

INFORMATION FROM NEWARK PUBLIC SCHOOLS ABOUT HARVARD STUDY

NEWARK PUBLIC SCHOOLS SUPERINTENDENT CHRISTOPHER CERF:

“This study confirms the progress that is being made in Newark schools and shows that reforms undertaken - particularly in areas like citywide enrollment and expansion of high quality schools - are making a real difference for Newark students. Whether you look at PARCC scores, student growth percentile, value-added scores, or graduation rates, student outcomes are trending in a positive direction in Newark. The data shows us that the seeds planted in earlier years are now yielding rewards for students. Today, thousands more Newark students are reading and doing math on grade level than just a few years ago and as a result, these students have a better chance at attending college or pursuing a meaningful career when they leave our schools”

KEY FINDINGS SHARED BY HARVARD [FROM HARVARD [PRESS RELEASE](#)]:

- **Net growth in English:** By 2015–16, Newark students in grades 4 through 8 in both district and charter schools had improved significantly in their net rate of growth in English.
- **Proven strength in math:** Prior to the reforms, Newark’s average rate of student achievement growth in math was above the state average. Net math achievement growth remained constant by 2015–16.
- **Initial decline in growth rates:** The rate of student achievement growth initially declined in both district and charter schools in English and math in the initial years of the reform, before improving in 2014–15 and 2015–16.
- **Majority of net growth caused by shifting student enrollment:** Shifting enrollment from lower- to higher-achievement growth schools—due to between-school reforms such as school closures, new school openings, and expanded student choice—was responsible for 62 percent of the gain in English.
- **K–8 charter school attendance more than doubled during reforms.** Between 2010–11 and 2015–16, the proportion of Newark’s K–8 students attending charter schools rose from 14 percent to 32 percent as part of between-school reforms.

WHAT DOES THIS MEAN FROM NEWARK’S PERSPECTIVE?

- **Newark Schools are providing better results for students.** The study shows improvement in growth rates in recent years in ELA, and shows results in Math that are consistently higher than the state average. These findings are generally aligned with [analysis](#) NPS has shared in recent years that show results across all schools are improving for Newark students.
- **Reforms have empowered parents and they are choosing wisely.** This analysis validates one of the basic bets made in Newark’s reforms: giving parents greater access to high-performing schools while closing the low-performing schools will have a positive and educationally meaningful impact on student achievement. The Kane paper reports consistent, positive value-added growth estimates for **every** year and **every** subject for the ‘between-school’ reforms - namely, expanding charters, closing the lowest performing charter and NPS schools, and universal enrollment.
- **This is one more piece of data in a growing body of evidence that shows how reforms are now improving life outcomes for Newark students.** While the study focuses on results using a very specific measure – growth on value added between 2010 and 2015-16 - [the latest PARCC results show even more continued improvement](#). When you examine the improvement of these results over time, compare Newark’s results with those from other districts, and note that graduation rates during this period are also up more than 15

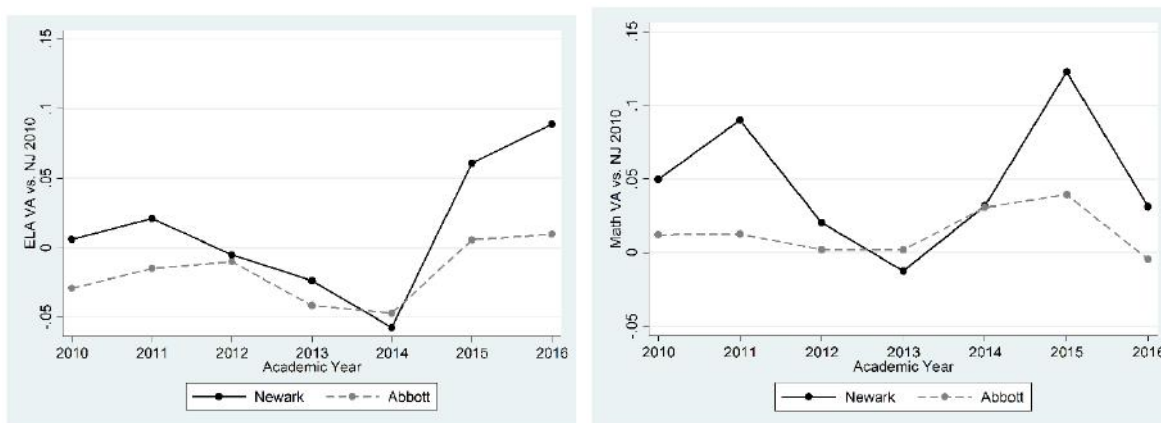
percentage points since 2010 (from around 60% to 77% in 2017), the impact becomes clear. The sum of these results show us that thousands more Newark students are reading and doing math on grade level, and graduating on time, than there were in 2010. This is the goal of any educational improvement effort and our hope is to build on this progress and continue to improve these outcomes for Newark students.

THREE THINGS TO KNOW ABOUT THE STUDY¹:

1. **Math results may in fact be more positive than ELA results:** The paper’s finding about Mathematics - where no statistically significant change was detected - refers specifically the *difference* between the 2010/11 value added score and the 2016 score. It’s important to remember that citywide Math value-added started and ended high, which may be more important when it comes to improving overall outcomes for students.

Harvard’s press release states “Proven strength in math: Prior to the reforms, Newark’s average rate of student achievement growth in math was above the state average. Net math achievement growth remained constant by 2015-16.” Building on this, the math results in the figure 1 below at right show that in 6 of the 7 years studied, value-added estimates show Newark students outperforming their peers across the state and in other urban districts. While the study focuses on the ‘not statistically significant’ difference between 2010/11 and 2016 – what educators are concerned about is the collective impact during the period. In addition, when it comes to the nature of value-added as a measure, it is not necessarily realistic for the score to go up year over year over a seven year period when starting with such a high baseline. The goal for educators and schools is to ‘add value’ by being above 0 (the state average) each year. This data shows that Newark has done this consistently, and Newark student PARCC scores now compare more favorably to peers across NJ and in other cities as a result.

Figure 1 - Trends in Math and ELA Value-added in Newark and the Abbott Districts Relative to the Rest of New Jersey (Figure 2 from Kane et. al.)



Note (from Kane et al.): Value-added is calculated here by first estimating equation (1), taking the residuals from that regression and adding to them the estimated district-year fixed effects (i.e. A'_{ijt} in the text description). Then, in an equation similar to equation (2), we regress A'_{ijt} on the interactions between a Newark indicator and year dummies, interactions between an Abbott indicator and year dummies, and year fixed effects. We plot coefficients from this second regression here.

¹ This section draws on data and analysis provided to NPS by Jesse Margolis, PHD at MarGrady Research, who has provided more in-depth analysis on Newark’s publicly available student results, as well as an analysis of studies conducted on Newark reforms.

2. Newark 2016-17 data shows further improvement: It is important to note that Kane’s paper does not include data from the 2016-17 school year, as it was not yet available. The 2016-17 data shows even stronger growth than the data analyzed by the Harvard team. Policy analysis takes time, and while this paper is being released around the same time as 2016-17 PARCC results are appearing, it’s critical to note that these results are a year old. After tremendous growth in Math from 2013-14 to 2014-15 (reported in the Kane paper and elsewhere), growth from 2014-15 to 2015-16 was uncharacteristically low, with only one grade level growing faster than the state. 2016-17’s data saw incredibly strong growth in Math, with 5 out of 6 grade levels growing faster than the state and Newark growing faster than the state overall. Given that value-added is essentially measuring year over year growth for Newark students compared with peers across the state, it is logical to conclude that Newark will again see value-added scores above state averages if 2017 is studied. (Note in math, the state outgained Newark by approximately 1pt in 2016, but in 2017 Newark outgained state by 3 pts).

Figure 2 - Grade 3-8 Proficiency Rates on the PARCC Test: 2015 to 2017 (Newark vs. NJ)

% Proficient	ELA			2-Year Change	Math			2-Year Change
	2015	2016	2017		2015	2016	2017	
Newark	29.4%	35.4%	40.8%	11.4%	25.0%	28.0%	32.4%	7.4%
NJ	49.6%	53.0%	56.0%	6.4%	39.0%	43.3%	44.2%	5.2%
Gap	20.2%	17.6%	15.2%	-5.0%	14.0%	15.3%	11.8%	-2.2%

3. This is a useful addition to the body of evidence about Newark’s progress, but the methodology employed should not be the only measure used to assess overall impact of reforms: This study uses value-added data to assess achievement growth, and compares the value added result in 2010 and 2011 with the value added result in 2016. This is a narrow, and somewhat limited, way of assessing the impact of reforms over time.

By design, value-added does not reflect overall gains, but achievement growth compared to state average, each year. As the authors note, “Because we are focusing on achievement growth in Newark *relative* to other similar New Jersey schools, we would ignore any increase in achievement or achievement growth which affected other similar schools in New Jersey simultaneously.” While valid, this ignores any net gains for Newark students that overlap with the gains made by other students in NJ. This may determine how much ‘value has been added’ compared with other districts in NJ, but it does not capture real gains made by Newark students. Even though the study shows that Newark students outpace state gains in recent years, the absolute improvement is not captured.

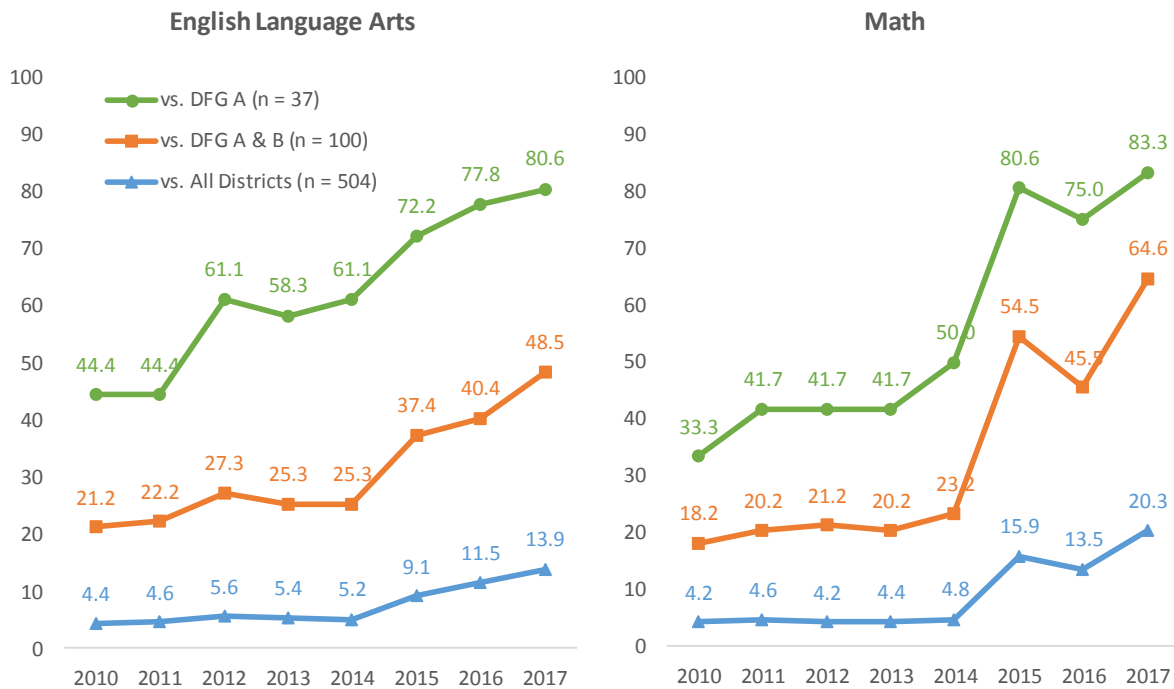
In addition, as noted in the first point of this section, focusing on the difference in value added scores also limits one’s understanding of the cumulative effect of reforms. For these reasons, examining PARCC proficiency and scale scores is also valuable, and may be a better measure of overall success, particularly where we can compare those proficiency scores with similar districts or cities in other PARCC states. This updated PARCC data is examined at length by researcher Jesse Margolis in his paper: “Moving Up: Progress in Newark’s Schools from 2010 to 2017,” available [here](#). A few of the key figures from this paper are:

Figure 3 – Newark’s Average Proficiency Rank Relative to District Factor Group (DFG) A² in ELA (2010 to 2017)

2010	2011	2012	2013	2014	2015	2016	2017
NORTH WILDWOOD CITY (182, 6)	NORTH WILDWOOD CITY (187, 7)	DOVER TOWN (1260, 71%)	DOVER TOWN (1280, 69%)	DOVER TOWN (1346, 68%)	DOVER TOWN (1282, 51%)	DOVER TOWN (1359, 58%)	DOVER TOWN (1402, 60%)
DOVER TOWN (1248, 65%)	DOVER TOWN (1233, 67%)	NORTH WILDWOOD CITY (175, 6)	QUINTON TWP (236, 61%)	NORTH WILDWOOD CITY (188, 6)	QUINTON TWP (188, 6)	QUINTON TWP (217, 49%)	LAWRENCE TWP (299, 51%)
QUINTON TWP (199, 64%)	FAIRVIEW BORO (683, 65%)	LAWRENCE TWP (297, 58%)	NORTH WILDWOOD CITY (183, 6)	BUENA REGIONAL (838, 57%)	LAWRENCE TWP (309, 41%)	LAWRENCE TWP (295, 46%)	UNION CITY (5115, 49%)
UNION CITY (4436, 58%)	QUINTON TWP (212, 62%)	QUINTON TWP (228, 57%)	BUENA REGIONAL (902, 57%)	VINELAND CITY (4435, 53%)	QUINTON TWP (212, 40%)	UNION CITY (5079, 44%)	QUINTON TWP (221, 49%)
FAIRVIEW BORO (677, 56%)	UNION CITY (4513, 59%)	UNION CITY (4630, 56%)	UNION CITY (4816, 57%)	LAWRENCE TWP (236, 53%)	WEST NEW YORK TOWN (3022, 2)	WEST NEW YORK TOWN (3156, 4)	NORTH WILDWOOD CITY (130, 4)
BUENA REGIONAL (1021, 56%)	BUENA REGIONAL (1048, 59%)	WEST NEW YORK TOWN (2881, 1)	LAWRENCE TWP (297, 56%)	UNION CITY (4995, 53%)	UNION CITY (4900, 37%)	ELIZABETH CITY (10654, 40%)	WEST NEW YORK TOWN (3300, 4)
WEST NEW YORK TOWN (2848, 1)	WEST NEW YORK TOWN (2868, 1)	BUENA REGIONAL (1002, 55%)	WEST NEW YORK TOWN (3038, 5)	WOODBINE BORO (96, 52%)	WOODBINE BORO (95, 35%)	BUENA REGIONAL (671, 38%)	ELIZABETH CITY (11063, 43%)
EAST NEWARK BORO (141, 52%)	LAWRENCE TWP (292, 54%)	FAIRVIEW BORO (693, 54%)	WOODBINE BORO (106, 54%)	WEST NEW YORK TOWN (3076, 5)	ELIZABETH CITY (10073, 33%)	NORTH WILDWOOD CITY (159, 3)	NEWARK CITY (23252, 41%)
VINELAND CITY (4090, 51%)	VINELAND CITY (4142, 52%)	VINELAND CITY (4246, 51%)	VINELAND CITY (4409, 51%)	FAIRVIEW BORO (727, 51%)	FAIRVIEW BORO (729, 33%)	FAIRVIEW BORO (743, 36%)	FAIRVIEW BORO (768, 40%)
LAWRENCE TWP (286, 51%)	ELIZABETH CITY (9605, 50%)	ELIZABETH CITY (9900, 51%)	ELIZABETH CITY (10059, 51%)	ELIZABETH CITY (10354, 50%)	VINELAND CITY (4367, 31%)	NEWARK CITY (20177, 30%)	EAST ORANGE (4374, 39%)
ELIZABETH CITY (9077, 50%)	DOWNE TWP (110, 49%)	EAST NEWARK BORO (153, 47%)	FAIRVIEW BORO (712, 51%)	QUINTON TWP (219, 50%)	NEWARK CITY (20177, 30%)	EAST ORANGE (4283, 36%)	EAST NEWARK BORO (168, 37%)
COMMERCIAL TWP (398, 50%)	EAST NEWARK BORO (156, 48%)	EAST ORANGE (4591, 46%)	DOWNE TWP (115, 51%)	DOWNE TWP (112, 47%)	PERTH AMBOY CITY (4140, 28%)	PERTH AMBOY CITY (4340, 35%)	VINELAND CITY (4688, 37%)
DOWNNE TWP (112, 49%)	KEANSBURG BORO (670, 48%)	DOWNE TWP (114, 44%)	EAST NEWARK BORO (174, 45%)	EAST ORANGE (4501, 44%)	EAST NEWARK BORO (151, 28%)	VINELAND CITY (4477, 33%)	VINELAND CITY (4672, 35%)
CITY OF ORANGE TWP (1999, 48)	EGG HARBOR CITY (283, 46%)	CITY OF ORANGE TWP (2096, 43)	MILLVILLE CITY (2319, 44%)	COMMERCIAL TWP (357, 43%)	EAST ORANGE (4115, 27%)	WOODBINE BORO (88, 33%)	PERTH AMBOY CITY (4566, 35%)
SEASIDE HEIGHTS BORO (97, 45)	CITY OF ORANGE TWP (2076, 45)	MILLVILLE CITY (2261, 42%)	ATLANTIC CITY (2783, 42%)	NEWARK CITY (21985, 43%)	CITY OF ORANGE TWP (2114, 42)	PATERSON CITY (11880, 25%)	EAST NEWARK BORO (170, 32%)
KEANSBURG BORO (677, 48%)	ATLANTIC CITY (2693, 46%)	NEWARK CITY (20864, 42%)	EAST ORANGE (4600, 44%)	NEWARK CITY (21985, 43%)	ATLANTIC CITY (2922, 25%)	ATLANTIC CITY (12584, 29%)	PASSAIC CITY (6660, 31%)
ATLANTIC CITY (2613, 46%)	SEASIDE HEIGHTS BORO (97, 45)	ATLANTIC CITY (2783, 42%)	NEWARK CITY (21491, 43%)	CITY OF ORANGE TWP (2114, 42)	MILLVILLE CITY (2306, 41%)	CITY OF ORANGE TWP (2216, 28)	MILLVILLE CITY (2153, 31%)
SEASIDE HEIGHTS BORO (97, 45)	CITY OF ORANGE TWP (2076, 45)	MILLVILLE CITY (2261, 42%)	ATLANTIC CITY (2783, 42%)	PERTH AMBOY CITY (4438, 40%)	PERTH AMBOY CITY (2943, 40%)	CITY OF ORANGE TWP (2105, 24)	DOWNE TWP (97, 31%)
EGG HARBOR CITY (290, 45%)	MILLVILLE CITY (2247, 45%)	SEASIDE HEIGHTS BORO (101, 42)	PERTH AMBOY CITY (4307, 42%)	PERTH AMBOY CITY (4438, 40%)	SEASIDE HEIGHTS BORO (96, 40)	BUENA REGIONAL (683, 24%)	PASSAIC CITY (6484, 28%)
WILDWOOD CITY (315, 45%)	EAST ORANGE (4634, 44%)	PERTH AMBOY CITY (4200, 41%)	COMMERCIAL TWP (371, 42%)	ATLANTIC CITY (2943, 40%)	PENNS GRV-CARNEY'S PT REG (9)	KEANSBURG BORO (478, 22%)	PATERSON CITY (12874, 31%)
EAST ORANGE (4611, 45%)	WOODBINE BORO (129, 43%)	KEANSBURG BORO (658, 41%)	CITY OF ORANGE TWP (2080, 41)	SEASIDE HEIGHTS BORO (96, 40)	BUENA REGIONAL (683, 24%)	KEANSBURG BORO (478, 22%)	PATERSON CITY (12874, 31%)
NEWARK CITY (20876, 44%)	NEWARK CITY (20905, 43%)	WOODBINE BORO (123, 41%)	KEANSBURG BORO (638, 41%)	PENNS GRV-CARNEY'S PT REG (9)	KEANSBURG BORO (478, 22%)	KEANSBURG BORO (478, 22%)	PLEASANTVILLE CITY (1592, 29%)
WOODBINE BORO (127, 43%)	PAULSBORO BORO (461, 42%)	PENNS GRV-CARNEY'S PT REG (9)	PATERSON CITY (12684, 40%)	PATERSON CITY (12796, 39%)	DOWNE TWP (109, 22%)	PLEASANTVILLE CITY (1556, 26%)	ATLANTIC CITY (3096, 29%)
MILLVILLE CITY (2308, 42%)	PERTH AMBOY CITY (4208, 41%)	EGG HARBOR CITY (255, 39%)	EGG HARBOR CITY (282, 40%)	EGG HARBOR CITY (278, 37%)	PASSAIC CITY (6222, 21%)	COMMERCIAL TWP (312, 26%)	PENNS GRV-CARNEY'S PT REG (9)
PERTH AMBOY CITY (4159, 42%)	COMMERCIAL TWP (408, 40%)	PATERSON CITY (12758, 38%)	PAULSBORO BORO (473, 40%)	KEANSBURG BORO (616, 37%)	SEASIDE HEIGHTS BORO (100, 21)	PENNS GRV-CARNEY'S PT REG (9)	COMMERCIAL TWP (290, 26%)
PAULSBORO BORO (483, 40%)	PENNS GRV-CARNEY'S PT REG (1)	WILDWOOD CITY (323, 37%)	PASSAIC CITY (6007, 39%)	PAULSBORO BORO (488, 36%)	IRVINGTON TOWNSHIP (2998, 21)	IRVINGTON TOWNSHIP (3076, 2)	NEW BRUNSWICK CITY (4409, 25)
PENNS GRV-CARNEY'S PT REG (1)	WILDWOOD CITY (323, 37%)	PASSAIC CITY (6007, 39%)	SEASIDE HEIGHTS BORO (83, 37)	PASSAIC CITY (6244, 36%)	PLEASANTVILLE CITY (1445, 21%)	KEANSBURG BORO (536, 22%)	IRVINGTON TOWNSHIP (3179, 25)
PLEASANTVILLE CITY (1708, 38%)	PATERSON CITY (12560, 36%)	COMMERCIAL TWP (392, 36%)	PENNS GRV-CARNEY'S PT REG (9)	EAST NEWARK BORO (157, 36%)	PENNS GRV-CARNEY'S PT REG (9)	NEW BRUNSWICK CITY (4205, 21)	KEANSBURG BORO (579, 24%)
IRVINGTON TOWNSHIP (3223, 3)	PLEASANTVILLE CITY (1724, 36%)	PASSAIC CITY (5832, 35%)	FAIRFIELD TWP (342, 36%)	PLEASANTVILLE CITY (1608, 36%)	NEW BRUNSWICK CITY (3966, 19)	TRENTON CITY (6007, 21%)	TRENTON CITY (6187, 23%)
PATERSON CITY (12333, 37%)	PASSAIC CITY (5659, 35%)	IRVINGTON TOWNSHIP (3205, 3)	PLEASANTVILLE CITY (1579, 35%)	IRVINGTON TOWNSHIP (3095, 3)	EGG HARBOR CITY (280, 19%)	EGG HARBOR CITY (292, 18%)	SEASIDE HEIGHTS BORO (102, 23)
PASSAIC CITY (5423, 36%)	IRVINGTON TOWNSHIP (3238, 3)	PAULSBORO BORO (466, 34%)	IRVINGTON TOWNSHIP (3119, 3)	FAIRFIELD TWP (265, 35%)	TRENTON CITY (5735, 17%)	BRIDGETON CITY (2577, 18%)	CAMDEN CITY (7296, 22%)
BRIDGETON CITY (2042, 34%)	FAIRFIELD TWP (370, 34%)	FAIRFIELD TWP (347, 34%)	WILDWOOD CITY (341, 32%)	NEW BRUNSWICK CITY (4015, 29)	SALEM CITY (350, 17%)	CAMDEN CITY (7081, 18%)	PAULSBORO BORO (424, 21%)
FAIRFIELD TWP (342, 33%)	BRIDGETON CITY (2116, 33%)	NEW BRUNSWICK CITY (3656, 31)	NEW BRUNSWICK CITY (3801, 31)	WILDWOOD CITY (323, 29%)	FAIRFIELD TWP (311, 16%)	PAULSBORO BORO (445, 18%)	BRIDGETON CITY (2707, 18%)
NEW BRUNSWICK CITY (3449, 32)	NEW BRUNSWICK CITY (3584, 31)	SALEM CITY (465, 31%)	SALEM CITY (422, 29%)	SALEM CITY (408, 28%)	WILDWOOD CITY (303, 15%)	SALEM CITY (378, 18%)	ASBURY PARK CITY (977, 18%)
SALEM CITY (435, 31%)	TRENTON CITY (6027, 30%)	TRENTON CITY (6058, 29%)	BRIDGETON CITY (2280, 29%)	TRENTON CITY (6026, 28%)	BRIDGETON CITY (2446, 14%)	SEASIDE HEIGHTS BORO (96, 18)	WILDWOOD CITY (327, 16%)
TRENTON CITY (5999, 29%)	SALEM CITY (376, 27%)	BRIDGETON CITY (2214, 28%)	TRENTON CITY (6033, 28%)	BRIDGETON CITY (2391, 26%)	CAMDEN CITY (6277, 14%)	WILDWOOD CITY (316, 17%)	FAIRFIELD TWP (316, 16%)
ASBURY PARK CITY (1045, 24%)	ASBURY PARK CITY (946, 24%)	ASBURY PARK CITY (946, 24%)	CAMDEN CITY (7030, 26%)	CAMDEN CITY (7058, 26%)	PAULSBORO BORO (416, 14%)	FAIRFIELD TWP (323, 15%)	SALEM CITY (371, 16%)
CAMDEN CITY (7066, 24%)	CAMDEN CITY (7020, 23%)	CAMDEN CITY (6997, 23%)	ASBURY PARK CITY (1009, 24%)	ASBURY PARK CITY (1009, 22%)	ASBURY PARK CITY (988, 12%)	ASBURY PARK CITY (951, 13%)	EGG HARBOR CITY (294, 12%)

Source: analysis of data from NJDOE web site. Note: this graph ranks all 37 school districts in District Factor Group A (DFG A) by their average proficiency rate on grade 3-8 ELA tests. Each cell in the chart shows the district name, followed by the number of students tested and the proficiency rate in parentheses. Charter schools are mapped back to their geographic district for all districts. Newark is shown in the shaded boxes.

Figure 4 – Percentile Rank for the City of Newark (Grade 3-8 Proficiency, Including Charters)



² For a definition of District Factor Groups, see <http://www.state.nj.us/education/finance/rda/dfg.shtml>