

Changes in Student PSSA Performance Levels, 2014-15 to 2018-19

Adrienne Reitano, Senior Research Associate; Christopher Bell, Associate

The School District of Philadelphia (SDP) uses standardized test data to monitor student achievement and progress; the goal is to see an increasing number of students meeting grade-level targets. One of the ways we measure academic progress is by looking at changes in Pennsylvania System of School Assessment (PSSA) scores. This brief summarizes PSSA participation rates and analyzes progress by student performance level, rather than score; that is, we look at how many students moved across performance levels from one assessment year to the next.

About the PSSAs

Each spring, students in the School District of Philadelphia (SDP) in grades 3 through 8 take the Pennsylvania System of School Assessment (PSSA) exams. All students take English Language Arts (ELA) and math assessments, and students in grades 4 and 8 take a science assessment as well. For each assessment, students receive a scaled score corresponding to one of four performance levels: Below Basic, Basic, Proficient, or Advanced. (See the [PDE website](#) for cut scores for each grade and subject.)

Contents

Guiding Questions.....	2
Data and Methods.....	2
Key Findings.....	3
PSSA Participation Rates, 2014-15 to 2018-19.....	3
One-Year Trends in PSSA-ELA Performance, Grades 3-8.....	4
Four-Year Trends in PSSA-ELA Performance, Grades 3-4.....	7
One-Year Trends in PSSA-Math Performance, Grades 3-8.....	8
Four-Year Trends in PSSA-Math Performance, Grades 3-4.....	13
Proficient and Advanced Trends by School, 2014-15 to 2018-19.....	14
Conclusion.....	15

Guiding Questions

1. What are the District- and grade-level PSSA participation rates from 2014-15 to 2018-19?
2. What are the student-level one-year trends in performance on the PSSA-ELA and PSSA-Math assessments from 2014-15 to 2018-19 (e.g., a student’s seventh grade performance in 2014-15 compared to that student’s eighth grade performance in 2015-16)?
3. What are the student-level four-year trends in performance on the PSSA-ELA and PSSA-Math assessments from 2014-15 to 2018-19 (e.g., a student’s fourth grade performance in 2014-15 compared to that student’s eighth grade performance in 2018-19)?
4. Over the past five years, what are the school-level changes in the percentage of students scoring Proficient or Advanced?

Data and Methods

Because we are interested in how individual student performance changes across years, we only included students with at least two years of PSSA scores in the analyses. Furthermore, for each year-over-year analysis, students must have scores for two sequential years to be included (see Table 1 for the number of students who met these criteria).

Table 1. Number of District students with one and two years of PSSA scores, by year

Assessment	Years of PSSA scores	2014-15	2015-16	2016-17	2017-18	2018-19
PSSA-ELA	Number of students with at least one year of data	56,232	56,219	56,369	57,065	56,914
	Number of students with two years of sequential data for analysis	N/A	43,575	43,893	44,175	42,562
PSSA-Math	Number of students with at least one year of data	56,416	56,411	56,524	57,275	57,052
	Number of students with two years of sequential data for analysis	N/A	43,814	44,090	44,497	42,752

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Note: Table 1 includes all students, including those not attributed to a school. The numbers in this table are higher than the number of participating students presented in Table 3 due to state accountability rules, which specify when students’ scores do not count for a school and/or the district (e.g., students educated outside of the district due to a court or agency placement). Further detail on attribution and accountability rules can be found here: <https://www.education.pa.gov/K-12/Assessment%20and%20Accountability/PAS/Pages/default.aspx>.

There are four opportunities over the past five school years to see whether and how students moved across performance levels: we can track student-level changes from 2014-15 to 2015-16, from 2015-16 to 2016-17, from 2016-17 to 2017-18, and from 2017-18 to 2018-19. We can also look at students’ four-year performance trends (across five school years) by comparing third- and fourth-grade student performance levels in 2014-15 to those students’ seventh- and eighth-grade performance levels in 2018-19. The students in the four-year trend analyses had PSSA scores in both 2014-15 and 2018-19, meaning these analyses include fewer students than the year-to-year analyses (Table 2).

Table 2. Number of District students with both 2014-15 and 2018-19 PSSA scores

Assessment	Number of students with both 2014-15 and 2018-19 PSSA scores
PSSA-ELA	13,904
PSSA-Math	13,937

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

The next section, “Key Findings,” presents participation rates for each assessment by year and grade. This is followed by one- and four-year performance trends, first on the PSSA-ELA and then on the PSSA-Math. The brief concludes by examining the number of schools where high and low percentages of students scored Proficient or Advanced across all five school years.

Key Findings

PSSA Participation Rates, 2014-15 to 2018-19

Between 2014-15 and 2018-19, participation rates for the PSSA-ELA and Math assessments remained largely consistent: over 95% of students took each assessment every year except in 2016-17, which had the lowest percentage of students tested (92.2% and 92.5%; see Table 3). Since 2016-17, both the number and percentage of students tested have rebounded to previous levels. Across all years, the percentage of students tested remained roughly the same for both ELA and Math, with an average of 95.6% of students tested in ELA compared to an average of 95.9% of students tested in Math.

Table 3. Participation in PSSA-ELA and PSSA-Math from 2014-15 to 2018-19, by year

School Year	PSSA-ELA, 2014-15 through 2018-19		PSSA-Math, 2014-15 through 2018-19	
	Number of Students Tested	Percentage of Students Tested	Number of Students Tested	Percentage of Students Tested
2014-15	52,426	97.0%	52,585	97.3%
2015-16	52,048	95.8%	52,205	96.1%
2016-17	50,652	92.2%	50,765	92.5%
2017-18	53,292	96.6%	53,413	96.8%
2018-19	53,205	96.4%	53,294	96.6%
Average		95.6%		95.9%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Number of tested students follows state accountability rules and includes only students with an attributed school. For this reason, single year totals in Table 3 are lower than single year totals in Table 1.

Participation rates also remained consistent across grades: all but eighth grade had participation rates above 95% in both ELA and Math. The number of students tested dropped as the grade level rose, with 49,677 third-grade students (96.5%) and 38,369 seventh-grade students tested in ELA (95.3%; see Table 4). The drop in the number of students tested is most prominent in sixth and eighth grade, which had participation rates one to two percentage points lower than fifth and seventh grade. Similar trends exist in the number and percentage of students tested in Math. Except for eighth grade, the number and percentage of students tested have been slightly higher for Math than ELA.

Table 4. Participation in PSSA-ELA and PSSA-Math from 2014-15 to 2018-19, by grade

Grade	PSSA-ELA, 2014-15 through 2018-19		PSSA-Math, 2014-15 through 2018-19	
	Number of Students Tested	Percentage of Students Tested	Number of Students Tested	Percentage of Students Tested
3	49,677	96.5%	49,963	97.1%
4	49,034	96.2%	49,290	96.8%
5	46,197	96.5%	46,318	96.8%
6	40,518	95.6%	40,547	95.7%
7	38,369	95.3%	38,410	95.5%
8	37,004	93.5%	36,911	93.2%
Average		95.6%		95.8%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Counts include students in each grade across all five school years (2014-15 through 2018-19).

One-Year Trends in PSSA-ELA Performance, Grades 3-8

2014-15 to 2015-16

Thirty percent of students in grades 3-7 who scored in the Below Basic performance level in 2014-15 scored Basic in the next grade the following year, and less than 1% moved to Proficient (Table 5). Similarly, less than 1% of students who scored Basic in 2014-15 moved to Advanced the following year. However, 17% of students who scored Basic in 2014-15 moved to Proficient, and 12% of students who scored Proficient moved to Advanced. The largest move was a slide backwards, as 35% of students who scored Advanced in 2014-15 only scored Proficient in 2015-16. Table 5 shows the number and percentage of students in each 2014-15 performance level (column 1) who scored in each performance level the following year (columns 2-5).

Table 5. Year-over-year movement in PSSA-ELA from 2014-15 to 2015-16

2014-15 Performance (1)	2015-16 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	8,498	69%	3,734	30%	149	1%	4	<1%	12,385
Basic	2,773	16%	11,318	67%	2,828	17%	46	<1%	16,965
Proficient	166	1%	2,954	25%	7,205	62%	1,344	12%	11,669
Advanced	6	<1%	26	1%	903	35%	1,621	63%	2,556
Total	11,443		18,032		11,085		3,015		43,575

Source: QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who tested in the same performance level in both years. Bold type shows the number and percentage of students who increased their performance level.

Overall, between 2014-15 and 2015-16, 19% of students in our sample moved up at least one performance level, 16% moved down, and almost two-thirds did not move (Table 6).

Table 6. Summary Statistics: Year-over-year movement in PSSA-ELA from 2014-15 to 2015-16

	Proficient or Advanced 2014-15	Proficient or Advanced 2015-16	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	14,225	14,100	8,105	28,642	6,828
Percentage of Students	33%	32%	19%	66%	16%

Source: QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

2015-16 to 2016-17

One-year student performance trends from 2015-16 to 2016-17 were similar to trends from 2014-15 to 2015-16, although larger percentages of students who scored Below Basic in 2015-16 moved into Basic (38%) or Advanced (1%) the following year. As in the preceding comparison, some students who scored Advanced in 2015-16 slid down to Proficient the following year; however, the number of Advanced students who went down a performance level in this comparison was two percentage points lower than the number of students who made the same slide in the preceding year (33% versus 35%). Table 7 shows the number and percentage of students in each 2015-16 performance level (column 1) who scored in each performance level the following year (columns 2-5).

Table 7. Year-over-year movement in PSSA-ELA from 2015-16 to 2016-17

2015-16 Performance (1)	2016-17 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	7,432	60%	4,685	38%	183	1%	84	1%	12,384
Basic	2,741	16%	11,601	67%	2,909	17%	176	1%	17,427
Proficient	137	1%	2,565	23%	7,008	62%	1,592	14%	11,302
Advanced	5	<1%	23	1%	929	33%	1,823	66%	2,780
Total	10,315		18,874		11,029		3,675		43,893

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who scored in the same performance level in both years. Bold type shows the number and percentage of students who increased their performance level.

Overall, between 2015-16 and 2016-17, 22% of students in our sample moved up at least one performance level, 15% moved down, and 63% did not move (Table 8).

Table 8. Summary Statistics: Year-over-year movement in PSSA-ELA from 2015-16 to 2016-17

	Proficient or Advanced 2015-16	Proficient or Advanced 2016-17	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	14,082	14,704	9,629	27,864	6,400
Percentage of Students	32%	33%	22%	63%	15%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

2016-17 to 2017-18

Students continued to move out of the Below Basic performance level: about half (49%) of students in grades 3-7 who scored Below Basic in 2016-17 moved into Basic (47%) or Proficient (2%) the following year (Table 9). Some trends were consistent with prior years: 18% of students who scored Basic in 2016-17 moved to Proficient the following year, and 13% of students who scored Proficient moved to Advanced. The percentage of students who first scored Basic, then slid to Below Basic, decreased by three points compared to the previous year. Table 9 shows the number and percentage of students in each 2016-17 performance level (column 1) who scored in each performance level the following year (columns 2-5).

Table 9. Year-over-year movement in PSSA-ELA from 2016-17 to 2017-18

2016-17 Performance (1)	2017-18 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	5,590	51%	5,156	47%	233	2%	62	1%	11,041
Basic	2,371	13%	12,393	69%	3,239	18%	71	<1%	18,074
Proficient	114	1%	2,628	23%	7,211	63%	1,482	13%	11,435
Advanced	49	1%	91	3%	1,361	38%	2,124	59%	3,625
Total	8,124		20,268		12,044		3,739		44,175

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who scored in the same performance level in both years. Bold text shows the number and percentage of students who increased their performance level.

Overall, the percentage of students whose performance level moved up continued to increase slightly: between 2016-17 and 2017-18, 23% of students in our sample moved up at least one performance level, 15% moved down, and 62% did not move (Table 10).

Table 10. Summary Statistics: Year-over-year movement in PSSA-ELA from 2016-17 to 2017-18

	Proficient or Advanced 2016-17	Proficient or Advanced 2017-18	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	15,060	15,783	10,243	27,318	6,614
Percentage of Students	34%	36%	23%	62%	15%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

2017-18 to 2018-19

Finally, one-year PSSA-ELA performance trends from 2017-18 to 2018-19 were similar to those in previous years. Just under half (45%) of students who scored Below Basic moved into Basic (43%) or Proficient (2%; see Table 11). The percentage of students who scored Basic and moved to Proficient (17%) and who scored Proficient and moved to Advanced (13%) are consistent with prior years. Compared to the previous year, there was a seven-point increase in the percentage of students who scored Basic, then slid to Below Basic. Table 11 shows the number and percentage of students in each 2017-18 performance level (column 1) who scored in each performance level the following year (columns 2-5).

Table 11. Year-over-year movement in PSSA-ELA from 2017-18 to 2018-19

2017-18 Performance (1)	2018-19 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	4,679	55%	3,651	43%	201	2%	33	<1%	8,564
Basic	3,766	20%	11,533	62%	3,214	17%	77	<1%	18,590
Proficient	180	2%	2,684	23%	7,226	62%	1,518	13%	11,608
Advanced	37	1%	124	3%	1,397	37%	2,242	59%	3,800
Total	8,662		17,992		12,038		3,870		42,562

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who scored in the same performance level in both years. Bold type shows the number and percentage of students who increased their performance level.

Overall, the percentage of students whose performance level moved up decreased compared to the previous year. In addition, the percentage of students who moved down a performance level increased compared to the previous year. Between 2017-18 and 2018-19, 20% of students in our sample moved up at least one performance level, 19% moved down, and 60% did not move (Table 12).

Table 12. Summary Statistics: Year-over-year movement in PSSA-ELA from 2017-18 to 2018-19

	Proficient or Advanced 2017-18	Proficient or Advanced 2018-19	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	15,408	15,908	8,694	25,680	8,188
Percentage of Students	36%	37%	20%	60%	19%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Four-Year Trends in PSSA-ELA Performance, Grades 3-4

PSSA-ELA scores from both 2014-15 and 2018-19 are available for 13,904 students. We compared these students' 2014-15 third- and fourth-grade PSSA performance levels to their seventh- and eighth-grade performance levels in 2018-19. Sixty percent of students who scored Below Basic in 2014-15 moved into Basic (54%) or Proficient (6%) in 2018-19 (Table 13). Additionally, 27% of students who scored at the Basic level moved into Proficient, and 15% of students who scored at the Proficient level in 2014-15 moved into Advanced in 2018-19. Table 13 shows the number and percentage of students in each 2014-15 performance level (column 1) who scored in each performance level in 2018-19 (columns 2-5).

Table 13. Five-year movement in PSSA-ELA from 2014-15 to 2018-19

2014-15 Performance (1)	2018-19 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	1,714	39%	2,364	54%	266	6%	33	1%	4,377
Basic	606	13%	2,869	59%	1,311	27%	62	1%	4,848
Proficient	114	3%	982	25%	2,202	57%	599	15%	3,897
Advanced	4	1%	19	2%	287	37%	472	60%	782
Total	2,438		6,234		4,066		1,166		13,904

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who scored in the same performance level in both years. Bold text shows the number and percentage of students who increased their performance level.

The percentage of students who scored either Proficient or Advanced increased by four points from 2014-15 to 2018-19 (34% to 38%; see Table 14).

Table 14. Summary Statistics: Year-over-year movement in PSSA-ELA from 2014-15 to 2018-19

	Proficient or Advanced 2014-15	Proficient or Advanced 2018-19	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	4,679	5,232	4,635	7,257	2,012
Percentage of Students	34%	38%	33%	52%	14%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

One-Year Trends in PSSA-Math Performance, Grades 3-8

2014-15 to 2015-16

Ten percent of students who scored in the Below Basic performance level in 2014-15 scored Basic in 2015-16 (Table 15). The largest area of upward movement, by percentage of students, was the move from Proficient to Advanced (14%); the largest movement overall was in the negative direction, as 38% of students who scored Basic moved to Below Basic. Table 15 shows the number and percentage of students in each 2014-15 performance level (column 1) who scored in each performance level the following year (columns 2-5).

Table 15. Year-over-year movement in PSSA-Math from 2014-15 to 2015-16

2014-15 Performance (1)	2015-16 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	21,630	90%	2,350	10%	176	1%	5	<1%	24,161
Basic	4,553	38%	5,856	49%	1,444	12%	62	1%	11,915
Proficient	288	5%	1,678	29%	3,020	52%	808	14%	5,794
Advanced	4	<1%	33	2%	474	24%	1,433	74%	1,944
Total	26,475		9,917		5,114		2,308		43,814

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who scored in the same performance level in both years. Bold text shows the number and percentage of students who increased their performance level.

Overall, between 2014-15 and 2015-16, 11% of students in our sample moved up at least one performance level, 16% moved down, and 73% did not move (Table 16).

Table 16. Summary Statistics: Year-over-year movement in PSSA-Math from 2014-15 to 2015-16

	Proficient or Advanced 2014-15	Proficient or Advanced 2015-16	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	7,738	7,422	4,845	31,939	7,030
Percentage of Students	18%	17%	11%	73%	16%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

2015-16 to 2016-17

One-year student performance trends from 2015-16 to 2016-17 were similar to trends from the prior year. Eleven percent of students who scored Below Basic moved into Basic, and 1% moved into Proficient. Thirteen percent of students who scored Basic moved to Proficient, and 13% of students who scored Proficient moved to Advanced (Table 17). Table 17 shows the number and percentage of students in each 2015-16 performance level (column 1) who scored in each performance level the following year (columns 2-5).

Table 17. Year-over-year movement in PSSA-Math from 2015-16 to 2016-17

2015-16 Performance (1)	2016-17 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	22,297	87%	2,928	11%	191	1%	92	<1%	25,508
Basic	3,374	33%	5,342	53%	1,337	13%	118	1%	10,171
Proficient	282	5%	1,901	33%	2,809	49%	769	13%	5,761
Advanced	4	<1%	102	4%	886	33%	1,658	63%	2,650
Total	25,957		10,273		5,223		2,637		44,090

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who scored in the same performance level in both years. Bold text shows the number and percentage of students who increased their performance level.

About a third of students who scored Basic, Proficient, or Advanced in 2015-16—or just under 15% of all students in our sample—scored one performance level lower the following year (Table 18).

Table 18. Summary Statistics: Year-over-year movement in PSSA-Math from 2015-16 to 2016-17

	Proficient or Advanced 2015-16	Proficient or Advanced 2016-17	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	8,411	7,860	5,435	32,106	6,549
Percentage of Students	19%	18%	12%	73%	15%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

2016-17 to 2017-18

Prior year math trends continued in the 2016-17 to 2017-18 data comparison. The percentage of students who scored Below Basic in 2016-17 and then Basic in 2017-18 was the same as in prior years (11%; see Table 19). However, compared to student movement from 2015-16 to 2016-17, there was a two-point increase in the percentage of students who scored Basic, then moved to Proficient; a three-point increase in the percentage of students who scored Proficient, then moved to Advanced; and a five-point increase in the percentage of students who scored Advanced and remained in that level the following year. Table 19 shows the number and percentage of students in each 2016-17 performance level (column 1) who scored in each performance level the following year (columns 2-5).

Table 19. Year-over-year movement in PSSA-Math from 2016-17 to 2017-18

2016-17 Performance (1)	2017-18 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	22,250	87%	2,871	11%	265	1%	83	<1%	25,469
Basic	3,695	36%	4,918	48%	1,502	15%	109	1%	10,224
Proficient	310	5%	1,733	30%	2,836	49%	923	16%	5,802
Advanced	42	1%	136	5%	795	26%	2,029	68%	3,002
Total	26,297		9,658		5,398		3,144		44,497

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who scored in the same performance level in both years. Bold text shows the number and percentage of students who increased their performance level.

Overall, between 2016-17 and 2017-18, 13% of students in our sample moved up at least one performance level, 15% moved down, and 72% did not move (Table 20).

Table 20. Summary Statistics: Year-over-year movement in PSSA-Math from 2016-17 to 2017-18

	Proficient or Advanced 2016-17	Proficient or Advanced 2017-18	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	8,804	8,542	5,753	32,033	6,711
Percentage of Students	20%	19%	13%	72%	15%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

2017-18 to 2018-19

Seventeen percent of students who scored in the Below Basic performance level in 2017-18 scored Basic in 2018-19 (Table 21), a six percentage point increase from the previous year-over-year comparison. There was also a four-point decrease in the percentage of students who scored Basic and slid to Below Basic the following year (32% in this comparison versus 36% from 2016-2017). However, 29% of students who scored Advanced in 2017-18 slid to Proficient in 2018-19, a three percentage point increase over the prior year. Table 21 shows the number and percentage of students in each 2017-18 performance level (column 1) who scored in each performance level the following year (columns 2-5).

Table 21. Year-over-year movement in PSSA-Math from 2017-18 to 2018-19

2017-18 Performance (1)	2018-19 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	19,461	82%	4,063	17%	288	1%	29	<1%	23,841
Basic	3,046	32%	4,884	51%	1,571	16%	83	1%	9,584
Proficient	371	6%	1,838	30%	2,987	49%	851	14%	6,047
Advanced	69	2%	152	5%	942	29%	2,117	65%	3,280
Total	22,947		10,937		5,788		3,080		42,752

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who scored in the same performance level in both years. Bold text shows the number and percentage of students who increased their performance level.

Overall, between 2017-18 and 2018-19, 16% of students in our sample moved up at least one performance level, 15% moved down, and 69% did not move (Table 22).

Table 22. Summary Statistics: Year-over-year movement in PSSA-Math from 2017-18 to 2018-19

	Proficient or Advanced 2017-18	Proficient or Advanced 2018-19	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	9,327	8,868	6,885	29,449	6,418
Percentage of Students	22%	21%	16%	69%	15%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Four-Year Trends in PSSA-Math Performance, Grades 3-4

PSSA-Math scores from both 2014-15 and 2018-19 are available for 13,937 students. We compared these students' 2014-15 third- and fourth-grade PSSA performance levels to their seventh- and eighth-grade performance levels in 2018-19. The largest area of upward movement, by percentage of students, was the move from Proficient to Advanced (19%; see Table 23). The majority of students who scored Below Basic in 2014-15 also scored Below Basic four years later (85%). Table 23 shows the number and percentage of students in each 2014-15 performance level (column 1) who scored in each performance level in 2018-19 (columns 2-5).

Table 23. Five-year movement in PSSA-Math from 2014-15 to 2018-19

2014-15 Performance (1)	2018-19 Performance								
	Below Basic (2)		Basic (3)		Proficient (4)		Advanced (5)		Total
Below Basic	6,351	85%	933	12%	176	2%	32	<1%	7,492
Basic	1,704	47%	1,250	35%	568	16%	73	2%	3,595
Proficient	260	13%	554	27%	865	42%	399	19%	2,078
Advanced	8	1%	32	4%	235	30%	497	64%	772
Total	8,323		2,769		1,844		7,001		13,937

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Notes: Gray boxes represent the number and percentage of students who scored in the same performance level in both years. Bold text shows the number and percentage of students who increased their performance level.

As on the PSSA-ELA, the percentage of students who scored Proficient or Advanced in PSSA-Math remained roughly the same from 2014-15 to 2018-19 (20% and 20%; see Table 24).

Table 24. Summary Statistics: Year-over-year movement in PSSA-Math from 2014-15 to 2018-19

	Proficient or Advanced 2014-15	Proficient or Advanced 2018-19	Students whose performance level moved up	Students whose performance level did not change	Students whose performance level moved down
Number of Students	2,850	2,845	2,181	8,963	2,793
Percentage of Students	20%	20%	16%	64%	20%

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Proficient and Advanced Trends by School, 2014-15 to 2018-19

Another way to analyze student PSSA performance across years is to look at the percentage of students who scored Proficient or Advanced at each school. For ease of analysis, we grouped schools into four buckets: 0-24%, 25-49%, 50-74%, and 75-100% Proficient or Advanced. For example, in 2014-15, there were 73 schools where less than 25% of the student population scored either Proficient or Advanced on the PSSA-ELA.

Between 2014-15 and 2018-19, the number of schools with more students scoring Proficient and Advanced on the PSSA-ELA increased. In 2014-15, there were 73 schools at which only 0-24% of students scored either Proficient or Advanced on the PSSA-ELA. By 2018-19, this number fell to 60. Meanwhile, the number of schools where over 75% of students scored Proficient or Advanced on the PSSA-ELA increased from five to eight (Table 25).

Table 25. Number of schools by percentage of students scoring Proficient or Advanced, PSSA-ELA, by year

School Year	PSSA-ELA: Number of Schools with % of Students Scoring Proficient/Advanced				
	Number of Schools	0-24% of Students	25-49% of Students	50-74% of Students	75-100% of Students
2014-15	170	73	74	18	5
2015-16	170	81	68	14	7
2016-17	167	69	73	19	6
2017-18	166	59	80	20	7
2018-19	168	60	77	23	8

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Note: Table only includes students with an attributable District school.

Similarly, the number of schools where 0-24% of students scored either Proficient or Advanced on the PSSA-Math fell from 137 to 121 between 2014-15 and 2018-19 (Table 26). The largest gain was seen in the number of schools where 25-49% of students scored either Proficient or Advanced; this number rose from 26 schools in 2014-15 to 34 schools in 2018-19. Finally, the number of schools where over 75% of students scored Proficient or Advanced increased from one to four.

Table 26. Number of schools by percentage of students scoring Proficient or Advanced, PSSA-Math, by year

School Year	PSSA-Math: Number of Schools with % of Students Scoring Proficient/Advanced				
	Number of Schools	0-24% of Students	25-49% of Students	50-74% of Students	75-100% of Students
2014-15	169	137	26	5	1
2015-16	170	138	20	10	2
2016-17	168	131	25	9	3
2017-18	166	122	32	9	3
2018-19	168	121	34	9	4

Source: SDP QlikBAM PSSA & Keystone App. Retrieved 10/16/19.

Note: Table only includes students with an attributable District school.

Conclusion

Participation rates for both PSSA-ELA and PSSA-Math remained largely consistent from 2014-15 to 2018-19, with an average of 95.6% and 95.9% students tested, respectively. While 2016-17 saw a drop in the percentage of students tested, participation rates quickly rebounded. Across grade levels, participation rates fell slightly from grades 3 to 8 for both assessments, with the largest percentage point drop between seventh and eighth grade; eighth grade had the lowest participation rate of all grade levels.

A review of student movement across performance levels on the PSSA-ELA and PSSA-Math from 2014-15 to 2018-19 shows different trends for each assessment. For PSSA-ELA, the fewest students scored Below Basic in both 2014-15 and 2018-19 (39%), with a majority of students (54%) who scored Below Basic in 2014-15 scoring Basic in 2018-19. When students slid into lower performance levels, it was most often a move from Advanced to Proficient. Of the students who scored Advanced in 2014-15, about a third (37%) scored Proficient in 2018-19. Overall, the percentage of students who scored either Proficient or Advanced rose from 2014-15 to 2018-19 (from 34% to 38%). More students scored at a different level between 2014-15 and 2018-19, with 33% of students moving up a level and 14% moving down a level, compared to roughly 21% and 16% in the year-over-year analyses.

There was less growth on the PSSA-Math assessment. Of the students who scored Below Basic in 2014-15, only about 15% scored at a higher level in 2018-19, meaning 85% scored at Below Basic in both years. The four-year movement also shows that almost half of the students (47%) who scored Basic in 2014-15 scored Below Basic in 2018-19. The percentage of students who scored Proficient or Advanced in 2014-15 was the same as in 2018-19 (20%). Compared to PSSA-ELA, more students stayed within the same Math performance level between 2014-15 and 2018-19 (64%), with fewer students scoring at a higher level (16%).

Over the past five years, the number of schools where 25% or more of students scored Proficient or Advanced on the PSSA-ELA and PSSA-Math increased. The number of schools where 0-24% of students scored either Proficient or Advanced fell from 73 to 60 for PSSA-ELA and from 137 to 121 for PSSA-Math. The number of schools where 75-100% of students scored either Proficient or Advanced increased for both tests from 2014-15 to 2018-19 (five to eight schools for PSSA-ELA; one to four schools for PSSA-Math).