 24
- Achieved highest CPI in the school's history for both ELA (79.8) and Math (84)
- Math CPI (84) is 11 points higher than the district CPI (72.8)

Carlton Innovation School

- Improved school percentile ranking by 13 pts, up from 21 to 34
- Achieved highest CPI since 2012 in both ELA (86.8) and Math (83.5)
- Math CPI (83.5) is over 10 points higher than the district CPI (72.8)

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School: Improvement Highlights

Elementary and K-8 Schools (continued)

Horace Mann Laboratory School

- Moved up from Level 3 to Level 2 and increased its percentile ranking from 15 to 22
- Achieved highest CPI since 2012 in both ELA (80.5) and Math (76.3)
- Achieved highest SGP in ELA (59) since 2012, a 10 point increase over last year

Nathaniel Bowditch K-8 School

- Improved its school percentile ranking by 4 points, from 8 to 12
- Achieved highest SGP in ELA (55) since 2012, a 10 point increase over last year
- Students with disabilities achieved an SGP in ELA of 53, a 19 point increase over last year

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School: Improvement Highlights**Elementary and K-8 Schools (continued)****Saltonstall K-8 School**

- School percentile ranking is highest since 2012, increasing 9 points from last year to 63
- Achieved highest ELA CPI (85) since 2012
- Achieved high growth in ELA with a median SGP of 69, a 19.5 increase over last year

Witchcraft Heights Elementary School

- Achieved highest ELA CPI (87.6) since 2012
- Achieved high growth in ELA with a median SGP of 62

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School: Improvement Highlights**Middle and High Schools****Collins Middle School**

- Increased school percentile ranking from 17 to 29
- Achieved highest CPI since 2012 in both ELA (85.6) and Math (71.7)
- Achieved highest SGP in ELA (60) since 2012, an 11 point increase over last year

Salem High School

- While the school's percentile ranking declined slightly (from 24 to 20), it is still almost twice as high as it was in 2012
- Very high ELA CPI of 95.1 - highest in the school's history
- While Math CPI did drop to 79.4 this year, it is nearly 7 points above the state CPI of 72.8.

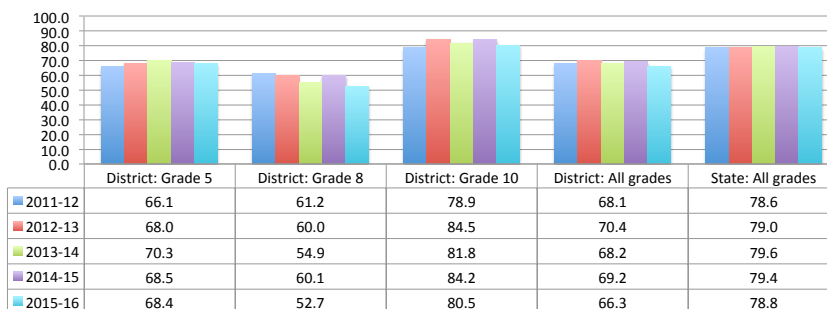
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Challenges to address

Science Proficiency (CPI)

While Grade 10 Science CPI has been consistently high (above 80) over the last 4 years, we are not seeing progress in the lower grades. Grade 5 CPI has been steady over the last 5 years, hovering around 68. Grade 8 CPI has fluctuated from year to year and recently dropped to the lowest level (52.7) in 2015-16. There is a need to boost science instruction in elementary and middle grades.

SPS Science CPI (by Grade Level)
All Students, 2012-16



Note: While DESE's official combined MCAS and PARCC data set for SPS was used for this analysis, the number of students for whom there is science performance data (n=845) does not match what is reported on the DESE website (n=817). This discrepancy results in small differences in the science metrics (percentage of students at each achievement level, CPI and SGP) reported here.

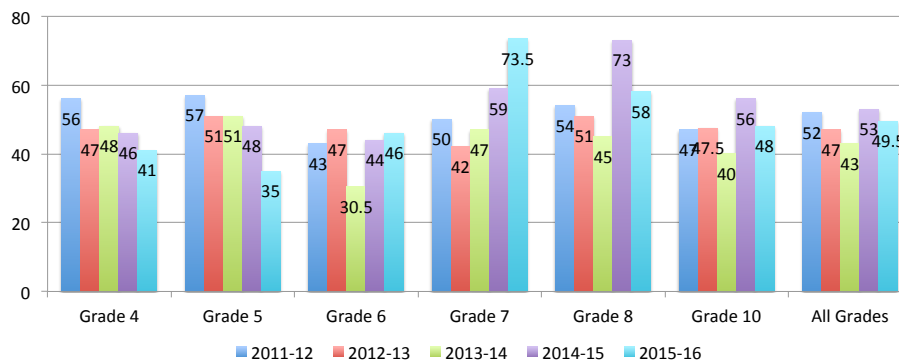
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Challenges to address

Math Growth (Median SGP)

While Math CPI is the highest its been in 5 years, we are seeing some declines in growth. In 2015-16, math growth declined in Grades 4, 5, 8 and 10. One challenge to be addressed is the steady decline in growth in Grades 4 and 5 over the last 3 years.

SPS Math Growth (by Grade Level)
All Students, 2012-16

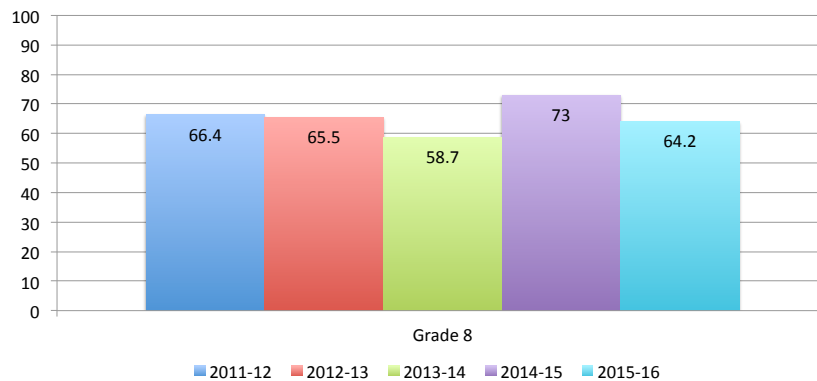


Challenges to address

8th Grade Math

Eighth grade math performance is a key indicator for college success. With the exception of 2015, 8th grade Math remains below 65% - this points to a need to boost math instruction in middle grades.

**SPS 8th Grade Math CPI
All Students, 2012-16**

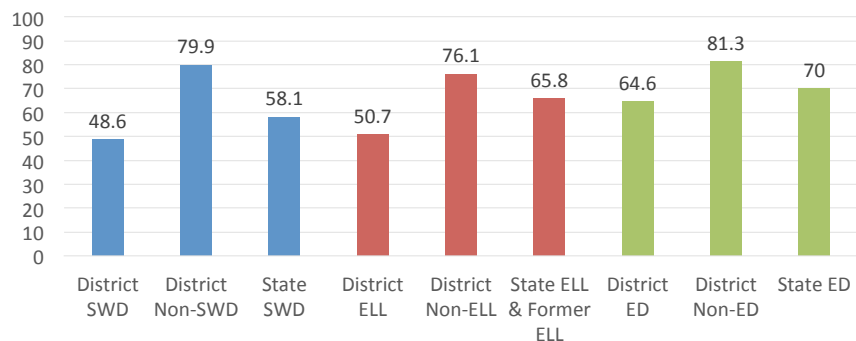


Challenges to address

Math CPI Among Subgroups

While Math CPI has increased among students with disabilities, English language learners and economically disadvantaged students, these subgroups lag behind their non-SWD, non-ELL and non-ED peers in the district by 31, 25 and 17 CPI points respectively. We must continue working to close the achievement gap for these groups.

2015-16 Math CPI, Student Subgroups

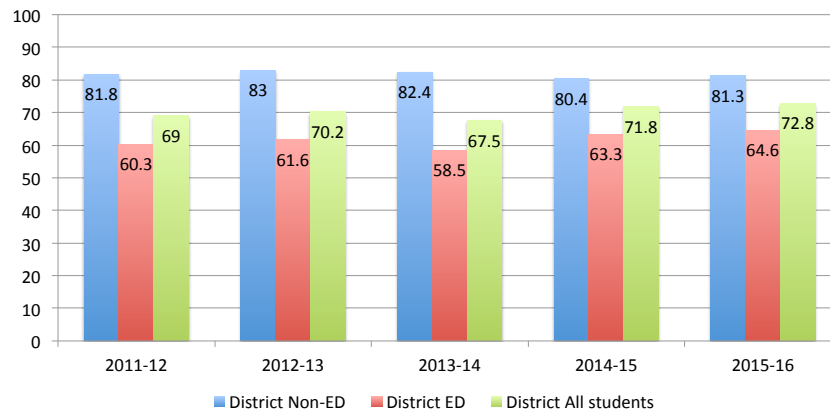


Challenges to address

Math Achievement Among ED Students

While there have been steady CPI increases in Math among ED students, they lag behind their non-ED peers and the statewide average.

SPS Math CPI (by Economic Status), All Grades, 2012-16

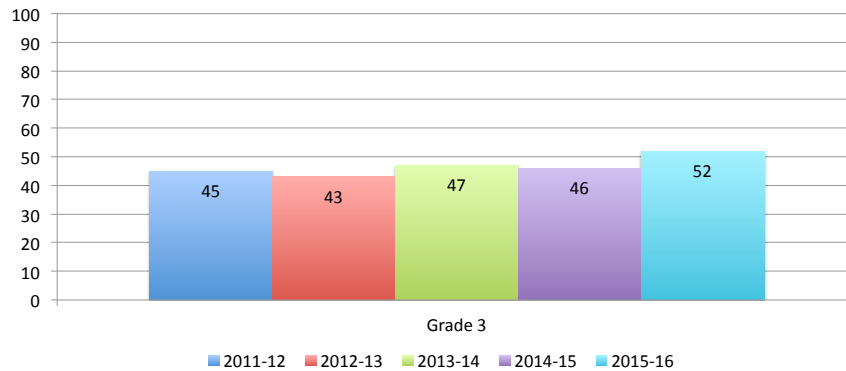


Challenges to address

3rd Grade ELA

While for the first time since 2012, we have more than 50% of 3rd grade students proficient in ELA, we still have about ½ of our 3rd graders who are not proficient in ELA. This indicates work is needed in early grades.

SPS 3rd Grade % Prof & Adv
All Students, 2012-16



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Strategies to keep us moving in the right direction

**We must continue on the path toward
excellence through:**

**Continuity
Consistency
Deepening of the work**

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Strategies to keep us moving in the right direction

2017 Accelerated Improvement Plan (AIP)

**AIP objectives & initiatives will continue to
guide and deepen our work in SPS:**

- Increase Rigor
- Effective Data Practices
- Effective Leadership
- Meeting the Needs of Diverse Learners
- Focus on Structures

Highlights of the 2017 AIP

Support Leadership in our District

- Focus of the work with our leaders is related to leveraging the human capital at their schools/ departments.
- Collaboration, focus and cohesion of the work of all adults serving our students is a key goal as we leverage our human capital in our district.

Support Teacher Practice/Instruction

- With enhanced coaching capacity, we will support teachers practice in the content areas as well as for instruction related to ELLs and SWDs.

Highlights of the 2017 AIP

Refine and Monitor School Structures

- The focus this year will be in ensuring that schools have effective structures such as data cycles, ILTs, common planning time, etc.
- Leaders will be monitoring the structures at their schools to advance and accelerate student achievement.

Focus on Developing Effective Family and Community Engagement Practices

- We will leverage the strategic planning process through the Nellie Mae Foundation grant to develop a shared vision and plan for effective family and community engagement.
- Increase engagement of families at the school level by leveraging the Family Engagement Facilitators along with other roles and strategies.

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Highlights of the 2017 AIP

- PD on math talk, science and engineering practices and strategies to build entry points for all learners
- Data cycles to track language acquisition for ELLs
- Develop a strategic plan to revamp literacy practices in the early grades (K-2)
- Develop and pilot the Student Support Team model (SST)
- Develop a K-8 social studies curriculum aligned to the literacy standards

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The AIP continues to lead the way...

“Success is a science; if you have the conditions, you get the result”

~Oscar Wilde