

GETTING ON TRACK TO GRADUATION

Ninth Graders' Credit Accumulation in the
School District of Philadelphia, 2014-2016

May 2018

Starting Strong: A Research Series on the Transition to High School

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Getting On Track to Graduation:

Ninth Graders' Credit Accumulation in the School District of Philadelphia, 2014-2016

Molly Crofton, Ruth Curran Neild • May 2018

Summary

Ninth grade is a critical juncture for students. Students who make a good transition to high school are likely to graduate within four years. Those who do not—who fail to earn as many credits as they should in ninth grade—face an elevated risk of dropping out of high school.

To understand how well they are supporting ninth graders, more school districts are defining what students must have accomplished at the end of the first year of high school to be considered on track to graduation. Because there is a close association between being on track in ninth grade and graduation, the ninth grade on-track rate is like a “sneak peek” into a student cohort’s eventual graduation rate. The ninth grade on-track rate can be used for district and school improvement by identifying groups of schools or students who need additional support or highlighting successful efforts and progress over time.

In 2018, the School District of Philadelphia (SDP) established a new Ninth Grade On-Track Definition. To be considered on track to graduation, a student completing the first year of high school must have earned at least one credit in each core subject (English, mathematics, science, and social studies), plus one additional credit from any subject. Annually, the District expects to report the percentage of students on track to graduation at the end of ninth grade.

In this report, we apply the 2018 Ninth Grade On-Track Definition to students who were first-time ninth graders in the SDP during the 2014-15 or 2015-16 school years. We examine how many students were on track to graduation, the characteristics of on-track and off-track students, and how on-track rates differ across high schools. Although the On-Track Definition was not in place at the time these students were in ninth grade, the analysis provides a benchmark against which progress can be measured and identifies characteristics of students and schools that might need additional support to start strong when they enter high school.

KEY FINDINGS

- **Approximately two-thirds of SDP high school students were on track to graduate at the end of their first year.** The majority of ninth-grade students attempted credits in each of the four core subject areas. Most off-track students were enrolled in—but did not earn a passing grade in—at least one core course.
- **Some off-track students were missing just one requirement, while others were missing all requirements.** More than 40 percent of the off-track students were missing one of the five required credits, while 22 percent were missing four or five of these credits. Among the students missing one requirement, science was the most common unmet requirement.



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- **Female students were more often on track (72 percent) than male students (62 percent) at the end of ninth grade.** Among off-track students, a higher percentage of males than females missed four or five requirements.
 - **On-track rates differed by race, ethnicity, and gender.** On-track rates ranged from 55 percent for Latino males to 90 percent for Asian females. Within each racial or ethnic group, a higher percentage of females were on track compared to males of the same race or ethnicity.
 - **Students receiving special education services and low-income students were more often off track—and farther off track—than their peers.** English learners were also more often off track than their peers but were missing fewer requirements than other off-track students.
 - **On-track rates varied widely by school.** At some SDP high schools, all of the students were on track at the end of ninth grade. At other schools, fewer than 50 percent of the freshmen were on track. Schools with lower on-track rates had a higher percentage of students that were far off track and were serving more special education students, English learners, and students from low-income families.

IMPLICATIONS FOR POLICY AND PRACTICE

- **A focus on ninth grade could be an important component of a strategic approach to improving Philadelphia’s high school graduation rate.** Students who start strong in ninth grade often finish strong—that is, they graduate from high school on time. Therefore, a good place for high school improvement efforts to focus is the first year of high school.
- **Increasing the ninth grade on-track rate will likely require different solutions for different types of students and schools.** Data presented in this report can help schools and the community understand the characteristics of ninth graders who fall off track and the schools that may need more support to address their high off-track rates.
- **Implementing a multi-faceted, coherent set of evidence-informed solutions can keep more ninth graders on track to graduation.** The ninth grade challenge is not unique to Philadelphia. Faced with similar off-track rates, other school districts across the country have sought to improve outcomes for ninth graders with new approaches to school organization, teacher staffing, curriculum and instruction, and student supports. It is important to implement a coherent, multi-faceted set of interventions.

This report includes a set of questions that SDP educators and the community can ask to assess how students are supported in the ninth grade transition and what more could be done (Box 4 on page 17).



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Why this study

Ninth grade – the first year of high school – is a time of both promise and peril for young people. On the one hand, high school offers greater independence, a wider range of academic and social choices, and expanded opportunities for learning and personal growth. At the same time, the new school environment and increased expectations can be intimidating and overwhelming.

Most ninth graders probably experience at least some minor stress as they adjust to the demands of high school. But for some, the transition to ninth grade results in more serious problems. These students do not earn the full set of course credits expected of freshmen and, as a result, finish their first year of high school “off track” to graduation. Evidence from Philadelphia and other cities shows that students who fall off track in ninth grade have a much higher risk of not completing high school.¹ In fact, the majority (55 percent) of students in the School District of Philadelphia’s Class of 2017 who had fallen off track in ninth grade did not graduate.²

Over the past decade, school districts across the United States have identified a strong start for ninth graders as an important component of their strategy to increase high school graduation rates. To support ninth graders, districts have developed ninth grade academies staffed by teams of teachers committed to helping ninth graders succeed.³ They have also offered specialized math and literacy curricula to help underprepared students catch up on academic skills and learn to study, take notes, and participate productively in classroom activities at the high school level.⁴ These efforts are informed by early warning systems that identify individual students who are at risk of failing courses or disengaging from school.⁵ For these students, schools have added extra supports like tutoring, counseling, and specialized interventions.⁶ Appendix A describes a conceptual model for an integrated approach to helping ninth graders succeed.

“School districts across the United States have identified a strong start for ninth graders as an important component of their strategy to increase high school graduation rates.”

¹ Elaine M. Allensworth and John Q. Easton, *The On-Track Indicator as a Predictor of High School Graduation* (Chicago: Consortium on Chicago School Research, 2005); Ruth Curran Neild and Robert Balfanz, *Unfulfilled Promise: The Dimensions and Characteristics of Philadelphia’s Dropout Crisis, 2000–2005* (Philadelphia: Philadelphia Youth Network, 2006).

² Theodore Wills, *Defining 9th Grade Success: A New 9th Grade On Track Definition* (Philadelphia: The School District of Philadelphia, 2018).

³ Nettie Legters, Leigh Parise, and Shelley Rappaport, *Implementing Ninth Grade Academies in Broward County, Florida* (New York City: MDRC, 2013); Marie-Andrée Somers and Ivonne Garcia, *Helping Students Make the Transition to High School* (New York City: MDRC, 2016).

⁴ James J. Kemple, Corinne Herlihy, and Thomas J. Smith, *Making Progress Toward Graduation: Evidence from the Talent Development High Schools Model* (New York City: MDRC, 2015); Kalena Cortes, Joshua Goodman, and Takako Nomi, “A Double Dose of Algebra,” *Education Next* 13 no. 1 (2013), 71-76; Takako Nomi, “‘Double-dose’ English as a Strategy for Improving Adolescent Literacy: Total Effect and Mediated Effect through Classroom Peer Ability Change,” *Social Science Research* 52 (2015): 716-739.

⁵ Sarah Frazelle and Aisling Nagel, *A Practitioner’s Guide to Implementing Early Warning Systems* (Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest, 2015).

⁶ Susan Sepanik, et al., *Moving Down the Track: Changing School Practices During the Second Year of Diplomas Now* (New York City: MDRC, 2015); William Corrin, Susan Sepanik, Rachel Rosen, and Andrea Shane, *Addressing Early Warning Indicators: Interim Impact Findings from the Investing in Innovation (i3) Evaluation of Diplomas Now* (New York City: MDRC, 2016).



To understand how well they are supporting ninth graders, more school districts are defining what students must have accomplished at the end of the first year of high school to be considered on track to graduation. Because there is a close association between being on track in ninth grade and graduation four years later, the ninth grade on-track rate is like a “sneak peek” into the eventual graduation rate of a cohort of students. The ninth grade on-track rate can be used for district and school improvement by identifying groups of schools or students who need additional support or highlighting successful efforts and progress over time.

“The ninth grade on-track rate is like a ‘sneak peek’ into the eventual graduation rate.”

In 2018, the School District of Philadelphia (SDP) established a new Ninth Grade On-Track Definition. To be considered on track to graduation, a student completing the first year of high school must have earned at least one credit in each core subject (English, mathematics, science, and social studies), plus one additional credit in any subject.² Annually, the SDP expects to report the percentage of students on track to graduation at the end of ninth grade.

This report provides an in-depth look at ninth grade on-track rates for the SDP Classes of 2019 and 2020. The purpose of this research is to inform planning and action by Philadelphia educators and the community. We also hope that this report will encourage empirically-grounded civic discussions about what the high school experience is and could be for the city’s young people.

What the study examined

This study examines the overall ninth grade on-track rate for the SDP, as well as the on-track rates for individual high schools and key groups of students. In addition, to understand more about students who were off track, the study examines how far off track they were and which course requirements were most often incomplete.⁷

The research questions are:

- What percentage of the SDP’s first-time ninth graders were on track to high school graduation at the end of their first year in high school?
- Among students who were off track at the end of ninth grade, how many course requirements were incomplete? Which requirements were they missing?
- Which students were most often on track to graduation at the end of ninth grade?
- How did the percentage of students who were on track to graduation differ across high schools?

⁷ This report applies the SDP’s 2018 On-Track Definition retrospectively to two recent cohorts of students to see what the on-track rates would be if the indicator had been in place when these students were ninth graders.



To answer these questions, the study team used de-identified student data from the SDP for two cohorts of first-time ninth-grade students. These students were freshmen in 2015-16 (the Class of 2019) or 2016-17 (the Class of 2020). In all, the study included 16,902 students across the two cohorts. The study does not include information for students in Philadelphia’s charter high schools, which serve approximately 30 percent of the students in grades 9-12 attending the city’s publicly-funded high schools.

To determine whether students were on track to graduate, the team used the Ninth Grade On-Track Definition developed by the SDP in 2018. According to this definition, students who are on track at the end of ninth grade have earned at least:

- One course credit in each of the four core subjects (English, mathematics, social studies, and science), and
- One additional credit from any source.

More detail about the 2018 Ninth Grade On-Track Definition and its association with graduation rates is available in a report published by the School District of Philadelphia.⁸

Box 1

Key Definitions

Cohort: In this report, a group of students who enter high school at the same time. Students who started high school in September 2015 are one cohort; students who started high school in September 2016 form a different cohort.

De-identified data: Data with all information that could be used to identify an individual (such as name, date of birth, and home address) removed. This study used data on individual students, but all identifying information was removed before the research team received the data, so no individuals could be identified.

First-time ninth grader: A student who is in their first year of high school. Because students must earn sufficient credits to be classified as tenth graders, some students who are classified as ninth graders in school records have attended high school for two or more years.

⁸ The 2018 On-Track Definition is different from the indicator displayed in the SDP’s School Progress Reports from 2017 and earlier. The previous on-track indicator required that students earn five credits during ninth grade without consideration of the subject area in which the credits were earned. Since high school students are required to obtain a certain number of credits in each subject in addition to the total credit accumulation, the indicator studied in this report provides a more complete picture of students’ progress towards graduation.; Wills, *Defining 9th Grade Success*.



Box 2

Data and Variables

This study uses student-level data for first-time ninth graders in the SDP's Classes of 2019 and 2020. The data include no personally identifying information so that no individual student could be identified.

The study sample was limited to first-time ninth graders in 2015 or 2016 who were enrolled in at least one credit-bearing course. Special education students whose Individual Education Plans (IEPs) did not require them to earn any credits toward graduation were not included in the analysis. To determine first-time ninth grade status, we examined students' enrollment data in their expected ninth grade year (e.g. the 2015-2016 school year for the Class of 2019) and, if available, their enrollment data in the prior year. Students were included in the sample if their enrollment records showed that they were enrolled in ninth grade in the studied year and, for students who had enrollment data from the prior year, in eighth grade or a lower grade in the prior year. If a student had enrollment records in more than one grade during a school year, we used the last record for that year.

Key variables are:

High school attended: The SDP data indicate the school each student attended for ninth grade. For students who attended more than one school, we used the last school attended.

Possible credits and subject area of each course attempted: For each course in which a student was enrolled, the SDP data indicated how many credits the course could contribute toward graduation and in which core subject, if any.

Credits earned for each course: The SDP data indicated the number of credits earned for each course in which they were enrolled.

English learner status: The SDP data included an indicator of whether a student was classified as English learner and receiving linguistic support.

Low-income status: The SDP data included an indicator of whether a student's family received public assistance through Temporary Assistance for Needy Families (TANF) and/or Supplemental Nutrition Assistance Program (SNAP). While this measure identifies the most economically disadvantaged students, it underestimates the number of students living at or close to poverty compared to the previously available Free and Reduced Price Lunch eligibility measures. The SDP has implemented a universal feeding program since 2014 and no longer receives the paperwork used to classify students as eligible for Free or Reduced Price lunch, a measure traditionally used to identify low-income students.

Special education status: The data included an indicator of whether students were receiving special education services other than gifted and talented services.



Box 3

The On-Track Indicator

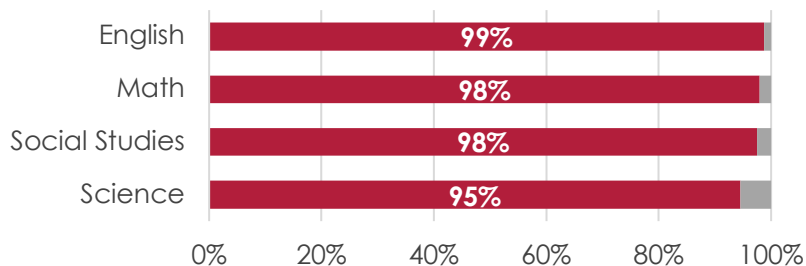
Students in the SDP's Classes of 2019 and 2020 must earn at least 23.5 course credits to graduate, including four credits in English and a minimum of three credits in each of the other core subjects (mathematics, science, and social studies). First-time ninth graders in the District typically carry a courseload of 6 to 8 credits.

According to the SDP's 2018 Ninth Grade On-Track Definition, a student is on track to graduate if, by the end of the ninth grade year, the student earns at least:

- One course credit in each of the four core subjects (English, mathematics, social studies, and science), and
- One additional course credit in any subject.

Students can fail to meet a course requirement for two reasons: (1) because they did not earn a passing grade in a core course in which they were enrolled or (2) because they were not enrolled in a core course. The vast majority of students in the study sample were enrolled in a credit-bearing course in each of the core subjects, meaning that most students had the opportunity to be on track at the end of ninth grade (Figure 1).

Figure 1. Percentage of Ninth Graders Attempting At Least 1 Credit, by Core Subject



Source: Authors' calculations based on student data provided by the School District of Philadelphia

Sometimes the choice not to enroll in a credit-bearing core course in ninth grade is intentional and informed.

- For subject areas in which fewer than four credits are required for graduation (for example, science and mathematics), it may make sense for a school to delay coursetaking in that area until tenth grade, depending on the school's mission, focus, and approach to instruction. A small number of SDP high schools do not require all ninth graders to take a science course.
- For some students, taking a catch-up course during ninth grade—a course that the SDP designates as not contributing a subject area credit toward graduation—could be the right choice. Such a course could help students brush up on mathematics skills, for example, before attempting more rigorous work.

These examples mean that there are times when a student being off track according to the SDP's indicator—or a school having a low on-track rate—is not a cause for alarm. In the vast majority of cases, however, being off track means that a student has been enrolled in a credit-bearing course but has not earned a passing grade.



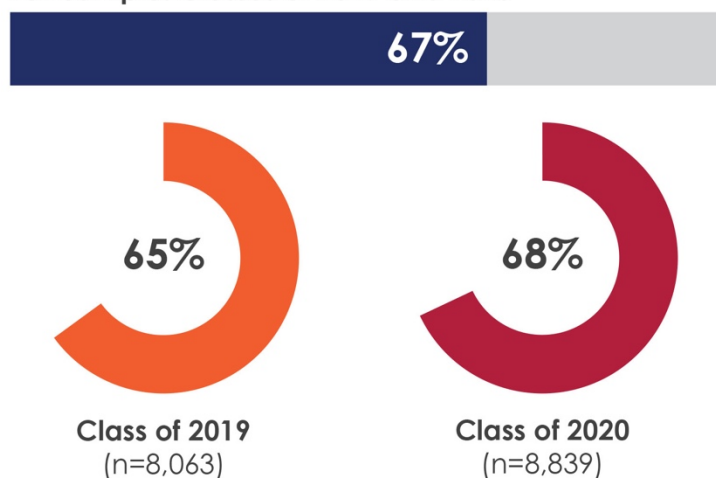
What the study found

Approximately two-thirds of ninth graders in the SDP were on track to graduate at the end of their first year in high school.

Among students who were first-time ninth graders in 2015-16 or 2016-17, 67 percent were on track to graduate at the end of their first year in high school (Figure 2).⁹ The on-track rates for the two cohorts were similar, although the rate for the later cohort (68 percent) was slightly higher than the rate for the earlier one (65 percent). Without data for additional cohorts of first-time freshmen, it is not possible to know whether this represents a true upward trend or is merely normal, year-to-year fluctuation.

Figure 2. Percentage of First-time Ninth Graders On Track, for Two Cohorts of Students

Full Sample: Classes of 2019 and 2020



Source: Authors' calculations based on student data provided by the School District of Philadelphia



More than 40 percent of off-track ninth graders were missing one course requirement, while nearly one-quarter were missing four or five course requirements.

To be considered on track to graduation, ninth graders must earn at least one credit in four academic categories (math, English, science, social studies) and at least one additional credit from any source. This means that some ninth graders may be off track because they met all but one course requirement, while others may not have met several requirements. Most seriously of all, some ninth graders may be off track because they earned none of the five course requirements. In short, there is a range of how far off track students can be.

⁹ This report applies the SDP's 2018 On-Track Definition retrospectively to two recent cohorts of students to see what the on-track rates would be if the indicator had been in place when these students were ninth graders

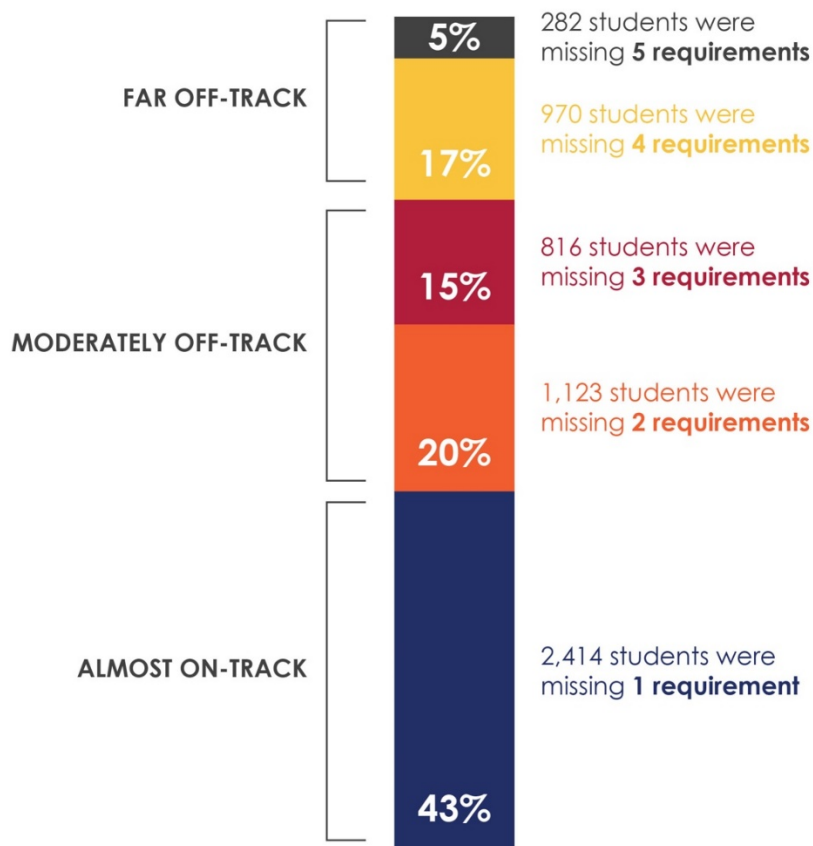


We categorized off-track ninth graders into three groups based on the number of course requirements they were missing.

- **The Almost On-Track students.** Forty-three percent of the off-track students were missing a single requirement (Figure 3). These students had not earned one of the core subject credits or, if they had earned all those credits, had not completed at least one additional credit.
- **The Moderately Off-Track students.** Thirty-five percent of the off-track students had not met two or three of the requirements. The vast majority of students in this group did not earn credits in two or three core subject areas.
- **The Far Off-Track students.** Twenty-two percent of the off-track students were missing four or five of the requirements for being on track. Seventeen percent of the off-track students were missing four requirements, which typically meant not earning credits in any of of the core subject areas. In addition, five percent of the off-track students were missing all five requirements, meaning that they did not earn a full credit in any of the core subject areas and less than one credit from any other source.



Figure 3. Number of Requirements Off-Track Students Were Missing, 2015-16 and 2016-17



Source: Authors' calculations based on student data provided by the School District of Philadelphia



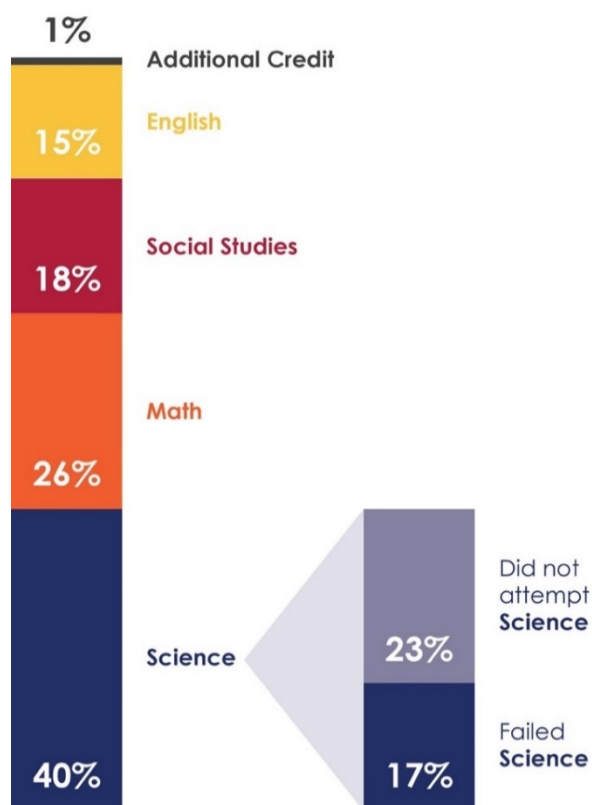
It is important to know how many requirements students are missing in order to plan appropriate strategies for getting them back on track. Students who have missed one requirement might be able to make up that credit over the summer or in a following school year and still graduate with their class. Students who are missing two or three requirements might be able to do the same but with greater effort and help with planning from their school. Those who have missed four or five requirements have not advanced far to graduation; they likely need a more intensive intervention that will address the underlying causes for their difficulty in ninth grade and give them a path to getting back on track.

This information can also indicate how well high schools are helping ninth graders get off to a good start and how many of their off-track students require particular types of support to get back on track to graduation.



Among off-track students missing a credit in a single core subject, science was the most common unmet course requirement. However, more than half of those missing a science credit were not enrolled in a science course.

Figure 4. Percentage of Almost On-Track Students Missing Each Requirement



Source: Authors' calculations based on student data provided by the School District of Philadelphia

Some students were off track only because they were not enrolled in a science course. Forty-one percent of the *almost on-track* students did not earn a science credit, and more than half of students missing the credit were not enrolled in a science course during ninth grade (Figure 4). Students who were not enrolled in science courses were clustered in a few high schools (see footnote 12 on p. 13 for more discussion of these schools).

For the other subjects, the number of students who did not enroll in the course was substantially smaller than the number who enrolled in the course but did not earn a passing grade. For example, about one-quarter of those who were missing one requirement did not earn a mathematics credit, but almost all of those students were enrolled in a mathematics course.

Notably, almost all students who earned a credit in each core subject course also earned at least one additional credit. This means that it is a very rare case that a student earns a credit in each of the four core courses but does not earn an additional fifth credit. Female students were



more often on track than male students at the end of ninth grade. Off-track females were less likely to be *far off-track* than males.

A higher percentage of female students were on track (72 percent) compared to male students (62 percent). In addition, among off-track students, more males than females were *far off-track* (missing 4 or 5 requirements). Twenty-six percent of off-track male students were *far off-track* compared to 17 percent of off-track female students.

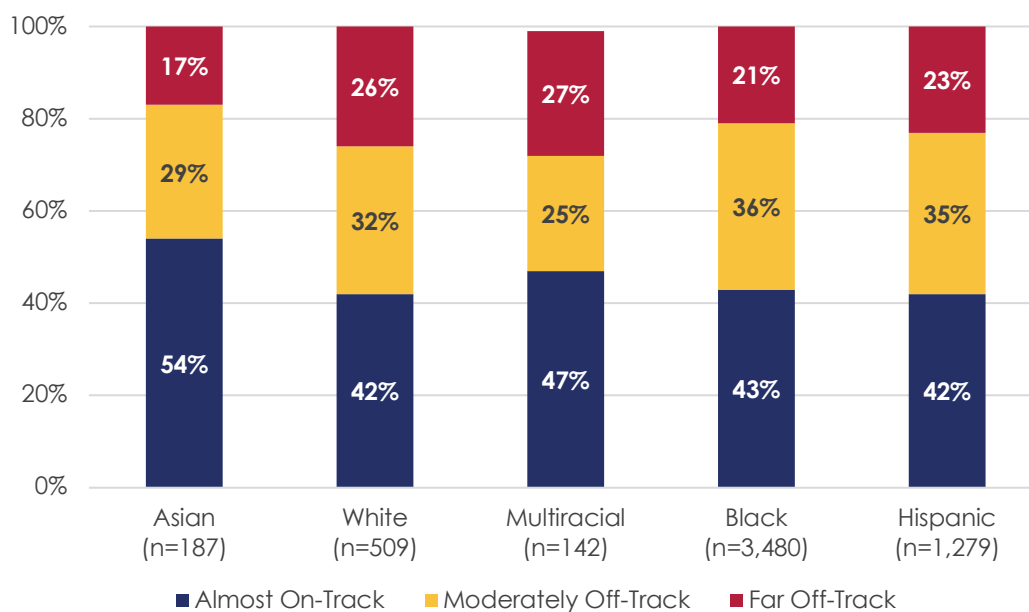
There were notable differences in on-track rates by race and ethnicity.

Asian students had the highest on-track rate (89 percent), followed by White students (76 percent) and Multiracial students (75 percent). Black and Latino student groups had the lowest on-track rates (62 percent and 61 percent, respectively).

Of the off-track students, more Asian students were closer to being on track than their peers (Figure 5). Off-track Asian students were most often *almost on-track* (54 percent, compared to 42-47 percent of off-track students in each other racial or ethnic group) and least often *far off-track* (17 percent, compared to 21-27 percent of off-track students in each other racial or ethnic group).



Figure 5. How Close Students are to Being On Track, by Race and Ethnicity



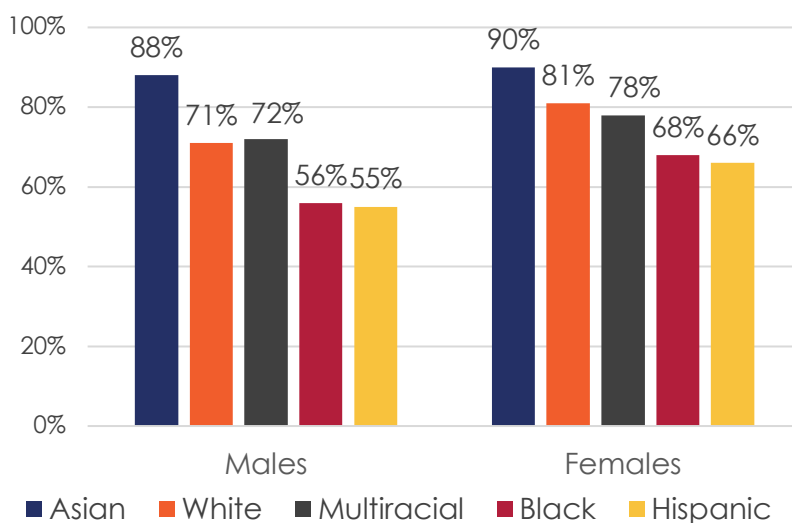
Source: Authors' calculations based on student data provided by the School District of Philadelphia



On-track rates ranged from 55 percent for Latino males to 90 percent for Asian females.

These patterns by gender and race and ethnicity also hold when looking at the data by both gender and race (Figure 6). Within each racial or ethnic group, a higher percentage of female students were on track compared to males of the same race or ethnicity. However, the percentage point difference in the on-track rate between males and females was smaller for some racial or ethnic groups than others. The on-track rate of Asian females was two percentage points higher than that of Asian males, while there was a 10 percentage point gender difference for White students, a 12 percentage point difference for Black students, and an 11 percentage point difference for Latino students.

Figure 6. Percentage of Students On Track, by Gender and Race/Ethnicity



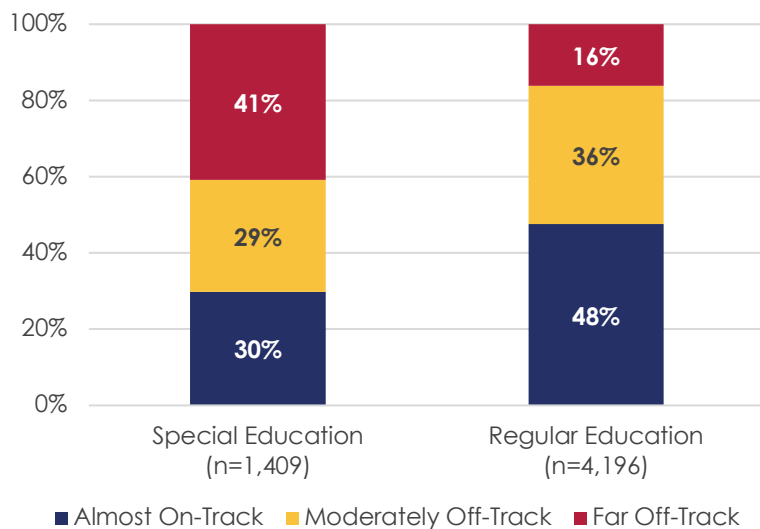
Source: Authors' calculations based on student data provided by the School District of Philadelphia

Students receiving special education services and low-income students were more often off track—and farther off track—than their peers.

Differences by special education status. Students receiving special education services were on track at a lower rate (50 percent) than their peers who were not receiving services (70 percent). In addition, special education students were farther off track than their peers not receiving special education services (Figure 7). Forty-one percent of the off-track special education students were *far off-track*, compared to 16 percent of off-track students not receiving special education services. In addition, 30 percent of off-track special education students were *almost on-track*, compared to 48 percent of off-track students not receiving special education services.



Figure 7. How Close Students are to Being On Track, by Special Education Status



Source: Authors' calculations based on student data provided by the School District of Philadelphia

All students in this study attempted at least one credit. This means that students with Individual Education Plans (IEPs) that specified no credit earning requirements were not included in this study. However, students with IEPs that modified their credit earning requirements, perhaps by reducing the total number of credits required to graduate or by requiring only credits in one or two of the core courses, would still be included in this analysis as long as they took at least one credit in their freshman year. For those students, this Ninth Grade On-Track Definition would not be fully appropriate, but the full details of the IEP would be needed to determine whether it is appropriate for each student, a task beyond the scope of this study.

Differences by family income. Low-income students, whose families received financial assistance through Temporary Assistance for Needy Families (TANF) and/or Supplemental Nutrition Assistance Program (SNAP), were on track at a lower rate (63 percent) than their peers (74 percent). While this measure identifies the most economically disadvantaged students, it underestimates the number of students living at or close to poverty compared to the previously available Free and Reduced Price Lunch eligibility measures.

In addition, off-track students whose families received assistance through TANF or SNAP were farther off track than their peers. Twenty-three percent of off-track students receiving assistance were *far off-track*, compared to 20 percent of off-track students not receiving assistance. Forty-one percent of off-track students who received government assistance were *almost on-track*, compared to 47 percent of off-track students who are not receiving assistance.



English learners were slightly more often off track, but closer to being on track, compared to English-proficient students.

A slightly lower percentage of English learners were on track compared to their peers. Sixty-four percent of English learners were on track at the end of ninth grade compared to 67 percent of students who were not classified as English learners.

Among off-track students, English learners were not as far off track as those who were not English learners. Sixteen percent of the off-track English learners were *far off-track* compared to 23 percent of other students. Most of that difference was due to a slightly higher percentage of English learners in the *moderately off-track* category: 38 percent of off-track English learners missed two or three requirements, compared to 34 percent of off-track students who were not English learners.

At some SDP high schools, no students were off track at the end of ninth grade. At other schools, more than 50 percent of the freshmen had fallen off track.

To understand how the percentage of off-track ninth graders varied across high schools, we computed the percentage of students in each school who were on track at the end of ninth grade, using the last school to which they were assigned for ninth grade.¹⁰

Table 1 shows four groups of schools by their ninth grade on-track rates. The dividing lines between groups were selected to provide meaningful categories of on-track rates as well as an approximately equal number of first-time ninth graders in each group. In Group 1, less than 50 percent of the first-time ninth graders were on track to graduation at the end of the school year. The group with the highest on-track rates, Group 4, includes schools with 90 percent or more of their students on track after ninth grade.

¹⁰ To test how school mobility affected on-track rates, we also produced the on-track rate based on the first school a student attended during the school year; we found similar results (Appendix B).



Table 1. Groups of Schools Based on Their Percentage of On-Track Ninth-Grade Students

School On-Track Rate	Group 1: Less than 50% On Track	Group 2: 50 to 64% On Track	Group 3: 65 to 89% On Track	Group 4: 90 to 100% On Track
Schools (in alphabetical order)	Building 21 C.A.P.A.* ¹¹ Edison Franklin Learning Center Franklin Kensington Business Kensington HS Lincoln Overbrook Parkway West South Phila Strawberry Mansion The U School* Workshop School*	Bartram Dobbins Fels Frankford Furness Kensington CAPA Kensington Health Kensington Urban Ed. King, Martin Luther Mastbaum, Jules Phila Virtual Academy Randolph Technical Sayre, William The Linc Washington West Phila	Bodine Constitution HS of the Future Lankenau Motivation Northeast Parkway C.C. Parkway N.W. Penn Treaty Robeson Roxborough Saul Science Leadership Academy @ Beeber	Academy @ Palumbo Arts Academy @ Rush Carver Engineering & Science Central G.A.M.P. Girls HS Hill-Freedman Masterman Phila Military Academy Science Leadership Academy Swenson Arts/Tech
Number of students in this group	3,718	4,470	4,724	3,990
Weighted Average School Graduation Rate (2015-16) ¹²	62%*	67%	85%	97%

Source: Authors' calculations based on student data provided by the School District of Philadelphia

The last row of Table 1 shows the average four-year graduation rate of the schools in that group, excluding the three schools marked with an asterisk.¹¹ While there is substantial variation in the graduation rates of schools in each category (see Appendix C for additional detail), these averages show that schools with higher ninth grade on-track rates tend to also have higher graduation rates. This is expected, since prior research shows the link between individual students being on track at the end of ninth grade and high school graduation; nevertheless, it is informative to see that this pattern holds on average at the school level as well.

¹¹ The three schools marked with an asterisk (*) in Table 1 are schools with unique curriculum models where most or all students do not take all four core courses in ninth grade. Because of that curriculum choice, most or all of their students would not be on track even if they passed all the courses they were taking. Those schools are not included in the average school graduation rates, since they have intentionally different models that make the on-track indicator less informative.

¹² The graduation rate displayed here is computed by averaging the 2015-16 graduation rates of each individual school, weighted by the number of students in the school. Schools without graduating classes as of 2015-16 are not included in this computation.



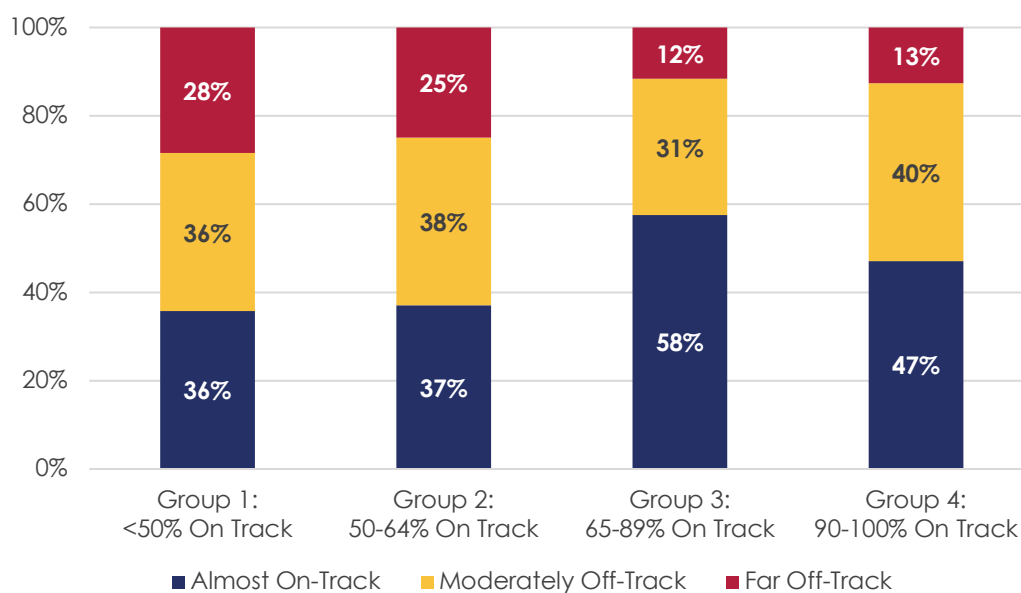
Schools with lower on-track rates also had higher percentages of students who were *far off-track*.

On average, the schools with lower on-track rates also had higher percentages of *far off-track* students (Figure 8).¹³ Put differently, schools with higher percentages of off track ninth graders also had higher percentages of students who were *far off-track*. Among the group of schools with less than 50 percent of students on track (Group 1 in Figure 8) and between 51 percent and 64 percent off track (Group 2), an average of 28 percent and 25 percent of the off-track students were *far off-track*, respectively. Among schools with higher on-track rates (Groups 3 and 4 in Figure 8), 12 percent and 13 percent of their off-track students were *far off-track*.

The group of schools with on-track rates between 65 percent and 89 percent (Group 3) had the highest percentage of *almost on-track* students, with an average of 58 percent. This suggests that, in some of those schools, a focused intervention for those *almost on-track* students could provide a substantial boost to their school-level on-track rates.



Figure 8. How Close Students are to Being On Track, by School On-Track Groups



Source: Authors' calculations based on student data provided by the School District of Philadelphia

¹³ These analyses excluded the three schools marked with an asterisk in Figure 8, since they have unique models for their freshman students that make the on-track indicator less informative.

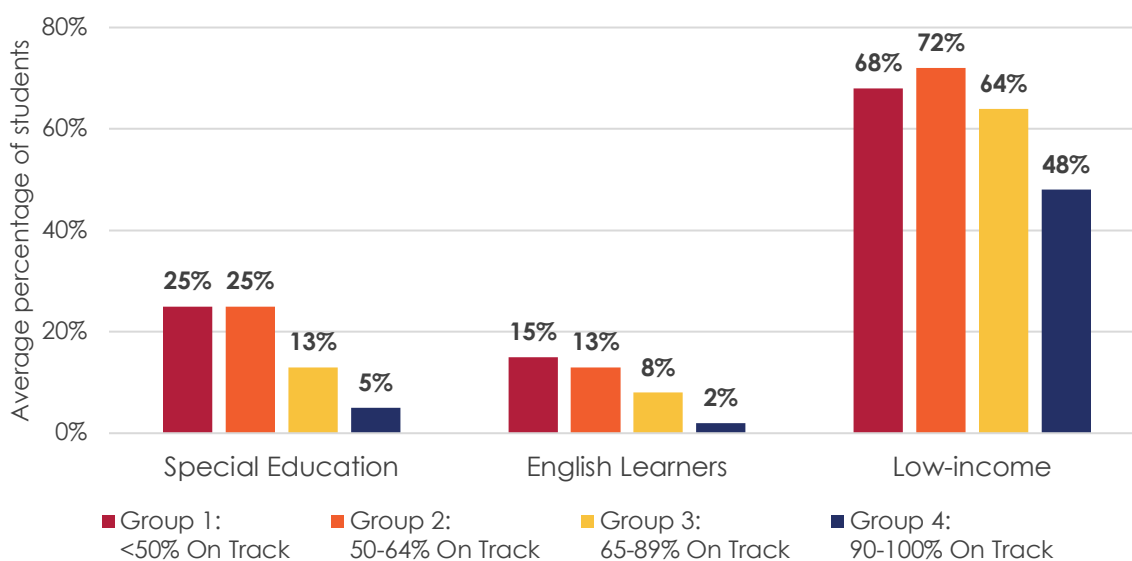


Schools with on-track rates below 65 percent were serving more students receiving special education services, English learners, and low-income students than schools with higher on-track rates.

A closer look at the schools in the lower two groups shows that those schools were serving more students receiving special education services, students identified as English learners, or low-income students (Figure 9). Earlier in this report, we showed that students in each of these classifications were more often off track compared to their peers. Thus, schools with higher percentages of these students are likely to have more students at risk of becoming off track.

One quarter of the students being served by schools in Groups 1 and 2 were special education students, compared to 13 percent and 5 percent of the students in Groups 3 and 4. Similarly, there are higher percentages of English learners in Groups 1 and 2 compared to Groups 3 and 4. Groups 1 and 2 have a higher percentage of students from families receiving assistance through TANF and/or SNAP, though the greatest difference is between Group 1 and the other three groups of schools.

Figure 9. School Percentages of Special Education, English Learner, and Low-Income Students, by School On-Track Rate



Source: Authors' calculations based on student data provided by the School District of Philadelphia



Implications for policy and practice

A focus on ninth grade could be an important component of a strategic approach to improving the city's high school graduation rate.

Every grade and every year of a student's life is important, but the transition to high school confronts students with special challenges. Students who start strong in ninth grade often finish strong, graduating from high school on time. Therefore, a good place for high school improvement efforts to focus is on the ninth grade.

We are not suggesting that students who struggle in ninth grade never had previous difficulty in school; research suggests that a great many off-track ninth graders had poor attendance, behavior, and/or grades during their middle years.¹⁴ Nor are we suggesting that helping students successfully navigate ninth grade will mean smooth sailing for the rest of their high school years. Instead, we argue that getting ninth grade right is one of the key tasks for any high school improvement effort.

Implementing a multi-faceted, coherent set of evidence-informed solutions can keep more ninth graders on track to graduation.

The ninth grade challenge is not unique to Philadelphia. Faced with similar off-track rates, other school districts across the country have sought to improve outcomes for ninth graders with new approaches to school organization, teacher staffing, curriculum and instruction, and supports for students. A coherent, multi-faceted set of approaches that districts and schools can take is described in Appendix A. Building on this model, Box 4 provides a set of key questions that educators and the community in Philadelphia can ask about how ninth graders are supported in the city's public schools. The answers to some of these questions might be provided by seasoned educators in the SDP who deeply understand what ninth graders need to succeed. Other questions might require additional systematic research.

Increasing the ninth grade on-track rate likely will require different solutions for different types of students and schools.

Data presented in this report can help schools and the community understand the characteristics of ninth graders who fall off track to graduation and the schools where being off track is more common. Different students and different schools will need approaches to the challenge that address their particular circumstances. These data are a first step in differentiating solutions by level of need and the amount of extra support that might be required.

¹⁴ Robert Balfanz, Liza Herzog, and Douglas Maclver. "Preventing Student Disengagement and Keeping Students on the Graduation Path in Urban Middle-Grades Schools: Early Identification and Effective Interventions." *Educational Psychologist* 42 no. 4 (2007), 223–235; Baltimore Education Research Consortium, *Destination Graduation: Sixth Grade Early Warning Indicators for Baltimore City Schools: Their Prevalence and Impact* (Baltimore, MD: Baltimore Education Research Consortium, 2011).



Box 4

How are we supporting ninth graders?: Questions for reflection and discussion

Supportive, orderly, and personalized school environment

- Do high schools – especially those that historically have the most off-track ninth graders – offer ninth grade academies?
 - Are all ninth graders in these schools in an academy?
 - Do ninth grade academies have dedicated, separate space in the school?
- Are ninth grade academies staffed with teachers specially selected for their sense of mission and ability to instruct and interact with ninth graders?
 - What qualities should school leaders look for in ninth grade teachers?
 - What can be done to prepare, recruit, and incentivize teachers to work with ninth graders?
- Do ninth grade teachers have regular time to meet to review student progress?
 - Do teachers have access to student progress data? What tools do they have to make sense of the data?
 - Do teacher teams have a clear sense of how to intervene with students falling off track?

Strong academic program

- Does the curriculum engage and interest students, as well as build academic skills?
 - What opportunities do students have to make choices and build on their interests?
- Do schools have a clear understanding of incoming ninth graders' academic strengths and weaknesses?
 - What tools and resources are in place to strengthen students' skills so they can succeed in a rigorous college preparatory curriculum in high school?
 - Does the schedule allow a "double-dose" of mathematics and literacy, if needed?
 - Do teachers have a repertoire of instructional strategies to help students catch up on mathematics and literacy skills – and the willingness to teach these skills?
- How and where do ninth graders learn study skills, conflict management, and strategies for classroom behavior and communication?

Targeted supports for struggling students

- Where can a student struggling with course content go for help?
- What high-quality options are available to help students catch up on credits and get back on track? Are students aware of their options?
- What is the strategy for ensuring that students who need special social or behavioral services get the help they need?

Clearly defined, collaborative focus on ninth grade

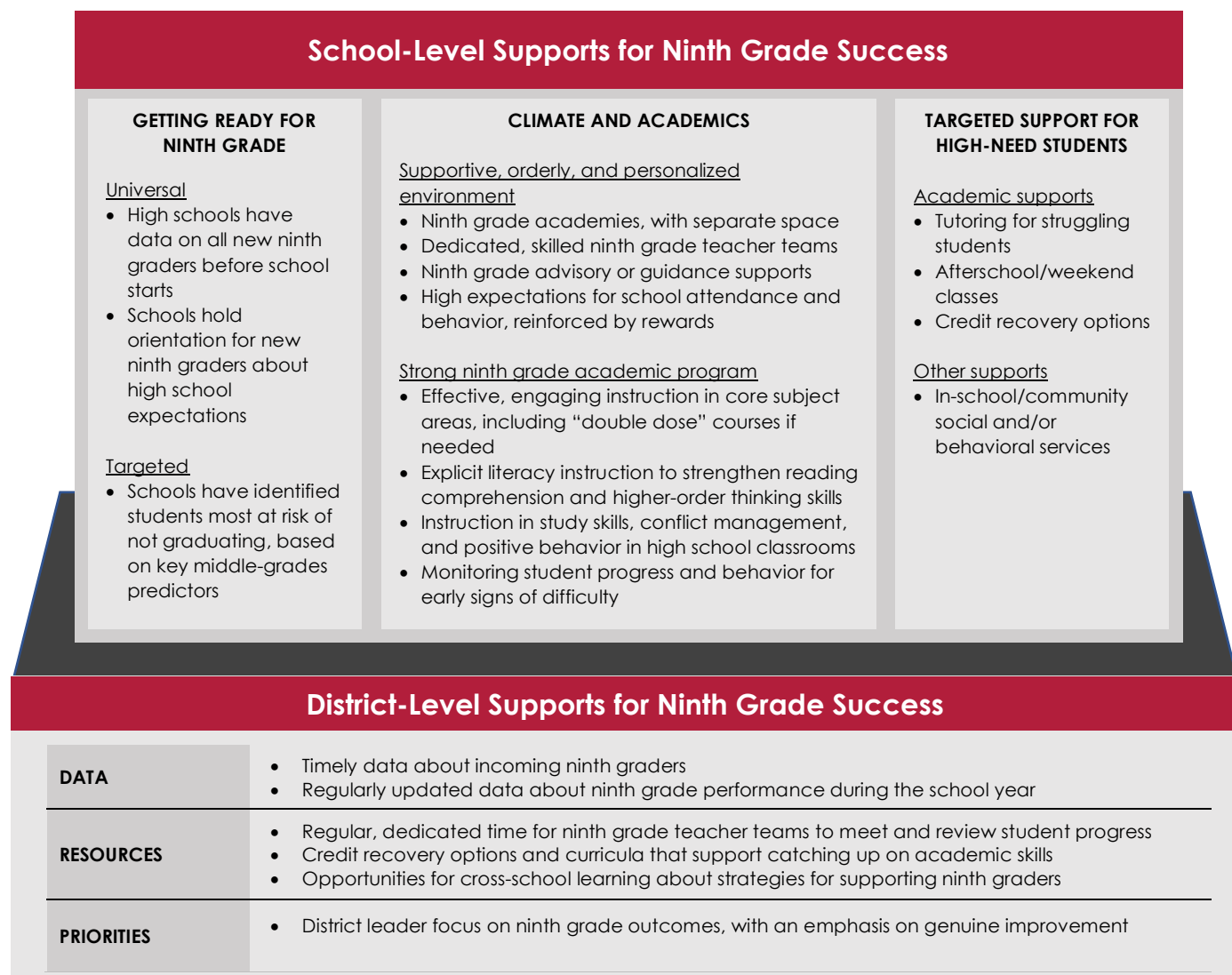
- How have school, network, and district leaders communicated their focus on ninth grade and their commitment to genuine, ongoing improvement in the ninth grade on-track rate?
- What opportunities are offered for cross-school sharing and problem-solving around the ninth grade?



Appendix A: Conceptual Framework for District and School Supports for Ninth Graders

A 2011 report from the U.S. Department of Education provides a conceptual framework for a comprehensive set of supports for ninth grade success.¹⁵ The framework includes organizational features and student services that can be implemented at the school level, as well as district policies and data infrastructure that can support the work of schools. We adapted and modified the framework to produce the model presented in this appendix (Figure A-1).

Figure A-1: Conceptual Model for School and District Supports for Ninth Grade Success



¹⁵ Constancia Warren, et al., *Final Report on the Study of Promising Ninth Grade Transition Strategies: A Study of Six High Schools* (Washington, D.C.: U.S. Department of Education, 2011).



Appendix B: School-Level On-Track Rates by First School Attended

This report presents school-level on-track rates. For students who moved schools during the course of the school year, we used the last school in which a student was enrolled for the school year. However, if off-track students were more often moving from school to school, this could unfairly bias the on-track rates at those receiving schools. To test this possibility, we conducted the same analysis using on the first school in which a student was enrolled during the school year (Table B-1). We find that the school groupings remains much the same. In fact, only three schools in this list had their on-track rates change by 5 or more percentage points. The schools in black text remained in the same group as when the analysis was done by last school enrolled. The schools in orange text dropped into a lower group, while the school in blue text moved to the higher group. When a school moved categories, their on-track rate remained very close to the group boundary.

Table B-1. Groups of Schools Based on Their Percentage of On-track Ninth-Grade Students, Using First School Enrolled

School On-track Rate	Less than 50%	50 to 64%	65 to 89%	90 to 100%
Schools (in alphabetical order)	Building 21 C.A.P.A.* Edison Franklin Learning Center Franklin Kensington Business Kensington HS Lincoln Overbrook Parkway West South Phila Strawberry Mansion The U School* Workshop School*	Bartram Dobbins Fels Frankford Furness Kensington CAPA Kensington Health Kensington Urban Ed. King, Martin Luther Mastbaum, Jules <i>Penn Treaty</i> Phila Virtual Academy Randolph Technical Sayre, William The Linc Washington West Phila	Bodine Constitution <i>Girls HS</i> <i>Hill-Freedman</i> HS of the Future Lankenau Motivation Northeast Parkway C.C. Parkway N.W. <i>Phila Military Academy</i> Robeson Roxborough Saul	Academy @ Palumbo Arts Academy @ Rush Central Engineering & Science G.A.M.P. Masterman Science Leadership Academy <i>Science</i> <i>Leadership Academy @ Beeber</i> Swenson Arts/Tech
Number of Students	3,683	4,978	4,815	3,403
Weighted Average School Graduation Rate ¹⁶	64%*	67%	87%	98%

Source: Authors' calculations based on student data provided by the School District of Philadelphia

¹⁶ The graduation rate displayed here is computed by averaging graduation rates of each individual school, weighted by the number of students in the school. If a school has not yet had a graduation class, it is not included in this computation.

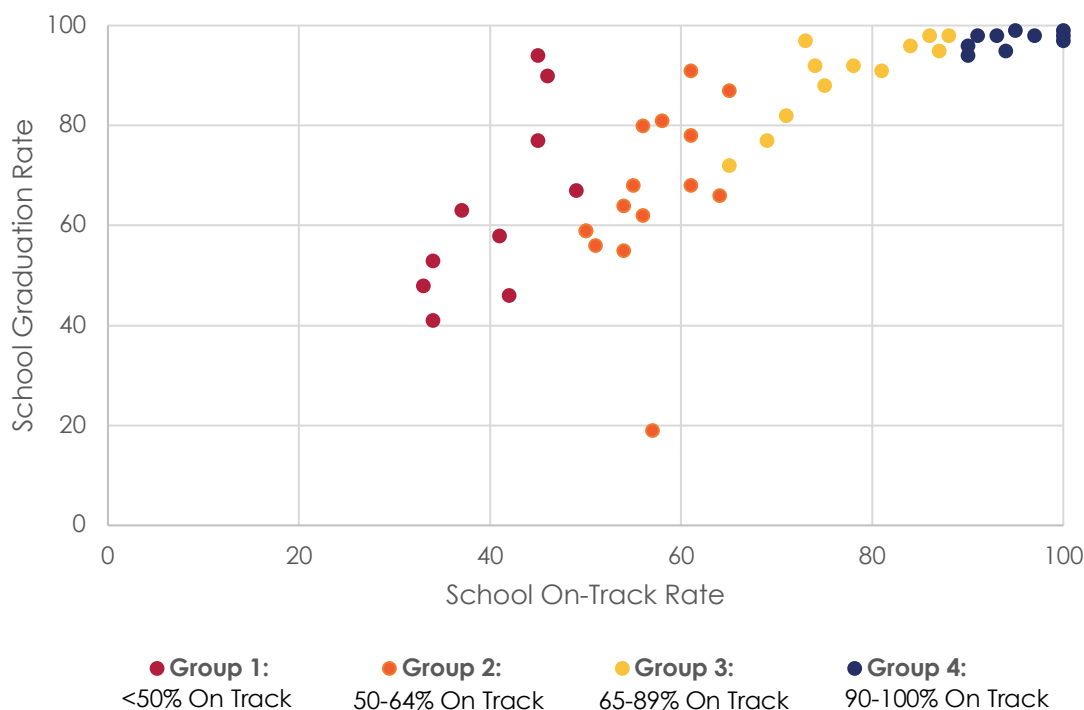


Appendix C: School-Level On-Track Rates and School Graduation Rates

When presenting the groups of schools based on their ninth grade on-track rates, we also calculated the average school graduation rates, weighted by the number of students in the school. The graduation rates and the school size numbers were both from the 2015-16 school year.

The weighted average is a useful data point, but by its nature it does not give a full picture of how much these graduation rates varied within each group of schools. To investigate the variation, we plotted each school's 2015-16 ninth grade on-track rate against its 2015-16 graduation rate (Figure C-1). This figure shows the consistent association between having a higher ninth grade on-track rate and a higher graduation rate but also highlights the weaker association between these two outcomes in the two groups of schools with the lowest on-track rates.

Figure C-1. School-Level On-Track Rates versus School Graduation Rates in 2015-16



Source: Authors' calculations based on student data provided by the School District of Philadelphia