

THE PREVENTABLE FAILURE

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Improvements in
High School
Graduation Rates
when High Schools
Focus on the Ninth-
Grade Year

Introduction

“Chicago Public Schools is elated to see the tremendous growth in the national graduation rate, especially because Chicago students are leading the way, improving at more than three times the national rate. Chicago is on the forefront...because of proven investments in keeping students on track from the moment they set foot in a high school. We congratulate every person in Chicago who helped our students outpace their peers around the country, but especially the teachers and principals who are dedicated to their success.” CEO Forest Claypool on why Chicago schools were outpacing the nation in growth in high school graduation.¹

In 2016, Chicago Public Schools (CPS) opened the school year with a spate of good news for high schools. In successive press releases, the Mayor and the CEO of CPS highlighted an array of accomplishments at the high school level, including another consecutive year of improvements in ACT scores and a record number of graduates having taken AP, IB, and other college-level courses. At the top of the list, the high school graduation rate of the 2016 class, as measured by the percent of ninth-graders who graduated within five years, reached an all-time high of 74 percent.² In what has become a September tradition, the 2017 school year began with a similar announcement, touting a new record high graduation rate of 78 percent, the “strongest one year improvement in memory.”³ After well over a decade where graduation rates seemed stubbornly low and impervious to high school reform, 2017 was the seventh consecutive year of improvement. Altogether, from 2011 to 2017, the CPS’s five-year graduation rate increased by 19 percentage points. What happened in Chicago to create such progress at a time when urban high schools were being labeled as dropout factories? There is a pretty clear consensus that graduation rates started to improve in 2011 because of an initiative that started four years prior, when the 2011 graduating class was in ninth grade.

Since 2007, CPS has been at the national forefront in using an early warning indicator, the Freshman OnTrack rate, as the primary lever to reduce school dropout. As we demonstrate in this report, the Freshman OnTrack indicator operationalized for high schools an emerging body of evidence that as students enter ninth grade, they begin to struggle and too often begin to fail. It provided a simple quantitative measure to school staff of whether ninth-graders were “on-track” to high school graduation, based on their credit completion and course failure. Indeed, while the Freshman OnTrack measure is a very minimum standard of course performance, prior to 2007, over 40 percent of ninth-graders ended the year off track. This means that the average ninth-grader in these schools failed multiple courses in ninth grade. Not surprisingly, Freshman OnTrack has proven to be a powerful predictor of high school graduation. Ninth-graders who were on track were 3.5 times more likely to graduate.

The intervention to get students on-track was rare in high school reform. Rather than buying a packaged solution that tends to over-simplify the problems schools face, CPS placed the onus of the work in the hands of the principals. To build the capacity of schools, CPS developed a series of data

¹ Chicago Public Schools, Office of Communication (2016, October 17).

² Chicago Public Schools, Office of Communication (2016, September 5).

³ Chicago Public Schools, Office of Communication (2017, August 2).

Chicago Public Schools, Office of Communications (2017, September 4).

tools that allowed educators to identify students at risk, monitor their performance and target recovery. This put meaningful data into the hands of school staff who were already dedicating time and energy to students daily and, in a decentralized school system, allowed high schools to construct their own approach. The results were impressive. From 2007 to 2017, the Freshman OnTrack rate in CPS increased from 58 to 89 percent.

Linking Freshman OnTrack to Increases in the Graduation Rate

To many it may seem that CPS is overreaching to conclude that an intervention that late in a student's education (ninth grade) and only in that grade would translate into dramatic improvements in graduation rates. Yet, this appears to be the case. Figure 1 shows the percentage of first-time ninth-graders on track to graduation and the graduation rate reported by CPS of that cohort four years later. To show the parallel movement of the Freshman OnTrack rate and graduation rate, the graph plots each rate to the cohort's ninth-grade year.

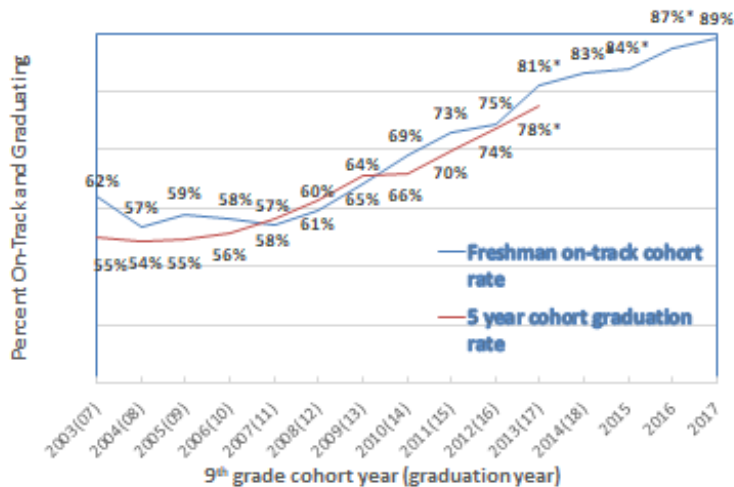
Lining up the ninth-grade year with the fifth-year graduation rate can be confusing. For example, the first data point shows the Freshman OnTrack rate for the 2003 ninth-grade cohort and the graduation rate of that cohort four years later in 2007—thus the label 2003 (07). If students get and stay on track, they would be tenth-graders in 2004, eleventh-graders in 2005, and would graduate as the “class of 2006.” The five-year indicator allows for students who are just slightly behind one more year to graduate. Adding graduates in the fifth year, raises the graduation rate between 3-5 percent.⁴

Lining up trends in Freshman OnTrack and Graduation

Figure 1 presents trends in both graduation and Freshman OnTrack as publicly reported by CPS in the yearly press releases and as reported on the CPS website. In 2015, the CPS revised its calculation of both the Freshman OnTrack measure and of graduation to be more rigorous in the treatment of unverified transfers. This change resulted in more students being included in the cohort, reducing both the on-track and graduation rates by approximately one to two percentage points a year. In addition, while the graduation and on-track cohorts are aligned, the graduation rate includes more schools because Freshman OnTrack cannot be calculated for charter schools in the city. Appendix A reports the trends in Freshman OnTrack and graduation rates, corrected for the shift in the treatment of transfers and excluding charter high schools in the graduation rate.

⁴ Allensworth & Easton (2005).

Figure 1
 Since 2007, Increases in Freshman OnTrack Rates were Matched by Increases
 in Graduation Rates Four Years Later



NOTE: * On-track and graduation rates using different treatment of transfers, see Box: Lining up trends in 9th grade OnTrack and Graduation <https://cps.edu/SchoolData/Pages/SchoolData.aspx>

Prior to 2007, both the Freshman OnTrack rate and the graduation rate were relatively stagnant, but starting with the ninth-grade class in 2007, Freshman OnTrack rates began a steady increase and the graduation rates followed suit. Given this almost parallel movement of the Freshman OnTrack and graduation trend, we might see graduation rates in the mid-80s in the next several years. As we will discuss in the next section, these improvements were particularly strong among Black and Latinx young men. It is almost unfathomable that a school system in which only slightly more than one-half of students were graduating a decade ago could produce close to a 90 percent graduation rate, yet this might be within reach.

The simple, yet significant story told in this graph, confirmed in recent analysis by the University of Chicago Consortium on School Research (UChicago Consortium), is that the most recent improvements in high school graduation rates in CPS can be attributed almost solely to improvements in the Freshman OnTrack rate in neighborhood high schools, when controlling for changes in student body characteristics, the opening of new schools, or other common explanations (see box titled *Why Did the Graduation Rates in CPS Enter a Period of Continuous Improvement*).⁵

Research Questions

Given the urgency reflected in discussions around school dropout, it is striking how few examples there are of districtwide initiatives aimed at improving the capacity of traditional high schools to increase graduation rates. Chicago's success at increasing Freshman OnTrack rates, and the long-term payoff of a focus on ninth grade, evidenced in dramatically improving graduation rates, is exciting on many fronts. Researchers studying the transition to high school have assembled a compelling case for intervention during ninth grade (see box titled *A Summary of Findings on the*

⁵ Allensworth, Healey, Gwynne, & Crespín (2016).

Importance of Ninth Grade). Yet few would have predicted that improvement in Freshman OnTrack rates across so many high schools would result in a historic transformation of what was formerly viewed as a systemic and intractable problem in urban high schools.

Often in education, researchers and administrators reach for a magic solution without an understanding of why or how an approach is designed to work and whether there is evidence that it does across contexts. Freshman OnTrack is neither a packaged program nor magic solution. The intervention supports high school staff to use data in order to get ninth-graders to school on time, attend classes once there, hand in homework, and get extra help when needed. This kind of flexible intervention may sound like common sense, yet high schools were simply not doing it. At the same time, the main critique of the Freshman OnTrack research is that a comparison of the graduation rates of on- and off-track students may significantly overstate the benefits of getting students on track. Knowing that students who pass courses in ninth grade are more likely to graduate than those who fail should not necessarily tell us whether changing the status of those off-track students (i.e., supporting them to get on-track in ninth grade) would lead to improved performance in subsequent grades. Within the same schools, critics contend there must be a reason that off-track students are failing, and being off-track may simply be a harbinger of academic disengagement that started long before the ninth grade. Many predicted that short-term interventions would only delay the inevitable.

Thus, researchers did not know for sure whether improvements in ninth grade would be either sustained, substantially lessened in later grades like a fade-out effect, or show little improvement in graduation rates. Nor was there clear evidence that the benefits of this short-term intervention would have similar effects across students. In fact, some would argue that a focus on improving Freshman OnTrack rates could create incentives for high schools to promote unqualified students, so that students would end up less prepared as tenth- and eleventh-graders.

In addition to questions about the efficacy of focusing on Freshman OnTrack rates for improving graduation rates, policymakers and educators often raise the concern that there may be unintended consequences for schools by working to prevent ninth-grade failure. Schools may pay a price for increasing Freshman OnTrack rates because retaining lower-performing or otherwise more academically struggling students could ultimately lower test scores. Furthermore, in an age where schools need to focus on college readiness, an intervention that may just turn Fs into Ds may send the wrong message to students, as well as teachers, that simply passing classes is what is important, undermining a focus on college readiness.

The dramatic improvements in on-track rates in Chicago offer a unique opportunity to bring new evidence to these debates. In schools that substantially improved on-track rates, we can compare the performance of ninth-grade cohorts' pre and post improvement through to graduation. To be specific, we focus on four central questions:

- 1) Is there evidence that changes in Freshman OnTrack rates are associated with improvements in the proportion of students who are on-track in tenth grade, on-track in eleventh grade and, ultimately, who graduate on time?
- 2) To what extent do improvements in Freshman OnTrack rates have the same or different effects on graduation for students with different levels of entering achievement?
- 3) To what extent were increases in Freshman OnTrack rates driven by schools making

- marginal improvements to student performance (e.g., shifting students from Fs to Ds, focusing on students with only one semester F in a core course)?
- 4) Is there evidence that high schools face a tradeoff between improving Freshman OnTrack and graduation rates and raising achievement test scores?

Outline of this Report

One of the most distinctive characteristics of CPS is that school governance is decentralized. In the late 1980s, the landmark Chicago School Reform Act devolved substantial resources and authority to local schools. Over the past two decades, much of the authority of Local School Councils has been taken back, but high school principals continue to have autonomy over hiring and the setting of educational priorities within their schools. Decentralization meant that high schools differed in the extent to which they focused on improving ninth-grade year outcomes. While the Freshman OnTrack rate in Chicago did not increase substantially between the 2007–08 and 2008–09 school years, three high schools—referred to in this report as “early movers”—increased Freshman OnTrack rates by over 10 percentage points in a single year. The next year, the district average Freshman OnTrack rate increased and 17 high schools—referred to in this report as “secondary movers”—produced and sustained significantly above-average growth in Freshman OnTrack rates. This report focuses on these 20 high schools for two reasons. First, because we can follow the ninth-grade cohorts in these schools through to graduation, and second, because there is a clear demarcation point for this subset of schools between when there was little attention to Freshman OnTrack rates and marked improvement that allows us to isolate the effects of changes in students’ trajectories.

Chapter 1 of this report describes in greater detail the growth in Freshman OnTrack rates from 2007–13, focusing specifically on two aspects that make the Freshman OnTrack story in Chicago unique: 1) Freshman OnTrack rates showed continuous improvement from 2007 to 2013 despite five changes in the leadership of CPS, and 2) improvements in Freshman OnTrack rates were greatest among the lowest-performing schools and those students with the highest rates of failure in the ninth grade.

Chapter 2 addresses the link between improved Freshman OnTrack rates and improved graduation rates and presents in-depth examples of three schools to illustrate our methodological approach. The premise of our approach is that because these schools made such substantial improvements in a short period of time, we can use a pre- and post-cohort comparison to examine whether the cohorts with increased Freshman OnTrack rates continued to do better in tenth and eleventh grades; and whether they were more likely to graduate. The focus of this section is on developing new indicators and illustrating the use of these indicators in our early mover schools.

Chapter 3 extends our analysis to answers all four research questions using a diverse group of 17 secondary mover high schools that showed significant improvement in the 2008–09 school year. Extending our analysis to these schools provides a much more robust test of whether increases in Freshman OnTrack rates were sustained and led to graduation increases across a wide variety of schools. In addition, the large sample allows us to look at differences in the payoffs to graduation by prior achievement, to assess whether schools focused on a single cutoff and, therefore, only produced an overly narrow set of improvements such as shifting Fs to Ds, and to note any possible changes in standardized test scores in eleventh-grade.

Finally, in the Interpretive Summary, we place our results in the context of other high school reforms that have focused on ninth grade, as well as in the context of the continued progress in Freshman OnTrack rates that have taken place since the first year of improvement in the 20 high schools that are analyzed in this report. We then draw three takeaways, or lessons learned, for what these findings may tell us more generally about designing effective approaches to reducing dropout rates. We also raise a set of questions for further research.

Why Did the Graduation Rates in CPS Enter a Period of Continuous Improvement?

In the summer of 2016, a team of researchers from the UChicago Consortium, led by executive director Elaine Allensworth, sought to answer the question of what might be generating consistent increases in graduation rates in CPS. Dropout and graduation statistics are often contentious in urban areas because there are many ways in which high school graduation rates can improve without fundamental change in high schools. For example, demographic changes in the student body or improvements in the elementary and middle grades could produce students that are entering high school better prepared for ninth grade, resulting in increases in graduation. Graduation rates can also be manipulated by changing who gets counted as dropouts or graduates. Also, claims of cheating are often raised whenever high stakes accountability measures are tied to student outcomes such as standardized test scores. Finally, citywide graduation rates can increase by changing the types or composition of schools with no change in the graduation rate of traditional high schools. Notably, during this time period, Chicago embarked on a controversial effort, “Renaissance 2010,” that intended to do just that by closing the “dropout factories” in order to open an array of charters, selective enrollment high schools, and specialized new schools.^A

The Consortium report, *High School Graduation Rates through Two Decades of District Change* looked closely at each of these possible explanations.^B First, the UChicago Consortium found that although the achievement level of entering students had improved and helped to drive graduation rates, this was only the case until 2007—after which incoming achievement rates leveled off. Second, while investigative reports did uncover inflated data which led to changes in how CPS calculates graduation and dropout rates, the Consortium research team concluded that the growth could not be explained by differences in calculation (who is counted and how). Third, the UChicago Consortium also found that changes in the composition of students or schools, or the addition of new schools were also not responsible for the improved graduation rates—which were concentrated in traditional high schools. Altogether, the UChicago Consortium concluded that the improved graduation rates were directly linked to the Freshman OnTrack rate and that this was the primary explanation for the continual upward trend in the CPS district rate.

^A U.S. Department of Education (2012, March 19).

^B Allensworth et al. (2016).

Chapter 1

The Freshman OnTrack Indicator in Chicago Public Schools: From Early Indicator to Core Strategy for Dropout Prevention

The American high school is a unique institution. In most high schools in Chicago, students typically take seven classes each day, one after another, in 50-minute periods. They must learn subject material taught by seven different teachers, each with their own expectations, methods of assessing students, and grading criteria. By union contract, teachers have preparation periods, but student study halls were dropped in the mid-1990s to accommodate additional graduation requirements. And, in a school system where less than one-half of students attend their neighborhood high school, ninth-grade students often have to travel long distances and rely on public transportation to get to and from school. When principals in professional development activities shadow students for a day, a common reaction is just how exhausting it is to manage ninth-graders' schedules.

Most importantly, with no system to monitor students and no adults working to identify and correct problems, students are largely managing this on their own. The seventh-period teacher does not know that the young woman who misses her class every day is present in sixth period, but leaves to pick up her brother after school. No one knows that this student is afraid of telling her parents about this conflict because the family is facing financial difficulty and she does not want to add another burden. No other teachers are aware that another student, who entered high school with high grades and strong skills, is flunking French because it is an immersion class where the teacher refuses to answer questions in English. It remains unidentified that he is not completing his homework because he does not understand that the homework assignment is written on the board under the heading *Devoirs*. All of these and many other examples compound to create high course failure rates in ninth grade.

This description of how and why students were failing courses in the ninth grade was something educators had not heard before. It challenged the prevailing assumptions that educators have, and put their role in producing student success and failure front and center. In two reports, *The On-Track Indicator as a Predictor of High School Graduation* and *What Matters for Staying On-Track and Graduating in Chicago Public Schools*, Consortium researchers Elaine Allensworth and John Q. Easton further demonstrated the clear link between these academic difficulties in the ninth grade and students' chances of graduating.⁶ Over the next several years, as this report shows, reducing ninth-grade course failure became a point of coherent intervention for high school reform at both the district and school level. A new unit of CPS, called Graduation Pathways, pioneered a data-driven approach to monitoring ninth-grade performance, beginning with flagging students who might be at risk for failing even before the school year started, identifying attendance problems, flagging poor course performance each quarter, and finally, providing timely guidance about which students could best benefit from limited credit recovery slots available.

In this report, we focus on evaluating the impact of improvements in Freshman OnTrack rates in a set of schools that showed significant improvement during the first two years of the Graduation

⁶ Allensworth & Easton (2005); Allensworth & Easton (2007).

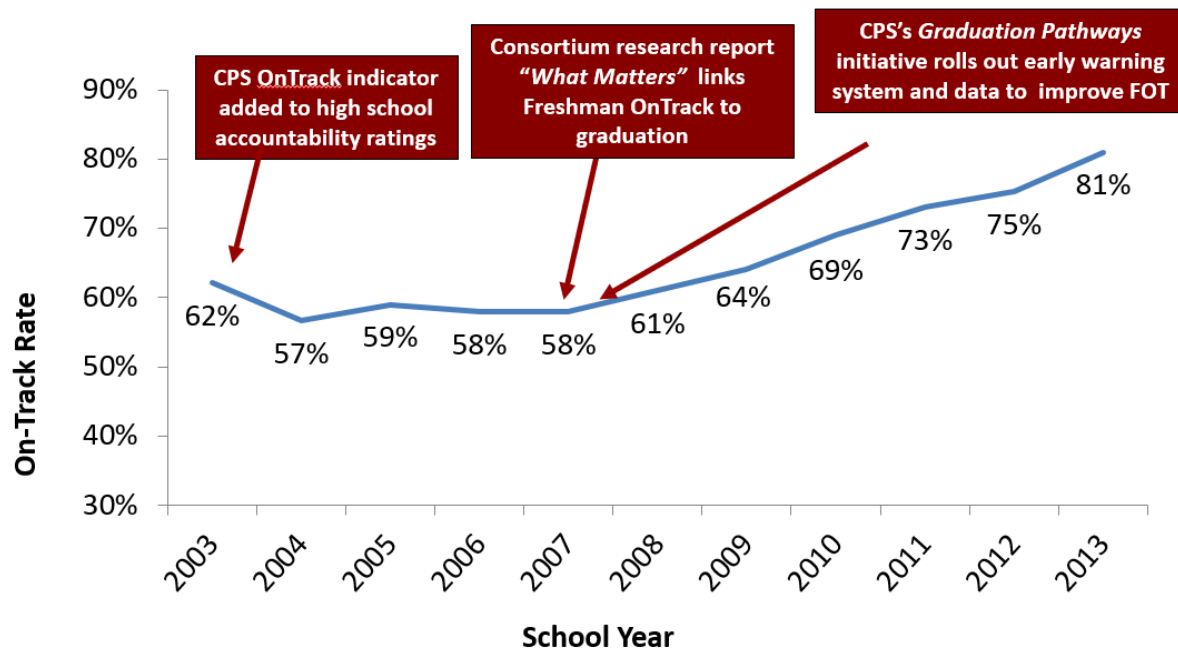
Pathways initiative. In this chapter, we discuss the rise of Freshman OnTrack rates across the district and describe how improvements were distributed among schools and by student characteristics. More remarkably, Freshman OnTrack broke the rules when it came to education reform. Improvements in Freshman OnTrack rates were the largest among schools and students that previous reform efforts had left behind.

The Freshman OnTrack Indicator in the Chicago Public Schools

CPS began using the Freshman OnTrack indicator when, early in his administration, CEO Arne Duncan included the percentage of ninth-graders on-track for graduation in the high school accountability system. Adopting the Freshman OnTrack indicator as an accountability measure would seem a simple addition with a straightforward implication—hold schools accountable for their Freshman OnTrack rates, a leading indicator for high school graduation, and they will work on the problem and improve on-track rates. Figure 2 shows the Freshman OnTrack rate in CPS from 2003 (the year before the Duncan administration first included the rate as an indicator on CPS’s high school report card) through the 2013–14 school year. To maintain the same schools and methodology, we use the 2013–14 school year as an end point.⁷

Figure 2

Freshman OnTrack rates began to steadily improve following the release of the Consortium report and multiple initiatives focused on improving Freshman OnTrack.



Note: Figure represents first-time ninth-graders not in charter or alternative schools and not with special education status. CPS reports Freshman OnTrack rates in spring. In 2015, CPS changed its Freshman OnTrack calculation to adjust for unverified transfers. See Appendix A.

⁷ To maintain the same schools and methodology in this study, we use the 2013–14 school year as an end point for multiple reasons. First, CPS opened and closed schools in 2014. Second, the EXPLORE test as a district metric was discontinued. Finally, the Freshman OnTrack rate was slightly revised at this time.

Despite its presence on school accountability reports, Freshman OnTrack rates showed little movement between 2003 and the 2007 school years. One potential reason for this was that high school educators did not fully understand what the indicator represented and the connection between being on-track in freshman year and later graduation. This became clear in 2005 when the Consortium directors Elaine Allensworth and John Q. Easton briefed central office leaders, along with all high school principals, on the findings of a report on graduation and dropout trends. Principals indicated that they lacked sufficient information to fully understand the dropout problem in their schools, how to develop interventions, and monitor their success. At this same time, Consortium researchers concluded they must return to the initial findings that generated the Freshman OnTrack indicator to ensure that the link between it and graduation held in all subgroups. They updated their analysis and released a short report that clearly defined the Freshman OnTrack indicator and demonstrated its relationship to high school graduation.⁸

What Matters Report and the Graduation Pathways Initiative

While focusing on improving the ninth-grade year experience was shown to be an effective strategy for improving graduation outcomes, schools still needed a strategy to improve Freshman OnTrack rates.⁹ A 2007 report, *What Matters for Staying on Track and Graduating in Chicago Public High Schools*, focused on identifying the underlying predictors of being on-track and suggested clear strategies for improvement in Freshman OnTrack rates. These included working on attendance, monitoring grades from the beginning of the school year, and intervening quickly when students began to have difficulty.¹⁰ On the strength of the findings, the Duncan administration used the opening of the school year to focus high schools on their ninth-graders. As a result, high schools in the city organized ninth-grade orientations and incorporated this report into the beginning of their school years. CEO Duncan sent a letter home to parents of all 30,000 incoming ninth-graders with a brief, user-friendly, synopsis of the report, making clear how students and families could partner with school staff toward the goal of high school graduation.

Most importantly, the Office of Graduation Pathways provided real-time data that identified ninth-graders who were at risk, as early as the first quarter (see Figure 3). Working closely with Consortium researchers, the Office of Graduation Pathways developed a series of data tools, including: 1) a “freshman watch list” that flagged incoming ninth-graders at risk of weak attendance and poor academic performance, 2) monthly “freshmen success reports” that identified students who were having difficulty and might be in need of intervention, and 3) a “credit recovery” report that flagged all students in the spring semester who needed to make up credits in core classes to be on-track to graduate. These reports filled a significant gap in high school’s previous access to data. At the time of this initiative, high school principals did not have access to information on the prior grades and attendance of students because elementary school grades and attendance were not available online and existed only on paper “life cards.” The data system for high school grades and transcripts was also not enabled for high school educators to look across student performance by group or by grade and conduct an analysis of how, for example, failures differed across teachers. While one important strategy for improving Freshman OnTrack rates required identifying which students were at risk given their attendance, the data system at the time did not allow for a principal

⁸ Allensworth & Easton (2007).

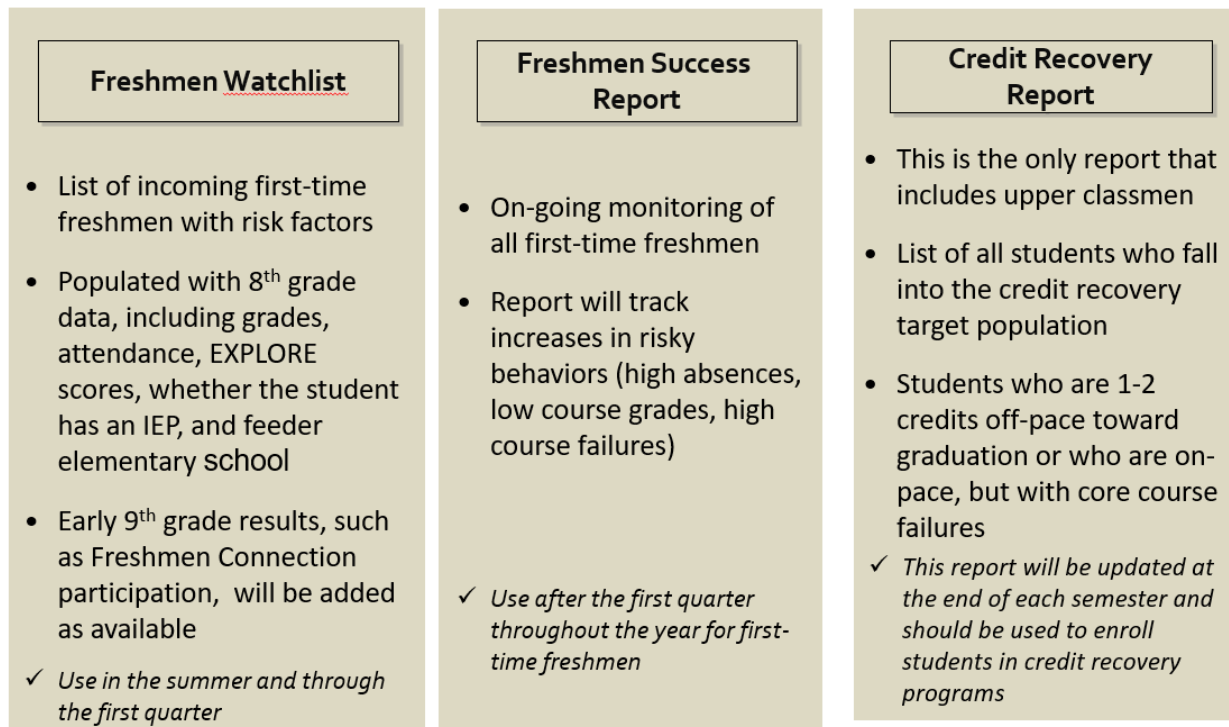
⁹ Allensworth (2013).

¹⁰ Allensworth & Easton (2007).

to link cumulative days absent with course outcomes. Thus, the Graduation Pathways innovation and effort gave principals an entirely new tool to manage problems in real time. By aiding principals in focusing their attention to data that mattered most for high school completion, school leaders could now see links that had previously seemed to be discrete and multiple problems residing within individual students.¹¹ Now, they could begin to identify common systemic, teacher, and student causes—making change possible at multiple levels.

Figure 3

Early Warning Reporting System: Timely Data Supporting Data-Driven Leadership—This Figure from 2007, Demonstrates the Roll-Out of CPS’s Approach to Data Driven Support for Improving Freshman OnTrack



Note: Kelly Sparks, Office of Graduation Pathways, Chicago Public Schools (2007)

¹¹ Moeller, Seeskin, & Nagaoka (2018).

The Network for College Success and the UChicago Consortium Freshman OnTrack Individual School Report

In the same year that the UChicago Consortium began working closely with the Office of Graduation Pathways, Consortium Co-Director Melissa Roderick began a deeper engagement with a set of high school principals that came together to form the Network for College Success (NCS), which is housed at the University of Chicago's Crown Family School of Social Work, Policy, and Practice. The NCS began in 2006 in response to both reports on the ninth-grade experience and research by Roderick and colleagues around the determinants of college access and success. Principals expressed a desire for a professional learning community to interact more deeply with researchers around the critical determinants of high school graduation, college access, and college success.

To support this initiative, the NCS created individual school reports that allowed high school educators to analyze the problems as they developed within their building, assess progress for various achievement groups compared to citywide averages, and track changes over time. These school reports were co-developed for NCS schools and were then created for every high school in the city. The NCS schools were not the only group of principals who embraced a focus on the Freshman OnTrack rate as a key lever to improvement. In the next two chapters, we look at 20 schools that showed dramatic and sustained improvement in Freshman OnTrack rates—most of these were not NCS schools. However, the analytic reports developed by the UChicago Consortium and the NCS provided principals with the data and feedback necessary to develop innovative solutions within their schools. Thus, from the beginning in Chicago, improving Freshman OnTrack rates became a focal point for school reform that was not solely driven by one central administration. The school level data reports empowered individual principals to use research-based solutions as a central mechanism to drive improvement.

The Ninth Grade On-Track Indicator

The Freshman OnTrack indicator, which has become a focal point for high school educators, was not initially developed for use by high schools.^C In the late 1990s, the UChicago Consortium was supporting the evaluation of GEARUP, a college access program operating in the middle grades in Chicago. GEAR UP administrators hoped to provide participating schools with an assessment of how their former students were doing in high school. While educators and researchers often argue that it is important to credit schools for student success and graduation, holding schools accountable for graduation rates presents a Catch 22. The graduation rate reflects the impact of work done four years prior or, in the case of elementary schools, 5-6 years prior. Early indicators can make it possible to assess whether students are successful on proximal outcomes. They also can suggest, given their relationship to graduation, longer-term outcomes would also change if the outcomes measured by the early indicator improved.

Academic difficulty in the ninth grade seemed a likely candidate for an early indicator. In the first Consortium study on the ninth-grade transition, Roderick and Camburn documented that high rates of course failure in ninth grade, even among students with adequate entering skills, led to a spiral of failure and disengagement.^D In developing an indicator, Consortium researcher Shazia Miller formalized the link between high rates of course failure and graduation by linking course failure directly to graduation requirements. In order to graduate, students must accumulate 24 total semester credits and meet specific graduation requirements in major subjects. In core courses in CPS this includes: four years of English; three years each of math, science, and social studies; and two years of foreign language. Students were on-track to graduate if:

- The students had five or more total credits, and
- Failed no more than one semester of a core course.^E

The criteria was a minimum allowing for students to make up credits later on, and in the case of core credits, get back on-track after summer school.

Ninth grade “on-track” proved to be a powerful leading indicator of graduation. In 2005, 40 percent of CPS first-time ninth-graders were off-track at the end of ninth grade and only 22 percent of these students graduated four years later. In a dramatic contrast, 81 percent of students who were on-track at the end of ninth grade graduated within four years. Thus, students who were on-track in ninth grade were 3.5 times more likely to graduate than students who were off-track.

^C For further discussion of the Freshman OnTrack indicator, see Roderick, Easton, & Sebring (2009).

^D Roderick & Camburn (1996); Roderick & Camburn (1999).

^E Miller, Allensworth, & Kochanek (2002).

Improvements in Freshman OnTrack Rates across Schools and Student Subgroups

A consistent theme in the UChicago Consortium’s past research, as well as education research more generally, is that new initiatives often create the conditions for reform but also act as sorting mechanisms that stratify schools according to their initial capacity to respond to new resources, conditions, or incentives. To give one example, Consortium research on the impact of the landmark 1989 Chicago School Reform Act, which decentralized school governance, concluded that while there was evidence that many Chicago schools improved during the first wave of school reform, a substantial group of schools were left behind, largely because the schools lacked the institutional capacity to respond to the incentives and resources provided by decentralization.¹² A subsequent analysis of trends in academic productivity during the early 1990s concluded that decentralization was associated with widening inequalities in student achievement across schools.¹³

In sharp contrast, from 2005 to 2013, those schools and students with the lowest Freshman OnTrack rates made, by far, the most dramatic improvements. In 2005, Freshman OnTrack rates varied widely across high schools, but efforts around on-track rates led to the most significant improvements in the lowest-performing schools. Figure 4 breaks down the distribution of rates by lowest and highest performing quartiles based on high schools’ Freshman OnTrack rates in 2005 and 2013. In those high schools with rates that were in the bottom performing quartile in 2005, less than one-half (45 percent) of ninth-graders ended ninth grade on-track for graduation. Yet, by 2013, 78 percent of ninth-graders in these schools were on-track, an increase of 33 percentage points. Figure 5 compares the distribution of Freshman OnTrack rates in 2005 and 2013 across CPS high schools for high schools that were open in both years. In 2005, over one-quarter of high schools had rates below 50 percent, compared to only one high school in 2013. By 2013, nearly 90 percent of high schools had Freshman OnTrack rates at or above 70 percent.

Figure 4
From 2005 to 2013 High Schools with Initially the Lowest Freshman OnTrack Rates Showed the Greatest Improvement
High Schools rank ordered by Freshman OnTrack rate and placed into one of four categories from lowest to highest

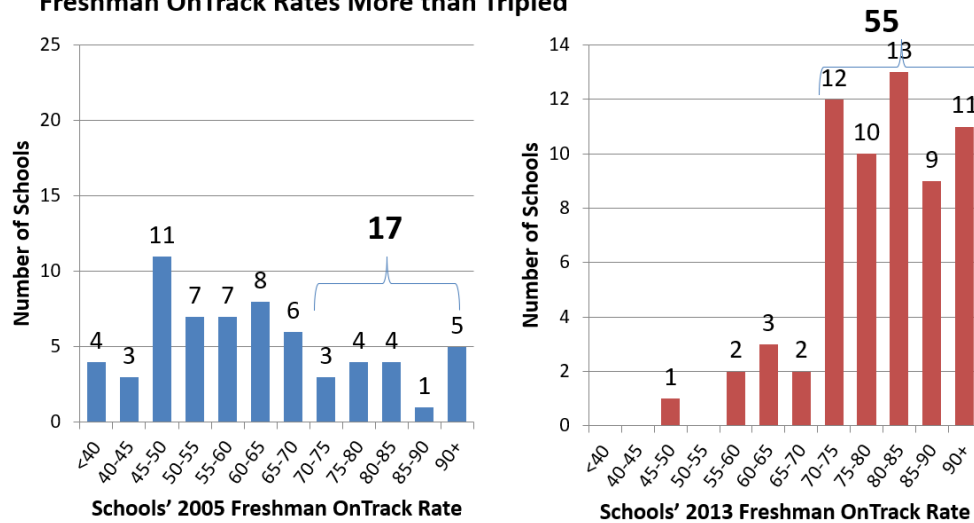
On-track rate performance category	2005 on-track rate	2013 on-track rate	Change from 2005-2013
Lowest baseline on-track rate n=16	45	78	33
Second lowest baseline on-track rates n=16	55	75	20
Second highest baseline on-track rates n=16	66	80	14
Highest baseline on-track rates n=15	85	88	3

Note: There are over 100 high schools in CPS. The analysis in this section focuses on the 63 high schools that were open in 2005 and 2013, excluding charter, alternative, and turnaround schools.

¹² Luppescu, Allensworth, Moore, de la Torre, Murphy, & Jagesic (2011).

¹³ Sebring, Allensworth, Bryk, Easton, & Luppescu (2006).

Figure 5
From 2005 to 2013 the Number of Schools with Greater than 70 Percent Freshman OnTrack Rates More than Tripled



Note: This figure represents first-time freshmen not in charter or alternative schools without a special education status and enrolled in schools that were open in spring 2005 and spring 2013, respectively.

Freshman OnTrack Rates Improved the Most among Students Who Were at the Highest Risk

Almost by definition, if the lowest-achieving schools are showing the greatest improvement, the lowest-achieving students in the district will disproportionately benefit. Figure 6 shows the improvements in Freshman OnTrack rates by student's race/ethnicity, gender, and entering achievement as indicated by students' EXPLORÉ scores at the beginning of ninth grade. Among the lowest-achieving students (EXPLORÉ scores <12), Freshman OnTrack rates increased by 25 percentage points, from 41.6 percent to 66.1 percent, significantly decreasing the gap in rates by prior achievement. In 2005, only 43 percent of Black young men and only 52 percent of Latinx young men ended the ninth grade on-track for graduation. The improvements in Freshman OnTrack rates for these two groups are stunning. Between 2005 and 2013, Freshman OnTrack rates among Black young men increased by 28 percentage points so that by 2013, over 71 percent of Black young men in CPS were on-track for graduation. Freshman OnTrack rates among Latinx young men increased by over 25 percentage points, climbing from 52 to 77 percent over that same time period.

Figure 6**While Freshman OnTrack Rates Improved from 2005-13 for All Students, Those with the Lowest Baseline Rates Underwent the Most Significant Improvements**

Growth in Freshman OnTrack rates by student's race/ethnicity, gender, and entering achievement by students' fall EXPLORE scores

	Percent of entering class	2005 On-Track Rate	2013 On-Track Rate	Change
On-Track Rates by Race/Ethnicity and Gender				
African American Males	19%	43.1%	71.4%	+28.3
African American Females	21%	61.2%	82.3%	+21.1
Latino Males	25%	52.1%	77.4%	+25.3
Latina Females	24%	66.4%	85.6%	+19.2
White Males	5%	66.8%	87.2%	+20.4
White Females	5%	79.6%	93.1%	+13.5
On-Track Rates by EXPLORE Categories				
<12	12%	41.6%	66.1%	+24.5
12-13	20%	52.8%	71.2%	+18.4
14-16	32%	68.8%	86.3%	+17.5
17+	30%	84.6%	94.9%	+10.3

Note: This figure represents first-time freshmen not in charter or alternative schools without a special education status. Years refer to the spring of the school year. Entering class compositions are of the 2012-13 class. Students take EXPLORE in the fall of ninth grade and are treated as their incoming test scores. Approximately 7 percent of freshmen are missing EXPLORE scores and are not included in EXPLORE sub-groups.

Concluding Comments

We have been careful in this chapter to describe the growth in Freshman OnTrack rate and the components—access to key data, information on the connection between on-track and high school graduation rates, and principal commitment—that might have played a role in contributing to the improvements. We can't specify which of these components played the greatest role in moving the schools' Freshman OnTrack rate. Ultimately, any effort to disentangle how all of these elements coalesced to produce such a dramatic improvement is akin to playing "Monday morning quarterback." The strength of the Freshman OnTrack indicator is in the multi-faceted responses it elicits from school staff, not any one direct input we could isolate. In the introduction, we described the strong correlation between increases in the district's Freshman OnTrack rate and the graduation rate. Our task, next, is to isolate these gains and determine whether they are sustained until graduation. Moving the Freshman OnTrack rate in low-performing schools is unprecedented in the realm of district-led reform initiatives. In the next two chapters we turn to the question of whether these same schools benefited equally in the payoff to graduation.

A Summary of Findings on the Importance of Ninth Grade

In the introduction, we argued that high school educators looking for effective approaches to reducing school dropout find few solutions they can apply in their day-to-day practice. Research on the predictors of high school dropout provides even less guidance. Until recently, quantitative studies of high school graduation, and conversely, dropping out, tended to focus on identifying what family and community characteristics place students at higher risk (e.g., being from a single parent family, living in a violent neighborhood) as well as on educational predictors that occur long before ninth grade, such as quality early childhood education or retention in elementary grades.^F These explanations offer little actionable guidance to educators and locate the problem in the characteristics of students that are external to the school.

But students do not drop out because they come from a single parent family. For the most part, students do not drop out because they see no value in a high school diploma.^G What we now know is that dropping out is an academic outcome that is the end result of a process centered around course failure and lack of credit accumulation. High school students begin to have difficulty, fall behind, and eventually realize that they simply cannot make it to graduation. Importantly, this is not a slow process. Much of these difficulties happen in the transition to high school, as students begin to struggle with the academic, social, and developmental demands of high school environments. This does not mean that previous research is wrong. Rather, research on the transition to high school marked a paradigm shift in the question from who drops out to how drop out happens, and in doing so, created an important link—students who have background characteristics that make them more likely to drop out do so because they may have less support and skill in handling key development challenges. More so, this research assembled a compelling story that places the locus of the dropout problem in the transition to high school and the solution to that problem within the control of high schools and their staffs. In this box, we present a summary of these studies. In particular, we highlight four sets of critical findings that made the case for intervention during ninth grade:

Finding 1: Ninth grade is marked by dramatic changes in students’ course performance in a very short period of time; with course failure as a frequent outcome.

School transitions are a challenging time for any adolescent. Studies consistently find that, on average, students’ grades, attendance, and attitudes toward school decline following a normative school move—whether the transition is to middle school, junior high school, or high school.^H Urban and minority students are particularly at risk.^I Urban adolescents’ school performance, involvement, and perception of the quality of their school environments decline markedly as they move to middle school and high school. Declines in school performance, however, are even more striking in the transition to high school in urban areas due to high rates of course failure.^J Grade failure is not common in the middle grades in Chicago, where most students attend a K-8 elementary school. High schools begin in ninth grade and ninth-grade grade failure is widespread. Over one-half (53 percent) of ninth-graders in Chicago failed at least one semester of a course; 41 percent failed two or more.^K

Finding 2: There is a strong link between grade declines in ninth grade, grade failure, and high school graduation; the transition to high school is a place where students “get stuck.”^L

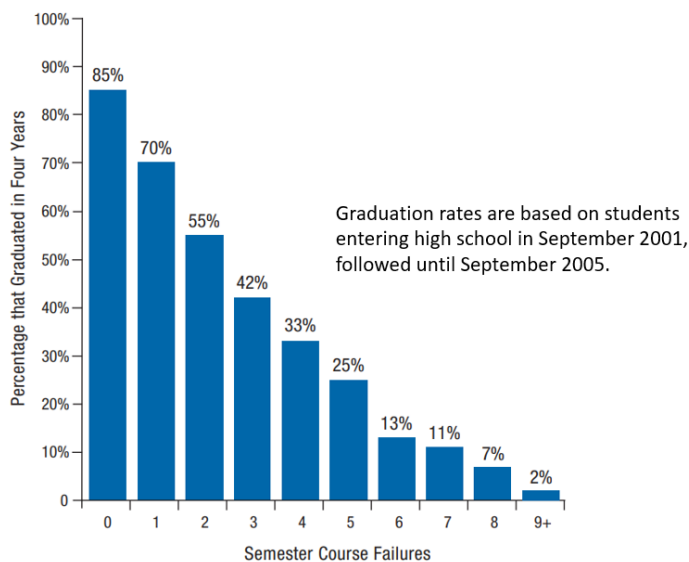
In one of the first studies to draw attention to the high school transition, Roderick found a clear

pattern that distinguished the academic trajectory of dropouts from graduates.^M Students who dropped out of high school experienced dramatic declines in their grades and attendance and equally as dramatic increases in course failures as they moved into high school. Indeed, it was largely during normative school transitions that the academic trajectories of dropouts diverged from those of students who would later graduate.

This finding, that a student's capacity to manage the high school transition plays a unique role in predicting school dropout, has now been replicated in multiple studies. In Chicago, the UChicago Consortium estimated that the link between ninth-grade course failure and eventual graduation is so strong that the first two semester course failures are associated with 30 percentage point decreases in the probability of graduating (see Figure A).^N

Figure A
Research Shows that Freshmen with More than Two Semester Course Failures are Unlikely to Graduate

Four-Year Graduation Rates by Freshman Course Failures



Note: This graph is a replication of Figure 7 in Allensworth and Easton "What Matters for Staying On Track and Graduating from Chicago Public High Schools" (2007).

Course failure makes the impact of the ninth-grade transition particularly acute. Why? First, failing individual subjects in high school takes on a significance that it did not have in elementary school. In high school, particular courses are required for graduation; and if students fail, they do not graduate. The course must be repeated and passed. Thus, in a system where progress is measured by both credits accumulated toward graduation and specific course requirements, the failure of even one or two classes hinders expected progress and represents a large barrier to advancement. Academic failure also undermines school engagement and sense of belonging, leading students to

begin adopting negative school attitudes and behaviors with an eventual downward spiral in performance.^O

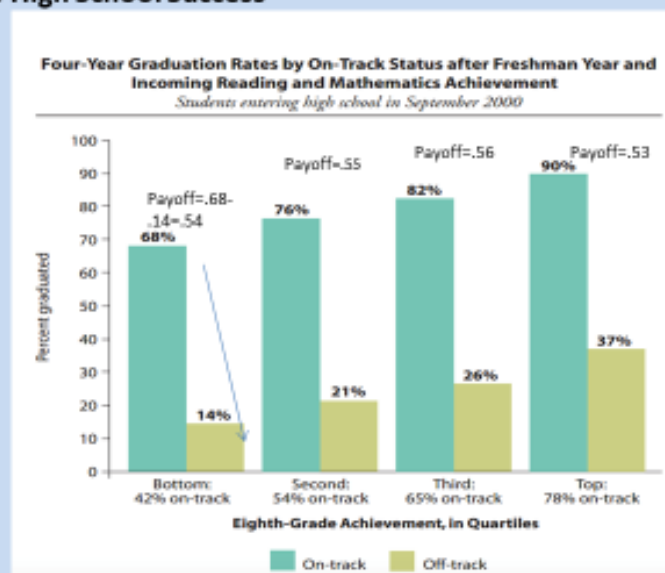
Finding 3: Academic difficulty in ninth grade seems to be independent of prior academic achievement.

Many educators attribute high rates of course failure to students not being academically ready to manage the transition to high school. In this view, course failure is simply a reflection of what skills students bring with them into high school. The evidence shows that while academic difficulty in ninth grade is more prevalent among students with low-incoming achievement test scores, it is not isolated to these students. To illustrate this point, Figure B presents Freshman OnTrack rates and graduation rates by students' entering eighth-grade achievement. Of students who entered CPS high

schools with eighth-grade test scores in the third quartile (roughly equivalent to being in the third quartile on national norms), 35 percent were off-track at the end of ninth-grade, and only one-quarter (26 percent) of those who were off-track graduated. Thus, many ninth-graders who entered high school with test scores at or above national norms had difficulty in the transition, and that difficulty was a significant predictor of whether they would graduate. Conversely, many students with weaker skills managed to stay on-track in ninth grade, and if they did so, they had much higher probabilities of graduating than students with higher entering achievement who fell off-track in ninth grade. This does not mean that entering test scores do not matter. Ninth-graders with lower incoming test scores were more likely to be off-track. But the difference in graduation rates between students with high and low incoming test scores was not nearly as large as the difference in graduation rates between those ninth-graders who were on- and off-track within incoming achievement levels. This means that a student's ninth-grade performance, in fact, has more influence on their chances of graduating than prior academic achievement on eighth-grade tests. Allensworth and Easton estimate that, even after controlling for the demographic characteristics and entering test scores of ninth-graders, the predicted probability of graduation was 55 percentage points higher (81 percent vs. 26 percent) for a student who was on-track vs. off-track at the end of ninth grade.

Figure B

Consortium Research Demonstrates that Prior Academic Achievement Does Not Guarantee High School Success



Note: With the exception of the payoffs, this graph is a replication of Figure 3 in Allensworth and Easton 2005 report, The on-track indicator as a predictor of high school graduation.

Finding 4: The transition to high school presents 14-year-olds with an entirely new set of tasks that they must manage, involving a ratcheting up of developmental demand with little support from adults.

The central reason that student characteristics and prior academic achievement do not reliably predict course failure is that, surprisingly, most students do not fail courses because they lack the academic skills to succeed. Student success is dependent on the degree to which schools identify and promptly respond to a multitude of non-academic challenges. In fact, studies of the transition to ninth grade find the academic demand of class assignments declines in transition years with schoolwork often becoming less (not more) challenging.^N This directly contradicts most assumptions that high school work presents insurmountable academic challenges for unprepared rising eighth-graders. What is most challenging and too often overwhelming for 14-year-olds is meeting the developmental challenges of school transition. Normative school transitions (whether from eighth to ninth grade or from high school to college) are important periods in the formation of academic behaviors.^Q Coming to class, being prepared, doing homework, and paying attention are all academic behaviors that make a good student. The developmental challenge of the high school transition is for students to build and internalize these behaviors with ever-greater complexity in new and often complex environments.

^F Allensworth (2013); Neild & Balfanz (2006).

^G Roderick (2006).

^H Blyth, Simmons, & Carlton-Ford (1983); Eccles, Lord, & Midgley (1991); Feldlaufer, Midgley, & Eccles (1988); Felner, Ginter, & Primavera (1982); Roderick (1994); Schulenberg, Asp, & Petersen (1984); Seidman, Allen, Aber, Mitchell, & Feinman (1994); Simmons, Black, & Zhou (1991); Simmons, & Blyth (1987).

^I Reyes, Gillock, & Kobus (1994); Roderick (1994); Seidman et al. (1994); Simmons et al. (1991).

^J Kaplan, Peck, & Kaplan (1997); Roderick & Camburn (1996).

^K Allensworth & Easton (2007).

^L Neild et al. (2008).

^M Roderick (1994); Furstenberg (2008); Roderick & Camburn (1996).

^N Rosenkranz, de la Torre, Stevens, & Allensworth (2014).

^O Benner & Graham (2009); Farrington, Roderick, Allensworth, Nagaoka, Keyes, Johnson, & Beechum (2012); Roderick (2003).

^P Rosenkranz et al. (2014).

^Q Eccles et al. (1991); Farrington et al. (2012).

Chapter 2

Tracking Increases in Freshman OnTrack through Graduation: An In-Depth Look at Three High Schools

The significant improvements in Freshman OnTrack rates presented in the previous chapter are both promising and daunting. The theory of action behind a focus on ninth grade is that if high schools could stem significant grade declines and in particular, reduce course failure in the transition to high school, students will be more likely to stay on-track and graduate. What high schools in Chicago have demonstrated is that the first half of this theory of action is attainable; high school educators can do much to reduce course failure rates in ninth grade, even in the schools with the highest rates of course failure. Even the strongest advocates of focusing on ninth grade would never have predicted that an intervention that began with new data supports would result in 10 years of sustained improvements or that those improvements in ninth grade would be so closely linked to increases in graduation rates.

How could improvements in ninth grade drive such a dramatic increase on graduation? The answer to this question rests on two critical claims. The first is that ninth grade is a unique point of intervention—as Ruth Neild has characterized it, a grade in which students, “get stuck” (see box titled *A Summary of Findings on the Importance of Ninth Grade*, Finding 2).¹⁴ While researchers or districts might be able to create an OnTrack indicator in every grade, there is generally little variability in school performance. As we will see in this chapter, students who are on-track in ninth grade tend to stay on-track and, unfortunately, students who are off-track tend to stay off-track. This is not true in the transition from eighth to ninth grade. In fact, if we try to predict ninth-grade course failures using students’ eighth-grade test scores and family background, research only explains 8 percent of the variation in failure rates across students.¹⁵

The second claim is that academic failure in ninth grade is not the result of students’ lack of academic skills, but is driven by students struggling to meet the developmental demands of high school. In ninth grade, students must develop academic behaviors such as managing the expectations and assignments of seven courses, getting to a school that is often far away and requires navigating public transportation, being on time for classes that are scattered throughout the building, and other skills and behaviors that are not critical in elementary schools. These behaviors, unlike test scores, are accessible to all students and drive the relationship between Freshman OnTrack and graduation. For example, as we see in the box titled, *A Summary of Findings on the Importance of Ninth Grade*, ninth-graders with below average (second quartile) test scores who were on-track at the end of ninth grade were more than 3.5 times more likely to graduate than their classmates with the same test scores who were off-track (76 percent vs. 21 percent). Ninth-graders with the lowest test scores were nearly five times more likely to graduate if they passed their courses and ended the year on-track (68 percent vs. 14 percent).

¹⁴ Neild, Stoner-Eby, & Furstenberg (2008).

¹⁵ Allensworth & Easton (2007).

Unfortunately, knowing that students who pass courses in ninth grade are more likely to graduate than those who fail doesn't tell us whether changing the status of those off-track students (i.e., supporting them to get on-track in ninth grade) would lead to improved performance in subsequent grades. While there might be a benefit to Freshman OnTrack, it seems implausible that intervening early in a student's high school career could actually change an adolescent's chance of graduating from 21 to 76 percent. There must be a reason that off-track students are failing, and being off-track may simply be a harbinger of academic disengagement that started long before ninth grade, so that short term intervention would only delay the inevitable.

Much of this debate about the benefits or limitations of improving Freshman OnTrack rates rests on a set of empirical claims that can be tested by following students into subsequent grades. For example, if improvements in a school's on-track rate means that more students have made a successful transition to high school which sets them on a positive trajectory toward graduation, then we would expect to observe increases in that cohorts' performance in subsequent grades and ultimately graduation. If, however, a student's off-track status is simply identifying those students who enter ninth grade disengaged or with very low skills and who will most likely struggle throughout high school, regardless of their experience in one or two courses, then we would not expect increases in the proportion of ninth-graders on-track to carry over to equivalent improvements in subsequent grades (on-track tenth, on-track eleventh).

The rapid increase in the Freshman OnTrack rate in CPS high schools provides a means to finally resolve this debate. Because schools made such substantial improvements in a short period of time, we can use a pre- and post-cohort comparison to examine how improvements in Freshman OnTrack played out as the cohorts moved beyond ninth grade. In this chapter, we demonstrate how we approached the problem using three schools which had substantial gains in on-track rates between 2006 and 2008. We examine whether increases were sustained in tenth and eleventh grade and whether they led to an overall improvement in the graduation rate.

The three schools we identified were not chosen because they were engaged in any one particular approach to working on reducing course failures in ninth-grade. They also were not chosen because of better-than-expected graduation rates. They were chosen on the basis of an increase in their Freshman OnTrack rates. The high schools could be characterized as large, traditional high schools, with an entering ninth-grade class size of approximately 400 at Kenwood Academy, 430 at Benito Juarez Community Academy, and 470 at Steinmetz College Prep. Each high school also had comparable increases in Freshman OnTrack rates. Given this, what is striking is how different the story unfolds in each school as each ninth-grade cohort moved toward graduation. We begin with Kenwood Academy where the data best illustrates our approach to testing the theory of action for intervention in ninth grade.

Methodology for Selection of Early-Mover Schools and Defining Comparison Groups: Baseline cohorts

The Consortium report *What Matters for Staying On Track and Graduating in Chicago Public Schools* was released in the fall of the 2007–08 school year. Throughout that year, the system rolled out the new data tracking tools for schools. The findings of this report, however, had been percolating through the school system prior to the release of the report, and some schools had already begun adopting a focus on ninth-grade on-track—including groups of high schools that received extra supports for Freshman OnTrack labs and coordinators under a grant provided by the William and Melinda Gates Foundation called *Graduation Pathways*.

In order to develop our methodical approach, we sought to identify schools that might serve as pilot cases. The three schools we chose in this section seemed to fit the criteria well. Each of the schools had: 1) A larger than 10 percentage point increase in on-track rates over prior years; 2) sustained or continued improvement the next year; and 3) no dramatic changes in student body composition or governance (such as switching from a neighborhood high school to a magnet).

In this section, we compare the performance of the entering ninth-grade class of 2007–08 at a school to the average performance of three prior entering cohorts 2003, 2004, and 2005. We take a three-year average because on-track rates vary often by a couple of percentage points from year to year, even if the overall trend is flat. Thus, by using a three-year average, we are not estimating change of a particularly good or bad year. In this brief, we will call this the baseline cohort and compare its performance to the school's 2007–08 cohort to gauge improvement. We use the same baseline years to make comparisons to the school's 2008–09 cohort in section three.

At Kenwood Academy the 2007–08 Freshman OnTrack rate was 15 percentage points higher than among the baseline cohorts (60 percent to 75 percent). At Juarez and Steinmetz, the Freshman OnTrack rates were 10 and 11 percentage points higher; increasing from 47 to 57 percent at Juarez and from 48 to 59 percentage points at Steinmetz.

Though comparable in size, these three schools serve very different student bodies. Kenwood Academy is a predominantly Black high school on the South Side of Chicago that is known as one of the higher-performing schools (ACT composite 18.8). Yet its Freshman OnTrack rate (60 percent) was equal to the system average. Juarez Community Academy is a predominantly Latinx high school in the center of the city's substantial Mexican immigrant community in Chicago's Pilsen neighborhood and had an ACT composite of 15.7. Steinmetz high school is a multi-racial high school on the city's Northwest side with an ACT composite of 16.3.

Case 1: Kenwood Academy: A textbook case for on-track
New indicators for tenth- and eleventh-grade on-track

A first step in evaluating whether students who are on-track sustain this performance in later grades is to identify measures comparable to a Freshman OnTrack rate in tenth and eleventh grade. Students are defined as on-track in ninth grade if they have five or more full course credits (the number required to move to tenth grade) and no more than one semester F in a core subject (English, math, science, or social studies). For tenth-graders, we use a tenth-grade on-track indicator developed by Consortium researchers that adopts a similar approach. Students are defined as on-track in tenth grade if they have 11 or more course credits and no more than one semester F in a core subject during ninth and tenth grade (see Figure 7).¹⁶

Calculating Course Failures

Ninth-graders take four core courses in English, math, science, and social studies and are awarded credit for successful completion at the end of each semester. The total number of core courses per year is eight (four courses, times two semesters). Therefore, a failed course is based on the final grades at the end of each semester. For example, if a student receives an F in algebra both semesters, it is counted as two course failures. This student would be off-track, as would a student with an F in English the first semester and an F in science the second semester.

Figure 7

Definitions of On-Track for Ninth, Tenth, and Eleventh Grade

Indicator	Definition	Probability of Graduating for the cohort of 2002
On-Track in 9 th grade	5 or more credits earned and no more than 1 semester F in a core subject	72%
On-Track in 10 th grade	11 or more credits and less than 2 semester failures	83%
On-Track in 11 th grade	17 or more credits	88%
4-year Graduation	Graduated (24 credits)	

¹⁶ Lesnick, Montgomery, & Murphy (2011, April 8).

In eleventh grade, there are myriad pathways that students can take to fulfill distributional requirements for graduation. To account for this, we use a simple measure of whether a student has completed 17 or more credits by the end of eleventh grade, as a measure of eleventh-grade on-track status. Seventeen credits is the minimum number that a student needs in order to graduate, provided they pass all their twelfth-grade courses. Each of these measures is strongly predictive of graduation. The probability of on-time graduation is 77 percent among students who were on-track in ninth grade, 87 percent among students who were on-track in tenth grade, and 90 percent for students with 17 or more credits in eleventh grade.

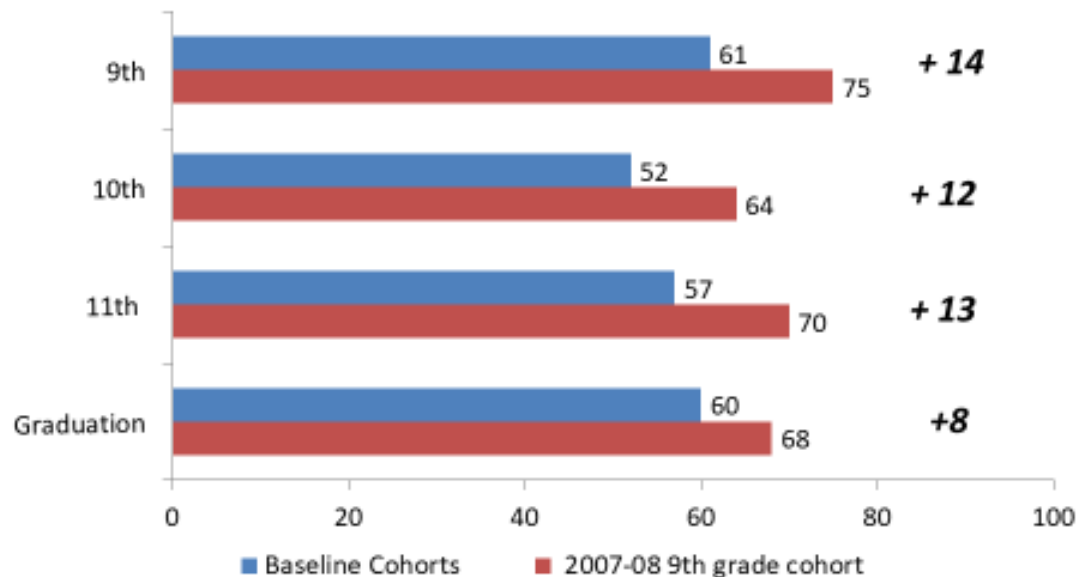
Step 1: Were gains in Freshman OnTrack rates sustained in tenth and eleventh grade, compared to the baseline?

Kenwood: Two new indicators: On-track in tenth and eleventh grade, compared to the baseline.

Figure 8 compares the proportion of the 2007–08 cohort of ninth-graders at Kenwood Academy who were on-track in ninth, tenth, and eleventh grade to the “baseline” cohort (see box titled *Methodology for Selection of Early-Mover Schools and Defining Comparison Groups: Baseline Cohorts*). The baseline cohort is simply the average on-track rate in the three years prior to the 2007–08 ninth-grade cohort. Before the district made on-track a priority in 2006, the Freshman OnTrack rates were essentially flat across the district. When the 2007–08 ninth-grade cohort at Kenwood ended the year, 75 percent were on-track to graduate, a 14 percentage point increase over the baseline cohorts.

Figure 8

At Kenwood, the Ninth Grade 2007-08 Cohort Remained Substantially More Likely to Stay On-Track in Tenth and Eleventh Grade and Graduate



Note: This figure represents first-time freshmen at Kenwood without a special education status.

At the end of tenth grade, the on-track rate of the 2007–08 cohort was 12 percentage points higher than in prior years, and at eleventh grade was 13 percentage points higher. Using our two new measures of tenth- and eleventh-grade on-track, we see strong support at Kenwood for the assertion that when ninth-graders do not get behind in credits and are able to successfully complete their first year, they are more likely to stay on-track in subsequent grades.

Finally, when the 2007–08 cohort ended twelfth grade, they were 8 percentage points more likely to graduate than the baseline cohorts. The fact that a 14 percentage point increase in Freshman OnTrack rates at Kenwood translated into just an 8 percentage point increase in the graduation rate might appear to confirm suspicions that increases in on-track might not translate into commensurate increases in graduation. What we find is that an 8 percentage point increase in the graduation rate is what we would expect if the on-track graduation rate remained constant (see Figure 9).

Step 2: What is the link between increases in Freshman OnTrack and graduation rates? How a 14 percentage point increase in on-track rates resulted in an 8 percentage point increase in graduation rates—estimating the payoffs to on-track improvements.

What is initially confusing given the pattern of on-track rates in tenth and eleventh grade is that the graduation rate at Kenwood only increased by 8 percentage points. The explanation for why we should not expect the graduation rate to parallel the on-track rate is relatively straightforward. On-track status is a strong, but still imperfect predictor of high school graduation: Not all students who were on-track in ninth grade graduated; and not all students who were off-track dropped out. In the baseline period, 82 percent of on-track ninth-graders graduated, compared with only 26 percent of off-track students (see Figure 9). If Kenwood students continued to have the same on-track graduation rate, moving 14 percent of students from a 26 to an 82 percent chance of graduation should, and did, result in an 8 percentage point increase in graduation.

Figure 9
Estimating the Graduation Payoffs to Ninth-Grade On-Track

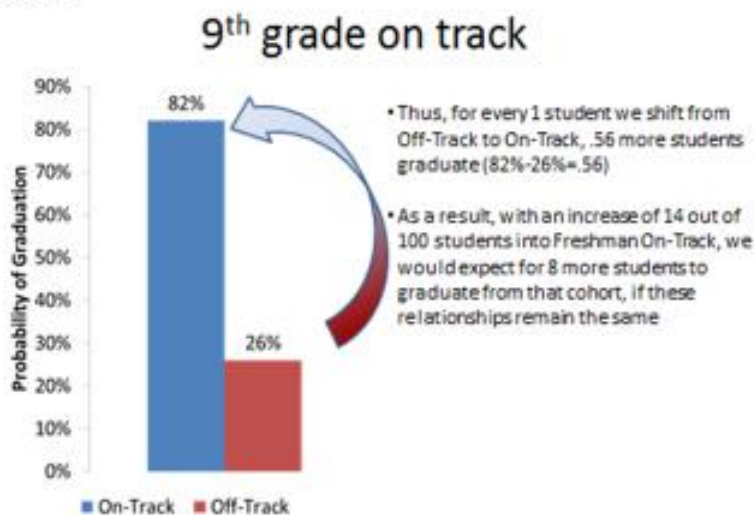


Figure 10 shows three different graduation rates related to a student's ninth-grade on-track status.

- **Overall graduation rate:** The four-year graduation rate of the entire ninth-grade cohort; Kenwood's overall graduation rate increased from 60 percent in the baseline cohort to 68 percent in the 2007–08 cohort for an 8 percentage point increase.
- **On-track graduation rate:** The four-year graduation rate of those ninth-graders who ended ninth grade **on-track** for graduation; Kenwood's on-track graduation rate slipped slightly from 81 percent to 79 percent for a 2 percentage point decrease. Despite this decrease, many more students graduated because the ninth-grade on-track rate rose substantially by 14 percentage points.
- **Off-track graduation rate:** The four-year graduation rate of those ninth-graders who ended ninth grade **off-track** for graduation; Kenwood increased its off-track graduation rate by 10 percentage points. Only 25 percent of the baseline cohort graduated compared to more than one-third of students in the 2007–08 cohort.

Figure 10

At Kenwood, Graduation Rates of On-Track Students Remained Largely the Same, Even as On-Track Rates Rose

	Baseline Cohorts	2007-8 Cohort	Change
9 th grade on-track	61	75	+14
<i>Graduation rate based on students' ninth grade on-track status</i>			
On-track graduation rate	81%	79%	-2
Off-track graduation rate	25%	35%	10
Overall graduation rate	60%	68%	8

Note: This figure represents first-time freshmen without a special education status. On-track graduation rate is the percentage of entering ninth-graders who were on-track in ninth grade and graduated four years later. Off-track graduation rate is the percentage of entering ninth-graders who were off-track in ninth grade and graduated four years later.

What we observe is that the increases in Kenwood graduation rates were driven largely by getting more students initially on-track and then having those students do as well as prior cohorts. In addition, Kenwood made traction with students who were off-track initially. Both of these factors combined to boost the overall graduation rate to 68 percent.

Case 2: Benito Juarez—Doubling down

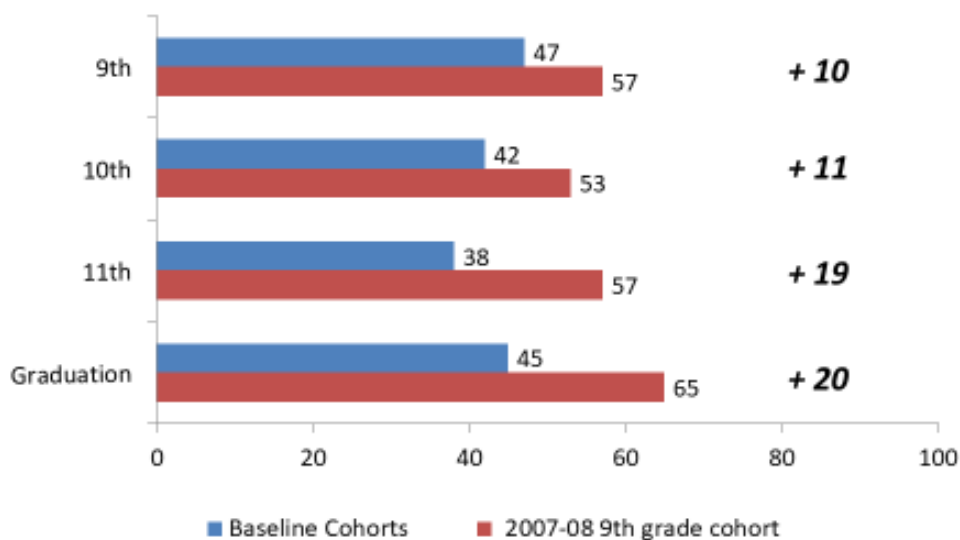
The main focus of this report is to understand the link between improvements in ninth grade and graduation four years later. However, schools can also alter the relationship between ninth-grade performance and graduation by working to ensure that off-track students get back on-track in later grades by implementing credit recovery. Educators at Juarez Community Academy combined efforts to get more ninth-graders on-track with a substantial investment in recovery in the later grades, resulting in dramatic improvements in graduation rates. Thus, at Juarez, the story of improvement is as much about what happened when Freshman OnTrack rates improved as it is about what happened when strategic intervention was applied to off-track students after ninth grade.

Step 1: Were gains in Freshman OnTrack rates sustained in tenth and eleventh grade?

Figure 11 follows the baseline and 2007–08 cohorts of ninth-graders at Juarez as they moved through tenth, eleventh, and twelfth grades. Similar to the pattern we observed at Kenwood, increases in Freshman OnTrack rates (10 percentage points) at Juarez were also sustained into tenth grade. In eleventh grade, however, the proportion of students who were on-track was 20 percentage points higher than in the baseline period. How could an improvement in on-track rates suddenly double in eleventh grade? The most likely answer is that Juarez combined a long-term strategy with a short-term investment in strategic credit recovery. By recovery, we mean that students who were off-track in ninth grade were able to get on-track by eleventh or twelfth grade by retaking and passing courses required for graduation that they previously failed. Publicly available budget records indicate that Juarez invested substantially in providing additional credit recovery programs, including evening, summer, and afterschool options for off-track students.

Figure 11

Juarez's 2007-08 Ninth-Grade Cohort had a Graduation Rate of 20 Percent Higher Than the Baseline, Reflecting Increases in Freshman OnTrack That were Sustained and Recovery Efforts in Eleventh Grade



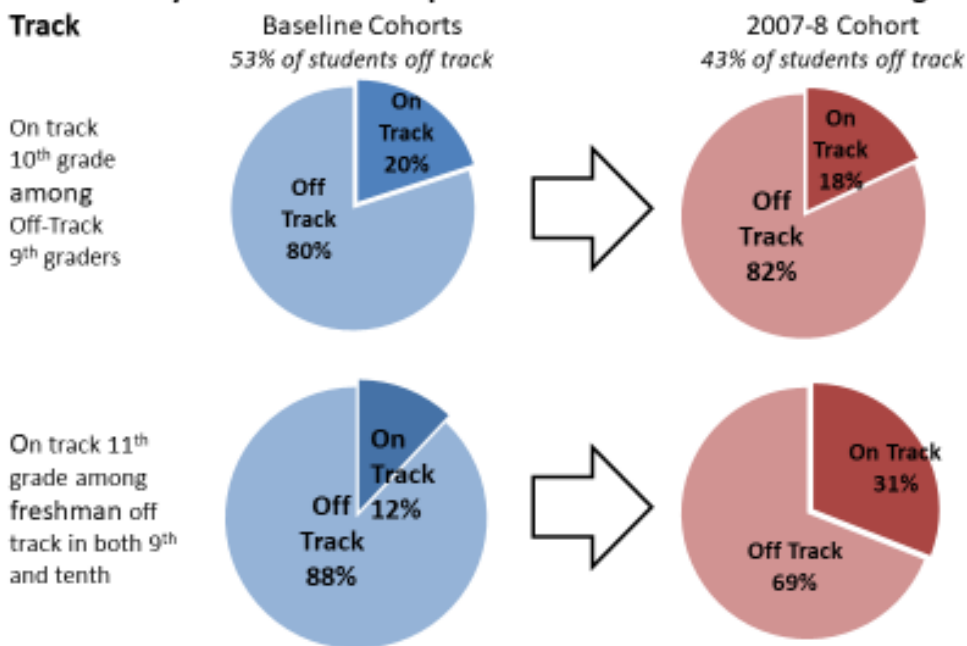
Note: This figure represents first-time freshmen at Juarez without a special education status.

Research suggests that Freshman OnTrack becomes so important in determining graduation both because students who are on-track do well and because students who are off-track do so poorly. Juarez's baseline cohort poignantly illustrates the lack of recovery prior to 2007–08. Here we see an example of a high school, like so many high schools in Chicago, where the majority of students fail two or more courses in ninth grade and, once that happens, they have very little chance of recovering and graduating on time. At Juarez, over one-half (53 percent) of ninth-graders in the baseline cohorts were off-track at the end of ninth grade and approximately 80 percent of those students stayed off-track in tenth grade and 88 percent were off-track in eleventh grade. By twelfth grade, only 17 percent of students who were off-track in ninth grade graduated.

This pattern was broken in the 2007–08 school year. When the ninth-graders in the 2007–08 cohort ended eleventh grade, 31 percent of students who had been off-track in ninth and tenth grade were back on-track, which means that the probability of graduating for these students substantially increased.

Figure 12

At Juarez, Students Who Were Off-Track Freshman Year Tended to Remain Off-Track in Tenth Grade, but Recovery Efforts in Eleventh Grade Substantially Increased the Proportion of Off-Track Students Getting On-Track



Note: This figure represents first-time freshmen at Juarez without a special education status.

Step 2: What was the link between increases in Freshman OnTrack and graduation rates?

At Juarez, this nearly tripling of recovery rates in eleventh grade, from 12 percent to 31 percent, drove a substantial increase in graduation rates. With our first example, Kenwood Academy, we saw the effect of focusing on decreasing failure in ninth grade, sustaining the on-track status, and to a lesser extent, on off-track graduation rates. At Juarez, we see these same effects also occurring, but what dominates is the increase in the off-track graduation rate via investment in credit recovery. As summarized in Figure 13 increases in graduation rates were driven by:

- **Ninth-grade on-track rate**—an increase in ninth-grade on-track rates of 10 percentage points that was sustained in tenth and eleventh grade;
- **On-track graduation rate**: An increase in the proportion of ninth-graders who stayed on track, reflected by an increase in the on-track graduation rate from 76 to 86 percent; and
- **Off-track graduation rate**: A substantial increase in recovery of off-track students, who then subsequently graduated, is reflected by an increase in the off-track graduation rate from 17 to 37 percent.

Figure 13

Juarez's Increase in Freshman OnTrack Rates, Coupled with Gains in Eleventh Grade, Drove Rising Graduation Rates

	Baseline Cohorts	2007-8 Cohort	Change
9 th grade on-track	47%	57%	10
<i>Graduation rate based on students' ninth grade on-track status</i>			
On-track graduation rate	76%	86%	10
Off-track graduation rate	17%	37%	20
Overall graduation rate	45%	65%	20

Note: This figure represents first-time freshmen without a special education status. On-track graduation rate is the percentage of entering ninth-graders who were on-track in ninth grade who later graduated. Off-track graduation rate is the percentage of entering ninth-graders who were off-track in ninth grade who later graduated.

The cases of Juarez and Kenwood Academy present two successful, yet quite different approaches to how attention to credit accumulation can drive improvements in graduation. Our third school, Steinmetz, does not follow a coherent pattern and as such appropriately challenges the easy story of ninth-grade on-track.

Case 3: Steinmetz—A difficult pattern to explain

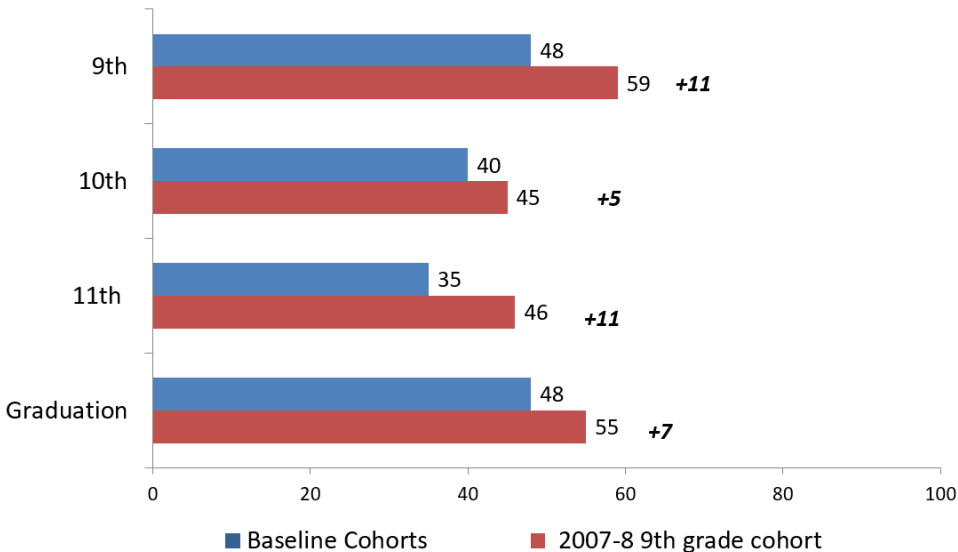
Step 1: Were gains in Freshman OnTrack rates sustained in tenth and eleventh grade?

Figure 14 follows the baseline and 2007–08 cohorts of ninth-graders at Steinmetz as they moved through tenth, eleventh, and twelfth grade. In the spring of 2008, 59 percent of ninth-graders at Steinmetz were on-track for graduation, compared to 48 percent in the baseline period—an 11 percentage point improvement. Unlike the first two cases, this improvement in Freshman OnTrack rates did not fully carry over to tenth grade. The 2008 improvement in on-track rates (11 percentage points in ninth grade) had been cut in half (5 percentage points in tenth grade) A student is considered on-track in tenth grade if they have 11 or more credits and no more than one semester failure in a core course. When the 2008 cohort ended their tenth-grade year, a significant group had experienced academic difficulty in tenth grade and was now off-track.

To complicate the story, as eleventh-graders, these students were back on track. Our measure for on-track in eleventh grade is simply whether a student has 17 or more credits. This is a pretty low bar but in the baseline years, only a little more than a one-third (35 percent) of ninth-graders at Steinmetz ended the eleventh grade with enough credits to graduate senior year. In 2008, 46 percent of ninth-graders hit that bar and the rise in the eleventh-grade credit accumulation translated into an increase of 7 percentage points in the graduation rate.

Figure 14

At Steinmetz, Improved Freshman OnTrack rates in 2007–08 Were Not Sustained in Tenth Grade, Yet Recovered in Eleventh Grade



Note: Figure represents first-time ninth-graders at Steinmetz, with no special education status.

Without tenth grade, Steinmetz looks very much like the pattern at Kenwood. The question is: Why would an 11 percentage point increase in ninth grade not be sustained in tenth grade? We don't know the answer. Certainly in schools, bad years can happen and in large high schools bad grades can happen—major events can cause disruption, or even the way a particular program at Steinmetz assigns credits could be inadvertently tagging students as off-track. This could also be evidence of

teachers just passing students to get ninth-grade on-track rates up setting the students up for failure the next year.

What we also don't know is the extent to which the recovery happened without any additional actions or whether, as at Juarez, Steinmetz explicitly focused on recovery programs. If the rebound in eleventh grade was driven by investment in credit recovery, we would have also seen improvements in graduation rates of off-track students as well, which we do not.

Figure 15
At Steinmetz, an Increase in the Overall Graduation Rate Tempered by a Decline in the Off-Track Graduation Rate

	Baseline Cohorts	2007-8 Cohort	Change
9 th grade on-track	48%	59%	+11
<i>Graduation rate based on students' ninth grade on-track status</i>			
On-track graduation rate	74%	78%	4
Off-track graduation rate	25%	21%	-4
Overall graduation rate	48%	55%	7

Note: This figure represents first-time freshmen without a special education status. On-track graduation rate is the percentage of entering ninth-graders who were on-track in ninth grade who later graduated. Off-track graduation rate is the percentage of entering ninth-graders who were off-track in ninth grade who later graduated.

Step 2: What was the link between increases in Freshman OnTrack and graduation rates?

While the pattern in ninth, tenth, and eleventh grade at Steinmetz is more complicated, the bottom line at Steinmetz is that an increase in the overall graduation rate was driven by more students starting off in ninth grade on-track and the graduation rate of those on-track students improving. Early in this chapter, we introduced the term “payoff” to moving students from off- to on-track, (Figure 9) as the difference in the graduation rate of on- vs. off-track ninth-graders. As on-track rates improve, many would predict that the payoff should decline since students who are weaker academically will be less likely to graduate regardless of getting more support in ninth grade. In addition, if the 11 percentage point improvements in on-track rates was achieved at Steinmetz by just inflating low grades, turning Fs into Ds, then we would expect that the graduation rates associated with being on-track would decline. Instead, at Steinmetz, they increased. At baseline, 74 percent of ninth-graders who were on-track graduated, compared to 25 percent of their classmates who ended ninth grade off-track ($74-25=49$). In 2007–08, the payoff to Freshman OnTrack was even larger ($78-21=57$) because students on-track graduated at a higher rate and off-track students' graduation rate declined.

To summarize, the ninth grade 2007–08 cohort at Steinmetz had a graduation rate 7 percentage points higher than in the baseline cohorts. This increase can be attributed to:

- **Ninth-grade on-track rate:** An increase in the Freshman OnTrack rate of 11 percentage points
- **On-track graduation rate:** An increase from 74 to 78 percent in the proportion of on-track ninth-graders who graduated; and
- **Off-track graduation rate:** A decline in the graduation rate of ninth-graders who started their ninth-grade year off-track. In the baseline cohort, only one in four off-track students graduated; and this dismal figure decreased further with only 21 percent of off-track students graduating in the 2007–08 cohort.

Summary

The purpose of this chapter was to use three in-depth examples to illustrate our approach to testing the theory of action around a focus on ninth grade. We developed two sets of indicators that, when used together, capture the relationship between ninth-grade on-track and graduation. First, we used measures of on-track in tenth and eleventh grade to examine whether improvement in course performance in ninth grade was sustained as students moved through tenth and eleventh grade. Second, we compared the graduation rates of on- vs. off-track students to gauge whether the payoffs to being on-track in ninth grade stayed the same as the proportion of ninth-graders who were on-track increased.

What is most striking in these case studies is the extent to which differences in these approaches led to substantially improved graduation outcomes at all three schools. In contrast to the common assumption that school dropout is an intractable problem in urban schools, these cases suggest that academic failure and students' likelihood of graduation is highly malleable. These schools brought to light two ways to improve graduation rates: 1) improve the on-track rate in ninth grade and sustain it through graduation; and 2) focus on recovery in the higher grades for students who were off-track initially or fell off-track in tenth grade.

This chapter also illustrates the power of individual school reports. While we don't know exactly what happened at Steinmetz, the faculty and leadership at Steinmetz most likely does and the conversation about on-track will be very different with this data than without. When schools use data effectively, big problems become manageable. The entering class at Steinmetz was 470 students. An 11 percentage point increase in Freshman OnTrack rates translated into an additional 52 students on track. The next year, that improvement was cut in half, which means that 28 students who were on track in ninth grade were now off-track in tenth grade. It is by finding those students and understanding what went wrong that data systems can become a critical source for continuous improvement.

We now turn to a broad cross-section of schools to test whether the relationship between on-track and graduation holds. This larger sample will also allow us to look at course failures, GPAs, incoming test scores, and eleventh-grade ACT scores to examine who benefits most from Freshman OnTrack intervention strategies and whether there are unintended consequences of improving the Freshman OnTrack rate.

Chapter 3

More Good News: Extending our Analysis to 17 Secondary Movers

The rise in Freshman OnTrack rates in CPS that has occurred and is continuing to occur represents a tremendous improvement at a scale that we seldom see in education. Our main task in the previous chapter was to develop an approach to assessing whether these increases in Freshman OnTrack rates will likely contribute to improvements in graduation. Certainly, the three high schools we highlighted demonstrate that increases in Freshman OnTrack can translate into higher graduation rates.

In this chapter, we extend our analysis to a group of 17 schools that we characterize as “secondary movers.” These are schools that had above-average improvements in Freshman OnTrack rates in the 2008–09 school years. High schools in this second group were diverse; they differed in the demographics of their student body, in size, and in their baseline performance. Looking across these 17 schools provides a more robust test of whether increases in Freshman OnTrack rates lead to graduation increases. We begin by describing these schools and then, drawing on the methodology we developed in the previous chapter, organize our discussion around our four initial research questions.

This chapter is titled “More Good News” for two reasons. First, on average across these 17 schools, the impact of rising Freshman OnTrack rates followed the same general pattern we observed among the early movers. Improvements in the Freshman OnTrack rates were sustained into tenth and eleventh grade and translated into concomitant improvements in on-time graduation. In addition, improving Freshman OnTrack rates did not result in isolated shifts from Fs to Ds.

The second reason we call this chapter “More Good News” is that the larger and more diverse set of schools in the secondary mover group allows us to address questions of whether the benefits of improving Freshman OnTrack rates differed by prior student achievement, and whether there might be evidence of a tradeoff between rising ACT scores and increasing Freshman OnTrack rates. In both cases, the evidence was again positive and quite consistent. We focus primarily on differences in gains in the Freshman OnTrack rate by entering achievement. Among secondary movers, improvements in Freshman OnTrack rates were sustained and had the same payoffs for all students entering ninth grade, both those considered low- and high-achieving. As a result, increases in Freshman OnTrack rates led to similar improvements in the proportion of students taking the state accountability test in eleventh grade. As more students attained enough credits to be considered eleventh-graders, there may have been concern that ACT scores would decrease. However, ACT scores and the change in ACT scores from the ninth-grade EXPLORE test to the eleventh-grade ACT did not change.

Figures 16 and 17 show a map of the secondary movers, their racial composition, the number of ninth-graders, and baseline Freshman OnTrack rates. These schools represented a wide cross-section of high schools in Chicago. They range in size from Kelly, on the Southwest Side of Chicago, with 858 ninth-graders entering in the fall of 2003, to Phoenix Academy, a small military

academy on the West Side, with 73 entering ninth-graders. These high schools were also diverse in terms of their starting points, with baseline Freshman OnTrack rates ranging from less than 40 percent to more than 75 percent. Figure 18 provides demographic and achievement comparisons between the baseline and the 2008–09 cohort, showing the similarities between the two groups. This implies that changes in Freshman OnTrack were not due to changes in the composition of students.

Ascertaining the “Secondary Movers”

When we identified “early movers,” we did not need to use a relative comparison because the district Freshman OnTrack rate did not improve. In 2008–09, the district Freshman OnTrack rate rose by 4 percentage points. Because the school system as a whole saw a significant increase in Freshman OnTrack rates that year, we defined secondary movers as schools that had increases in Freshman OnTrack rates that were above the district average in 2008–09, that sustained that improvement for one additional year, and that had no significant changes in governance or student body composition.

Figure 16

“Secondary Movers” were Spread Across the City

Map of all secondary mover schools

	Number of Students	Baseline % Ontrack
Overall	4160	52
Bogan	593	46
Chicago Discovery	279	55
Corliss	192	51
Douglass	84	37
Entrepreneurship	108	43
Hancock	305	63
Hirsch	217	44
Kelly	858	50
Lakeview	325	76
Michelle Clark	242	70
Phillips	300	50
Phoenix	73	50
Richards	120	44
School of Arts	141	63
Sullivan	329	47
Tilden	336	44
Uplift	145	74

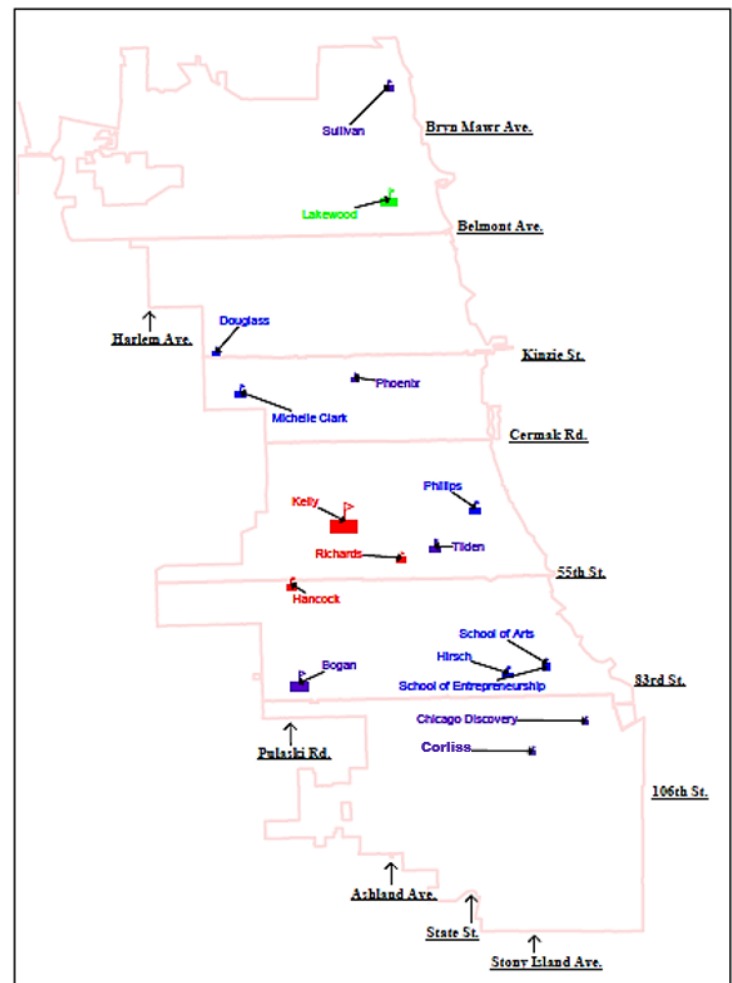


Figure 17: Secondary Movers were Representative of a Wide Cross-Section of High Schools
Demographic information for secondary mover schools

	Percent Latino	Percent African-American	2003 Average EXPLORE	Number of Freshmen
Total	39%	52%	13.4	4160
Bogan	30%	61%	13.7	593
Chicago Discovery	48%	52%	13.6	279
Corliss	1%	98%	13.4	192
Douglass	0%	100%	12.8	84
Entrepreneurship	0%	99%	12.2	108
Hancock	80%	4%	12.2	305
Hirsch	1%	98%	12.6	217
Kelly	86%	3%	13.5	858
Lakeview	50%	14%	14.6	325
Michelle Clark	0%	100%	13.7	242
Phillips	0%	99%	12.5	300
Phoenix	23%	77%	11.7	73
Richards	28%	71%	12.9	120
School of Arts	0%	99%	12.3	141
Sullivan	31%	58%	13.7	329
Tilden	25%	64%	12.6	336
Uplift	24%	64%	12.6	122

Note: This figure represents first-time freshmen at these schools without a special education status. Years refer to the spring of the school year. Number of freshman refers to the 2003 school year. Uplift HS opened in fall 2005; therefore, demographics, and EXPLORE score are from the 2005-06 school year.

Figure 18
EXPLORE Scores, Racial Composition and SES Status of the Secondary Mover Schools

	Baseline	2008-09
Ninth-Grade EXPLORE Score	13.13	13.08
Distribution of Explore scores		
<12	24.0%	23.3%
12-13	33.5%	33.5%
14-16	34.2%	34.1%
17+	8.3%	8.4%
Racial composition		
% Black	49.2%	42.1%
% Latinx	48.0%	45.5%
Neighborhood Socioeconomic Status	-0.46	-0.54
Concentration of Poverty	0.244	0.233

Note: Neighborhood socioeconomic status and concentration of poverty are derived from Census data on students' neighborhoods at the block group level. Socioeconomic status is made from information on median family income and education levels in the neighborhood. Concentration of poverty is based on male unemployment and the percentage of families under the poverty line. The variables are standardized across all neighborhoods in Chicago.

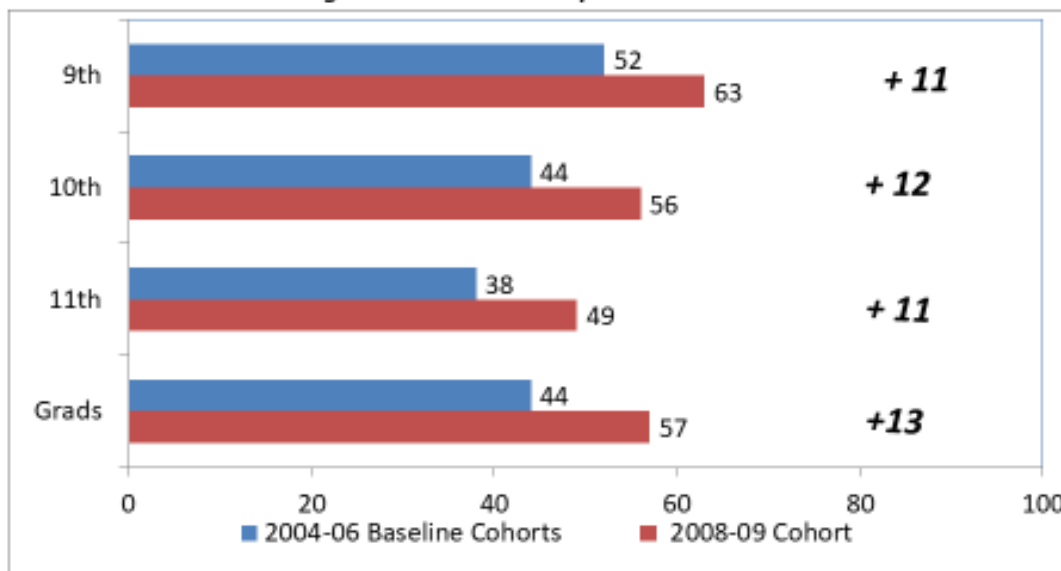
Research question 1: Is there evidence that changes in Freshman OnTrack rates are associated with improvements in the proportion of students who are on-track in tenth and eleventh grade, and, ultimately, who graduate on time?

Figure 19 shows the progression of the baseline and the 2008–09 ninth-grade cohorts in these 17 schools from ninth grade to graduation. Among secondary movers, Freshman OnTrack rates increased, on average, by 11 percentage points. That improvement in on-track was sustained in tenth and eleventh grade. In tenth grade, in the baseline year, only 44 percent of ninth-graders in these schools made it to the end of their tenth-grade year with 11 or more credits and no more than one semester failure in a core course (our definition of tenth-grade on-track). In the 2008 cohort, 56 percent of ninth-graders hit that bar at tenth grade, an increase of 12 percentage points. We see a similar improvement in eleventh grade, where our measure of on-track is having attained 17 or more credits by the end of eleventh grade. Finally, when the 2008–09 cohorts ended twelfth grade, they were 13 percentage points more likely to graduate than the baseline cohorts in these schools. Once again, this is strong evidence, across a broad array of schools, that practices ensuring that ninth-graders do not fail also put them on a positive trajectory toward graduation.

Figure 19

In Secondary Movers Schools, the Ninth Grade 2008-09 Cohort Remained Substantially More Likely to Stay On-Track in Tenth and Eleventh Grade and to Graduate

Increases in on-track and graduation rates compared to the baseline



Note: This figure represents first-time freshmen at secondary mover schools without a special education status.

The increase in graduation rates in these schools is remarkable. In the baseline period, only 44 percent of entering ninth-graders graduated four years later. In just a short period of time, with a significant increase in Freshman OnTrack rates, the graduation rate of those entering ninth-graders increased to 57 percent (see Figure 19). As we'll demonstrate, a 13 percentage point increase in graduation rate, following an 11 point increase in initial Freshman OnTrack must be driven by changes in the graduation rate of either on- or off-track students or both.

Figure 20**In Secondary Mover Schools, the Rising Graduation Rates Reflected the Increase in Freshman OnTrack Rates that Held through Graduation**

	Baseline Cohort	2008-09 Cohort	Change
Freshman <u>OnTrack</u> rate	52%	63%	11%
<i>Graduation rate based on students' Freshman <u>OnTrack</u> status</i>			
On-track graduation rate	67%	73%	6%
Off-track graduation rate	16%	19%	3%
Overall graduation rate	44%	57%	13%

In the previous chapter, we demonstrated how schools could influence the relationship between ninth-graders' early experience and their chances of later graduating by: 1) decreasing the proportion of ninth-graders who fail courses and get off-track; 2) improving retention by ensuring that more ninth-graders who get on-track stay on-track; and 3) increasing recovery by ensuring that more students who finish ninth grade off-track or fell off-track in tenth grade eventually get back on-track. Our three early mover schools illustrate different points on the spectrum as to how to influence those changes. Figure 19 and 20 show the average of the 17 schools, many of which also employed different strategies. In the secondary mover schools, graduation rates were driven by:

- an increase in Freshman OnTrack rates of 11 percentage points that was sustained in tenth and eleventh grade;
- an increase in the proportion of ninth-graders who stayed on-track, reflected by an increase in the on-track graduation rate from 67 to 73 percent; and,
- a small increase in recovery of off-track students, who then subsequently graduated, reflected by an increase in the off-track graduation rate from 16 to 19 percentage points.

Not every high school in our secondary mover group exhibited this pattern of improvements in Freshman OnTrack being accompanied by increases in the on-track graduation rate. Small schools, in particular, exhibited more volatility in performance. Appendix B provides data on the key three indicators—the on-track graduation rate, the off-track graduation rate, and the change in overall graduation rates—for each school in this group. On average, we observed that increases in Freshman OnTrack rates were accompanied by small but important increases in the graduation rates of students who were on track, enough to lead to an increase in graduation rates that was nearly equivalent to the change in Freshman OnTrack.

Research question 2: To what extent do improvements in Freshman OnTrack rates have the same or different effects on graduation for students of different achievement levels?¹⁷

One of the central concerns raised in discussions of Chicago’s focus on ninth grade has been whether increasing Freshman OnTrack rates among the lowest-achieving students would pay off to the same degree, compared to students with higher test scores. Logic would suggest that the payoffs to increasing Freshman OnTrack rates would differ by entering achievement level. Lower-achieving students may face additional barriers beyond just transitioning into ninth grade that would make it harder to translate getting on-track into increases in graduation. Additionally, we would expect that higher-achieving students are more likely to pass their courses and graduate. Across all secondary mover schools, the Freshman OnTrack rates for students in the lowest quartile increased by 10 percent; and the same occurred for students in the second, third, and fourth quartiles. These increases were sustained in tenth and eleventh grade, across all achievement quartiles, *and* these increases translated into higher graduation rates for students at all achievement levels.

On-Track and Graduation Measures for Tenth and Eleventh Grade

In Chapter 2, we used two new measures (tenth- and eleventh-grade on-track) to test whether improvements in Freshman OnTrack were sustained in later grades. Students are defined as on-track in ninth grade if they have five or more full course credits (the number required to move to tenth grade) and no more than one semester F in a core subject (English, math, science, or social studies). Students are defined as on-track in tenth grade if they have 11 or more course credits and no more than one semester F in a core subject during tenth grade. Finally, a student is defined as on-track at the end of eleventh grade if they have completed 17 or more credits. Seventeen is the number of credits that a student needs in order to graduate in twelfth grade, provided they pass all their twelfth-grade courses. Each of these measures is strongly predictive of graduation.

We use the term “overall graduation rate” to refer to graduation rate of the entire ninth-grade cohort. The “on-track graduation rate” refers only to the graduation rate of ninth-graders who ended ninth grade on-track for graduation, while the “off-track graduation rate” identifies ninth-graders who ended ninth grade off-track for graduation and graduated four years later.

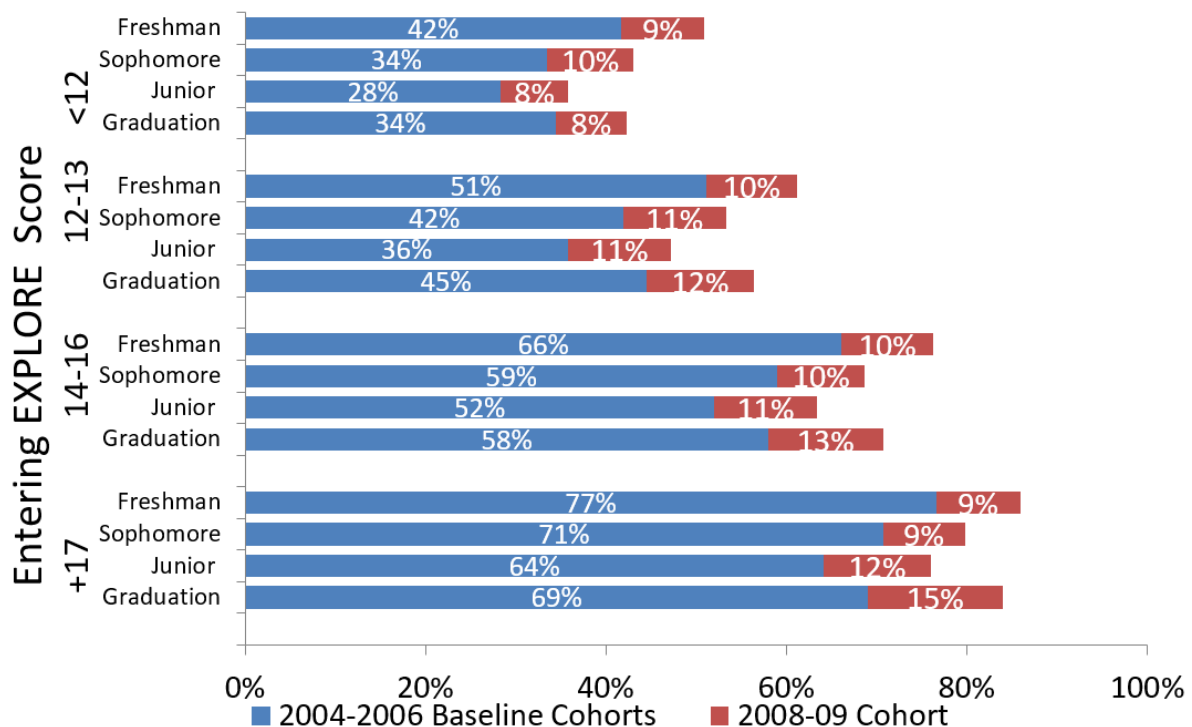
¹⁷ We are not able to report results by race and ethnicity within schools, since of the 17 secondary mover schools, over 90 percent were either predominantly Latinx or Black. Thus, our sample of diverse schools is too small to evaluate patterns within the school. The results across schools are consistent with the pattern of improvement in Chapter 1, Figure 6.

Figure 21 tracks the increases in Freshman OnTrack rates in the 2008–09 vs. the baseline cohorts through tenth and eleventh grade and graduation. In Illinois, all students took the ACT as part of the state’s accountability test. CPS aligned its testing with the ACT and used the Educational Planning and Assessment System (EPAS), which is made up of the EXPLORE test for eighth or ninth grade, the PLAN test in tenth grade, and the ACT in eleventh grade. EXPLORE scores in ninth grade are broken into four categories (less than 12, 12-13, 14-16, and 17 or higher). Students in CPS took the EXPLORE in the fall of ninth grade, and thus we treat the EXPLORE test for ninth-graders as their incoming test scores.

Figure 21

Increases in Freshman OnTrack Rates had Comparable Increases in Graduation Rates for Students of All Incoming Achievement Levels

Increases in Freshman OnTrack and graduation rates for the 2008-09 cohort compared to the baseline, disaggregated by incoming EXPLORE score



Note: This figure represents first-time freshmen in secondary mover schools without a special education status.

Among these 17 secondary mover high schools, during the baseline period, only 42 percent of students with the lowest achievement were on-track at the end of ninth grade and only 34 percent graduated. In 2009, Freshman OnTrack rates among students with EXPLORE scores less than 12 were 9 percentage points higher, and this increase in the on-track rate was sustained into tenth and eleventh grade. When this ninth-grade cohort reached twelfth grade, moreover, they were 8 percentage points more likely to graduate, compared to the baseline cohort. This pattern was remarkably consistent across all achievement subgroups, though the gains in graduation rates were

even stronger as entering achievement scores increase. Trends by race, ethnicity, and gender showed the same pattern.¹⁸

The payoffs to being on-track in ninth grade were equivalent across achievement groups and did not change as Freshman OnTrack rates rose.

Perhaps the most compelling, but controversial graph that shaped the argument for a focus on Freshman OnTrack was a comparison of the graduation rates for on- vs. off-track students by their entering achievement. Figure 22 presents this finding for our secondary mover schools at baseline. For clarity, it is worth walking through what each of these indices represents. In the secondary mover schools, on average, 42 percent of ninth-graders with the lowest incoming test scores ended ninth grade on-track for graduation. To many educators, this would not be surprising, as students with the lowest test scores would be expected to struggle. What is astounding, however, is that within this achievement group, 62 percent of those who were on-track graduated compared to only 15 percent of their counterparts, who struggled in ninth grade. If we define the payoff to on-track as the difference in graduation rate of students who were on- vs. off-track in ninth grade, the payoff to on-track rates among the lowest-achieving ninth-graders was 47 percentage points in the baseline

Figure 22
In Secondary Mover Schools, Low-Achieving Students Received the Same Payoffs to Getting On-Track as Higher-Achieving Students and Those Payoffs Stayed the Same Even as On-Track Rates Rose

Incoming EXPLORE		On-Track Rate	On-Track Grad Rate	Off-Track Grad Rate	Graduation
< 12	Baseline Cohort	42%	62%	15%	34%
	2008-09 Cohort	51%	66%	17%	42%
	Difference	+9	+4	+2	+8
12-13	Baseline Cohort	51%	66%	22%	45%
	2008-09 Cohort	61%	76%	25%	57%
	Difference	+10	+10	+3	+12
14-16	Baseline Cohort	66%	75%	27%	58%
	2008-09 Cohort	76%	84%	27%	71%
	Difference	+10	+9	0	+13
17+	Baseline Cohort	77%	79%	36%	69%
	2008-09 Cohort	86%	87%	64%	84%
	Difference	+9	+8	+28	+15

¹⁸ See Figure 18 and the box titled *Comparison of the Baseline Cohort and the 2008–09 Cohort in Secondary Mover High Schools are Remarkably Similar in Academic and Demographic Characteristics* for characteristics of the baseline and 2008–09 ninth-grade cohorts in secondary movers.

period. These payoffs, moreover, were quite similar for students regardless of their entering test scores.

Throughout this report, we have argued that the central criticism for the importance of increasing on-track is that researchers were overstating the case by comparing the graduation rates of students who were on- and off-track in the same school. There must be some reason why these two groups of students were different. It seemed implausible that getting students to pass several courses would transform their probability of graduating from 15 percent to 62 percent. What we find is that this was true across the board within CPS, but most poignantly illustrated among the lowest-achieving students. This was not a small group, and yet, as we moved students on-track, the overall graduation rate increased by 8 percentage points for this lowest-performing group. This pattern is strikingly similar across all incoming performance levels. The most important finding of this report is that as the Freshman OnTrack rates increased, so too did the graduation rates, regardless of a student's achievement level at the beginning of ninth grade.

Research question 3: To what extent were increases in Freshman OnTrack rates driven by schools making marginal improvements to student performance (e.g., shifting students grades from Fs to Ds)?

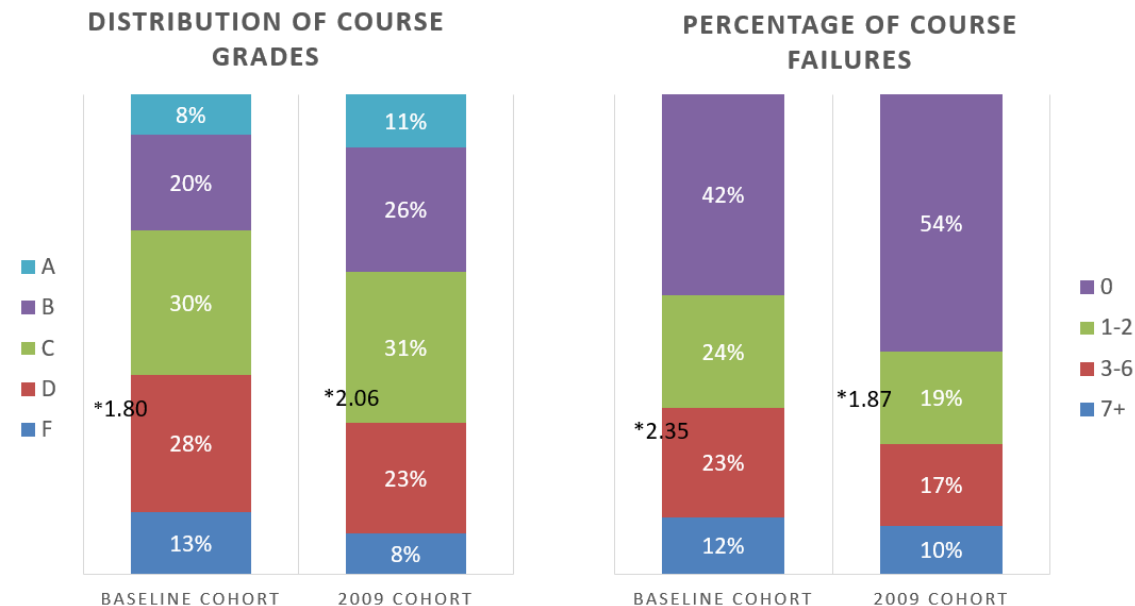
It is important to examine whether the focus on Freshman OnTrack led to real improvements in ninth-grade course performance or led instead to more marginal changes that simply got students over the hurdle of failure. There is little evidence that the increase in Freshman OnTrack rates in these schools was driven by simply focusing on turning Fs into Ds and in particular, on students at the margin. Figure 23 tracks the baseline and 2008–09 cohorts and shows that GPAs increased across the board. The proportion of students with Ds or Fs declined significantly from 41 to 31 percent, while the percentage of students with Bs or better increased from 28 to 37 percent. Equally impressive is that the percentage of students passing all core courses increased from 42 percent to 54 percent.

This is not a completely rosy picture. While the percentage of ninth-graders with no failures increased, the average ninth-grader in these schools was still failing 1.87 courses, meaning between one to two semesters of a major subject. And over one-quarter of students (27 percent) failed three or more semesters of a core course.

Figure 23

Not Only Did Failures Decrease at Secondary Mover Schools, but More Students Earned A and B Averages in Freshman Year

Grade distribution and core course failures for the 2009 cohort compared to the baseline at secondary mover schools



Note: This figure represents first-time freshmen at secondary mover schools without a special education status. Year refers to the spring of the school year. Core classes are all English, math, science, and social studies courses. * denotes GPA average.

The relationship between on-track rates and achievement test scores

Research question 4: Is there evidence that high schools face a tradeoff between improving Freshman OnTrack and graduation rates and raising achievement test scores?

The increase in Freshman OnTrack rates led to roughly equivalent increases in the proportion of students taking the ACT in eleventh grade. The average ACT score in the secondary movers group stayed the same, which suggests that the additional students kept on-track in the 2009 cohort learned as much between ninth and eleventh grade as their peers.

A common concern raised in discussions around addressing high school dropout is that there is an inherent tradeoff between increasing graduation rates and improving achievement test scores. Indeed, educators often raise the concern that high schools that increase their Freshman OnTrack rates will ultimately pay a penalty in the form of lower average scores on state accountability tests. This is due to weaker students, many of whom presumably would have dropped out, remaining in high school. It was in response to this claim that Arne Duncan originally included the Freshman OnTrack measure as part of a more balanced accountability system (see Chapter 1).

It is worthwhile to note that an important effect of the improvements in the proportion of tenth-graders on-track is that many more students are now still enrolled and formally counted as eleventh-graders and are eligible to take the ACT. As displayed in Figure 24, the proportion of ninth-graders

taking the ACT on time increased from 56.3 percent in the baseline cohorts to 66.5 percent for the 2009 cohort—a 10 percentage point increase. This improvement, moreover, was equivalent across students with both high and low test scores, again which is quite consistent, as seen in Figure 19, with the increases in the percent of students who were on-track in eleventh grade.

The third column in Figure 24 reports the average EXPLORE score for the pre- and post-cohorts as measured by the EXPLORE test, given in the fall of ninth grade. Since the criteria we used in identifying secondary movers was that the high school did not have significant changes in their student body composition in the pre- vs. post-period, the incoming ninth-grade EXPLORE scores for the baseline and 2009 cohorts were almost identical. On average, the entering EXPLORE scores for the baseline cohort were 13.13 vs. 13.18 for the 2009 cohort.

Figure 24

While Many More Students Persisted to Eleventh Grade to Take the ACT On Time, Test Scores Did Not Decline as On-Track Rates Rose.

EXPLORE and ACT scores at secondary mover schools, 2009 cohort compared to the baseline

		Number of Students	% of 9 th -grade cohorts taking the ACT on time in 11 th grade	EXPLORE score	ACT score	EXPLORE to ACT gain
All Students	2004-2006	11,743	56.30%	13.13	16.03	2.4
	2009	3,773	66.50%	13.18	16.24	2.64
	Difference		10.20%	0.05	0.19	0.24
<12 Incoming EXPLORE	2004-2006	2,810	41.00%	9.97	13.05	2.93
	2009	880	50.20%	10.17	12.94	2.66
	Difference		9.20%	0.02	-0.11	-0.27
12-13 Incoming EXPLORE	2004-2006	3,939	52.80%	12.53	14.66	2.1
	2009	1,290	63.00%	12.52	14.69	2.14
	Difference		10.20%	-0.01	0.03	0.04
14-16 Incoming EXPLORE	2004-2006	4,017	66.20%	14.77	17.09	2.28
	2009	1,287	16.20%	14.78	17.58	2.76
	Difference		10.00%	0.01	0.49	0.48
17+ Incoming EXPLORE	2004-2006	977	73.90%	17.93	20.8	2.84
	2009	316	86.40%	17.81	21.41	3.62
	Difference		12.50%	-0.08	0.61	0.58

If students who traditionally would have been off-track in ninth grade were students who were weaker academically or even less motivated to engage in their classwork, then rising on-track rates should have exerted downward pressure on ACT scores.¹⁹ Yet, when the students reached the

¹⁹ The argument that increases in on-track rates would lower ACT scores is an empirical claim. A simple simulation demonstrates the potential effect. In the baseline period, the average ACT score in our secondary mover high school was 16.06. Let's assume that ACT scores would remain the same in the absence of the increase in on-track rates. If the students who might have been previously off-track were, for example, students who would have ACT scores one point lower (one-quarter of a standard deviation in ACT), then the average ACT score of eleventh-graders would reflect the weighted average of 90 percent of students with ACT scores of 16.06 and an additional 10 percent of students with ACT

eleventh grade, their performance on the ACT remained comparable (16.03 for the baseline cohort vs. 16.24 for the 2009 cohort), which means that the average growth from EXPLORE to ACT remained the same even though more students were taking the ACT.

This is a tentative, but promising, finding. While a 10 percentage point increase in the proportion of students on-track is significant, there would need to be a very large difference in tested achievement to significantly change the district's average ACT scores. As we will see in the Interpretive Summary, these 17 secondary movers had much larger increases in on-track rates, which will allow us to study more significant changes over time.

Summary

We began this chapter voicing a legitimate concern that the patterns of improvements in Freshman OnTrack rates in our case study schools might be the “best case” scenario. Each of the schools raised its Freshman OnTrack rate, leading to increases in the graduation rate. However, each took a different journey. Keep in mind, that the Freshman OnTrack initiative provided early indicators for schools to identify at-risk students, but it did not prescribe how to prevent these students from falling off-track. In this chapter, we targeted schools that had above-average increases in their Freshman OnTrack rates between the 2007–08 and 2008–09 school years and maintained or improved that increase in the next school year. In this broader sample of schools, we see the same levels of effectiveness in terms of sustained on-track in the upper grades, leading to an increase in the graduation rates, as we did for the three case study schools.

The 17 schools that met these criteria were diverse and together seem to present an ideal test case of whether the patterns we observed in our case study schools held up across many schools. Baseline conditions in these schools certainly suggested a much more difficult context. On average, one-half of ninth-graders in these schools ended ninth grade on-track for graduation. The secondary mover schools had much lower graduation rates for both on- and off-track students than the schools we identified as early movers. In the baseline period, only 67 percent of on-track ninth-graders at secondary mover schools graduated, compared with an on-track graduation rate of 81 percent at Kenwood, 76 percent at Juarez, and 74 percent at Steinmetz. The average graduation rate of off-track ninth-graders was just 16 percent. Many of these secondary mover schools would not have been on a list of the worst high schools in the city; yet, the baseline performance is somewhat shocking and demonstrates how little attention had previously been paid to students' academic difficulty in ninth grade. When over one-half of students have such academic difficulty in ninth grade that they have a 16 percent chance of graduating, one would not expect that changing their on-track status would fundamentally change their trajectory in that same school. What we find, however, was that improvements in Freshman OnTrack followed the same pattern—increased on-track rates in ninth grade led to higher on-track rates in the upper grades and increased graduation rates. This impact, moreover, happened very quickly. To isolate the effect of an increase in ninth-grade on-track, we chose schools that had significant improvements in the first and second year of the Graduation Pathways initiative and compared that cohort to the years immediately prior.

This report was focused solely on testing the basic theory of action behind a focus on ninth grade as a unique point of intervention. At this point, the question of whether investments in ninth grade will

scores of 15.06. In this case, the average ACT score of eleventh-graders would fall to 15.87. If ACT scores were rising, this calculation would underestimate the impact on increases in test scores

pay off as a dropout prevention strategy is reasonably conclusive. In the Interpretive Summary, we summarize what we think we have learned about the ninth-grade year. The next question, however, is: What was it about the approach in Chicago that led adults to suddenly pay attention to this problem with such success? Several major foundations, including the W.T. Grant Foundation and the Spencer Foundation, have started to invest in both promoting and studying research-practice partnerships. Surely the approach in Chicago calls for replication but what should be replicated? Is it a focus on ninth grade? Is it the use of the indicator and the data system? Or is it the research/practice partnership? It is important to understand how this approach of data, research, professional development and a combination of autonomy and accountability for educators might come together to create such dramatic change in student outcomes. This would appear to be critical if the success in Chicago can move to many other districts.

Are Ds the New Fs: Are Schools Targeting Students for Support or Engaging in Social Promotion?

A discussion about the success of rising on-track rates is not complete without addressing lingering concerns of grade inflation as a means to improve on-track rates. Indeed, high school principals face external pressure to increase the Freshman OnTrack rate, given that it is part of the district's accountability plan in rating overall school performance, so the temptation for a "quick win" is possible. Therefore, it is not surprising that skeptics may claim that an easy way to increase a school's Freshman OnTrack rate is to simply focus supports for students on the bubble or, more sinisterly, give Ds instead of Fs without actually improving a student's performance. Research on high-stakes testing has consistently found that when schools are evaluated on measures that represent a bar that students must cross (e.g., proficiency or pass rates), educators will tend to adopt quick-return by focusing on students near the cutoff.^R There is an obvious analogy to Freshman OnTrack rates.

At the same time, an important component of CPS's on-track strategy, and one that the Consortium research emphasizes, is better targeting of students who are on the cusp and can most easily get back on-track. For example, it makes no sense to assign summer school slots only to students who have failed seven courses and not provide those spots to students who failed two courses and can get back on-track by making up those classes. Supporting students who are at risk of failing is an appropriate strategy to improve a school's Freshman OnTrack rate and one that many schools use. Indeed, the school district provides early indicators of on- and off-track, so that schools can target its resources on students who are at risk of failing.

While it is often cited as a concern, we do not see evidence of widespread social promotion if we test it by whether gains are sustained in tenth grade and by changes in eleventh-grade ACT scores. The secondary mover schools represent a large cross section of schools; it seems quite implausible that teachers are engaging in social promotion in moving this many students—given that gains were sustained in upper grades and the graduation rate increased. It is also important to look beyond the ninth-grade year to determine trends that will enable us to determine whether schools have increased their on-track rates through social promotion.

The challenge for schools when targeting supports is to devise strategies that students will take with them after ninth grade so that recovery in upper grades can be focused on off-track students in ninth grade.

^R Ho (2008).

Interpretive Summary: The Preventable Failure

In 2007, spurred by research reports by the UChicago Consortium, leadership at CPS began a new initiative focused on reducing course failure in the ninth grade and, in particular, improving the proportion of ninth-graders who ended the school year on-track to graduation. Research suggested that a promising strategy to prevent school dropout would be to stem the dramatic declines in attendance, school engagement, and, ultimately, course performance.

To improve ninth-grade performance, high schools received some extra resources for summer programs that aided the transition to ninth grade and expanded ninth-grade orientations. However, the central thrust of their efforts was to use data to identify students who might be at risk in the transition to high school through the use of early identification and ongoing monitoring of students' performance to intervene as soon as problems occurred. CPS developed a series of data tools that allowed high schools to identify which students were at risk for failure and monitor their progress throughout the school year. Consortium school reports provided additional analytic support and allowed high schools to identify which groups of students were improving and which were not, and how their students were doing compared to system averages. This provided actionable analysis.

At first glance, this does not seem like an initiative that would produce a system shift in performance, redefine approaches to school dropout, and bring into question the conventional wisdom that urban neighborhood high schools could not effectively sustain radical improvements. And yet, CPS's focus on the Freshman OnTrack indicator moved an entire system, and the evidence strongly suggests that the dramatic improvements in Freshman OnTrack rates were sustained, translating into improved performance in later grades and ultimately higher graduation rates. It is important, therefore, to start our interpretive summary by recognizing the magnitude of the evidence presented in this research report and the unprecedented nature of these results:

- It is rare in education to find a reform that “brings up” (rather than leaves out) the lowest-performing students and the lowest-performing high schools;
- It is very rare, indeed, to find high schools making dramatic progress over such a short period of time and sustaining that progress over several years;
- It is unprecedented to find researchers and educators converging on such a large, critical challenge, using research to focus their efforts and producing such dramatic results;
- And, this effort was implemented in Chicago, in traditional neighborhood high schools that have been condemned as “dropout factories” and generally characterized as places of across-the-board institutional failure.²⁰

In this interpretive summary, we begin with a brief overview of the main findings. We place our results in the context of other high school reforms that have measured improvements in Freshman OnTrack rates. We also contextualize the continued progress in on-track rates that has taken place since the first year of improvement in the 20 high schools that are analyzed in this report. We then draw three takeaways, or lessons learned, for what these findings may tell us more generally about designing effective approaches to reducing dropout rates as well as the set of questions they raise for further research.

²⁰ Sebring et al. (1996).

Freshman OnTrack rates improved dramatically with the lowest-performing schools making the most substantial progress.

There are many ways to demonstrate the breadth of and depth of improvement in Freshman OnTrack rates in CPS high schools, and they all lead to similar conclusions. Between 2007 and 2013 improvements in Freshman OnTrack rates were dramatic, sustained, and observed across a wide range of high schools and among critical subgroups—by race, by gender, and across achievement levels. The lowest-performing high schools made, by far, the greatest progress. Freshman OnTrack rates in the 25 percent of high schools that in 2005 had the poorest Freshman OnTrack rates in the city increased by 35 percentage points, from 45 to 80 percentage points by 2013. In both relative and absolute terms, improvements in Freshman OnTrack rates were largest among Black and Latinx young men and students with the lowest entering achievement. Between 2005 and 2013, Freshman OnTrack rates increased from 43 to 71.4 percent among Black young men and from 52 to 74 percent among Latinx young men.

There is strong evidence that improvements in Freshman OnTrack rates were sustained into tenth and eleventh grade and led to significant improvements in graduation.

It is easy to see why a focus on the transition to high school—particularly one focused on Freshman OnTrack indicator—became a powerful point of coherent intervention for high school reform in Chicago. As we argued in Chapter 1, in an area of education where there is such a large gap between research and practice, the development of the Freshman OnTrack indicator, and resultant attention to monitoring and supporting students across the transition, reduced the seemingly unmanageable problem of increasing graduation rates to something that educators could influence by changing the day-to-day experiences of ninth-graders in their building. Furthermore, the Freshman OnTrack indicator provided a simple quantitative measure that schools could monitor and make measurable progress on in a very short period of time. Thus, it moved the problem of school dropout and on-track from a summary measure of student or schools' performance to an actionable set of strategies that could be monitored over time.

At the same time, the strength of the UChicago Consortium's research findings seemed almost too good to be true. Few would disagree that the statistics were compelling. Students who get even one F in a course in the first semester of ninth grade are 15 percentage points less likely (70 percent vs. 85 percent) than ninth-graders with no semester Fs to graduate four years later. Ninth-graders who have good attendance are 21 percentage points more likely to graduate than ninth-graders who miss more than a week of school (5-9 days) in a semester. Critics cautioned that while it is clear that differences in the attendance and course performance of ninth-graders were highly predictive of whether students were going to later drop out, this did not mean that getting students to pass all of their first semester classes would automatically change their chances of graduation by 15 percentage points.

The rise in Freshman OnTrack rates represented a significant commitment on the part of high school educators, without substantial evidence that it would pay off. Given this investment, it seemed imperative that we would bring evidence to bear as quickly as possible on whether and how improvements in Freshman OnTrack might shape the performance of students in subsequent grades and if there was evidence of impact on graduation. This meant that we had to find schools that had increases in Freshman OnTrack rates in either the first or second year of the initiative, because these two cohorts graduated. We identified 20 schools that had substantial increases in Freshman

OnTrack in either the 2007–08 (three early movers) or the 2008–09 school years (17 secondary movers) and which sustained improvements for at least one year. These 20 schools were striking in their diversity. The schools ranged from very large to small high schools. They represented high schools in almost every area of the city and, as a result, were racially and ethnically diverse. On average, the baseline Freshman OnTrack rate in these schools was slightly below the CPS average (52 percent among secondary movers vs. 58 percent for the district). Taken together, the approximately 4,800 first-time ninth-graders in these schools represented 17 percent of ninth-graders in the city.

The most consistent finding in our analysis of both the early and secondary movers is that improvements in Freshman OnTrack were followed by equivalent increases in the proportion of that cohort who were on-track in tenth and eleventh grade. To summarize our finding in the previous chapter, the average Freshman OnTrack rate in those high schools that saw above average improvement in the 2008–09 school year was 11 percentage points higher than in the baseline period (2004–06 school years). When the 2008–09 cohort reached tenth grade, their tenth-grade OnTrack rates were also 12 percentage points higher and this continued into their eleventh-grade year (11 point). Finally, on average, the graduation rate of these high schools increased by 13 percentage points, from 44 to 57. In addition, in almost all cases, we found that the relationship between Freshman OnTrack and graduation remained the same or became stronger as Freshman OnTrack rates rose. At the baseline period, students who were off-track in these 17 schools were very unlikely to graduate. Just 16 percent of off-track ninth-graders graduated on time four years later. Few would think that by getting students to pass their classes in ninth grade, the probability of those off-track students graduating on time would more than triple. And yet, that is exactly what happened. Even more surprising is that these same patterns occurred regardless of student entering achievement levels.

This is quite a challenging and, in many ways, provocative set of findings. As researchers, we are trained to think systematically about what is often called “selection bias.” Even if being on-track mattered, we would not expect that as more and more students became on-track they would not garner the same returns, because there must be some reason that students who were off-track in the baseline cohorts had more difficulty than their counterparts in the same school who managed to pass their courses. We also see the same pattern in test scores. Increases in tenth-grade on-track rates meant that many more students were counted as eleventh-graders and thus were eligible to take the ACT—Illinois’s mandated accountability test. Yet, the average ACT scores of the 2008–09 ninth-grade cohort remained the same and the average growth in student test scores from EXPLORE to ACT remained the same. To put this simply, when more students made it to eleventh grade, those students did as well on the ACT as students who were on-track in prior cohorts, even though many fewer students in prior cohorts were on-track. This finding challenges much of how both researchers and educators alike have thought about the characteristics of students who drop out of school. We have found that, at least for Freshman OnTrack and graduation, within-institution experiences matter much more than what any student brings with them as they enter high school. This challenges prevailing notions of school dropout and encourages future studies that favor analysis of school-level factors as the explanation for sorting mechanisms.

Takeaway 1. The Freshman OnTrack initiative reframed the problem of school dropout from an outcome that is outside the control of educators to one that can be managed through effective school-based strategies.

At its core, the debate about focusing on Freshman OnTrack rates is a debate about the nature of the high school dropout problem itself—about whether students’ likelihood of dropping out can be influenced by school and classroom environments and practices, or whether dropping out is predetermined by a set of existing family, neighborhood, peer, and student characteristics that students bring with them into the ninth grade. Certainly, differences in students’ family backgrounds, skills, motivation, and disposition that they bring with them into ninth grade put them at differential risk for difficulty in the transition to high school. However, the evidence in this report suggests that the failure that drives high school dropout is less a shortcoming of students, than it is the failure of adults and institutions to provide a coordinated response to address students’ individual needs.

What the focus on Freshman OnTrack has done is shift a failing grade from a judgment about a student’s ability—a message to students that they were not going to make it in high school—to a red flag for adults that a student needed intervention and support. Failure suggests that students are struggling with the material, skills, and behaviors required in a given course. Too often, students have been allowed to move on to the next semester or the next school year with little intervention, placing them at even greater risk of subsequent failures. Early tracking of failures in ninth grade reframed academic difficulty as a preventable outcome, transforming it into a marker of a solvable problem with either course material, a given teacher, or with managing the academic and social demands of the transition to high school. Without adult intervention, there is little reason to expect struggling students to solve these problems alone. Educators have traditionally seen failure as sending a message to students that their behavior must change; as it turns out, 14- and 15-year-olds are ill-equipped to make these changes on their own.

Putting the Results in Context

Chicago’s approach to improving ninth-grade performance was unique. Schools were not told what to do, they were provided data systems and analysis that helped them develop strategies and manage the problem in real time. But what is not unique is the finding that reducing course failure in ninth grade is effective as measured by whether students continue to progress on time through high school and graduate. As research evidence has accumulated on the importance of reducing academic course failure in ninth grade, evaluations of more traditional reform initiatives began using credit accumulation and Freshman OnTrack as outcomes on which to evaluate the success or effect of critical interim outcomes. For example, in two studies of high school reforms conducted by MDRC, researchers found similar patterns to what we observed throughout this report.

In 2002, the New York City Public School system embarked on an ambitious high school reform when it closed many large public high schools and opened hundreds of small schools. Using a rigorous lottery study, MDRC studied the effect of this move to small schools and adopted the UChicago Consortium’s Freshman OnTrack rate as one indicator on which to evaluate the effects of the new schools. In the report *Transforming the High Schools Experience*, researchers found that students in small schools were 10 percentage points (58.5 vs. 48.5) more likely to be on-track for graduation in ninth grade, compared to counterparts who lost the lottery and attended a different high school. Using measures of credit accumulation, the report estimated that small schools of choice enrollees were 10.8 percentage points more likely to earn 10 or more credits ninth-grade year, 11.1 percent

more likely to earn 20 or more credits tenth-grade year, 7.1 percentage points more likely to earn 30 or more credits in eleventh grade, and 6.8 percentage points more likely to graduate. As the MDRC evaluation concluded:

“The effect of a more successful transition into high school is observed for a broad range of students who differ in terms of their prior academic proficiency, race/ethnicity, gender, eligibility for free or reduced-price lunch, and stated preference for their SSC. These SSC effects are sustained during students’ second and third years of high school and culminate in higher rates of graduation by their fourth year.”²¹

MDRC in its earlier evaluation of the effect of “Ninth Grade Success Academies” in seven low-performing high schools in Philadelphia also found that improvements in credit accumulation in ninth grade were sustained into tenth grade.²² The evaluation compared changes in students’ performance pre- and post-adoption of Success Academies to differences in performance in matched comparison high schools. MDRC found strong impacts of the Ninth Grade Success Academy on improving attendance, academic course credits earned, and promotion rates.²³ The evaluation estimated that the Ninth Grade Success Academies led to an 8 percentage point improvement in ninth-graders earning enough credits to be promoted to tenth grade and a 6.5 percentage point increase in the proportion of tenth-graders promoted to eleventh grade.

Takeaway 2. Ninth grade is a pivotal year that provides a unique intervention point to prevent school dropout.

Why is ninth grade such a unique point of intervention? Drawing on prior research and the evidence presented in this report, we would propose that there are three critical pieces of this puzzle. First, ninth grade in urban school systems is marked by dramatic changes in students’ course performance in a very short period of time. Throughout the elementary and middle grade years, students’ grades and academic behaviors (e.g., attendance, study habits, etc.) tend not to fluctuate dramatically from year to year. But it is in ninth grade that we observe dramatic changes in academic performance that unfortunately set that course for the rest of high school. As the UChicago Consortium report *Free to Fail or on Track to College* points out, average grades for all courses drop by more than one-half a letter grade (0.6 points on a 4-point scale). This decline happens across all subjects and among both core and non-core courses.²⁴

Second, declines in grades between eighth and ninth grade are largely driven by equally as dramatic changes in attendance, homework completion, and other academic behaviors in comparison to those exhibited in eighth grade. It is these changes in academic behaviors that explain declines in grades, which place the nexus of the dropout problem in the high school transition and particularly within the influence of high school educators. Most educators assume that the high rates of course failure in ninth grade and the declines in GPA that occur as students move into high school are due to students’ low skills; the problem, the argument runs, is that students do not have the academic skills to meet the new higher levels of content demands in high school courses. The evidence, however,

²¹ Bloom, Thompson, & Unterman (2010).

²² Kemple, Herlihy, & Smith (2005).

²³ Kemple & Herlihy (2004); Kemple et al. (2005).

²⁴ Stevens et al. (2014).

does not support that explanation. Indeed, what is particularly important about the high school transition is that students' grades drop because of dramatic changes in their academic behaviors, and this decline occurs among students with strong academic skills, as well as students with weak skills. Simply, students' grades decline because they are not attending classes, are not doing homework, and are not studying—negative academic behaviors that many of them did not exhibit in middle grades. In a recent analysis, the UChicago Consortium found that almost all of the decline in English and math grades between eighth and ninth grades could be explained by the change in students' absences and declines in self-reported study habits.²⁵ The changes in academic behaviors during the transition to high school are striking. For example, in 2009, the average eighth-grader in CPS missed nine days of school. The next year, when these students were in high school, their average absences increased to 21 days. This means that the average ninth-grader in CPS missed approximately a month of instructional time.

Third, not surprisingly given the evidence on attendance, what makes ninth grade particularly distinctive is that many students fail courses just at the point at which the rules change; semester grades now count and progress in high school is measured by credit accumulation and meeting graduation requirements. Failing courses is uncommon in the middle grades in Chicago, but in ninth grade, failure is widespread. In the baseline period, for example, the average ninth-grader in our sample of secondary movers (see Figure 24) failed more than two of their semester courses. Fs in ninth grade place students almost immediately in a “catch-up” position and makes progress through high school even more difficult. Lack of credit accumulation plays a significant role in explaining the link between the ninth-grade transition and school dropout. Students who fail courses are not accumulating credits toward graduation; each course failure puts students further behind, making them less and less likely to complete the number of course credits required to graduate on time. Academic failure also undermines school engagement and a sense of belonging, leading students to begin adopting negative school attitudes and behaviors with an eventual downward spiral in performance.²⁶

To summarize, there is strong evidence that lends plausibility to the findings that ninth grade is a critical point of intervention. In three different cities, the same pattern emerges. When high schools improve the proportion of their ninth-graders who pass their courses, these gains carry into tenth and eleventh grade and result in more students graduating. The difference is not in the effect of improving Freshman OnTrack rates, it is in how different districts and schools achieved that improvement. In Philadelphia, the Talent Development improvements were accomplished by reorganizing the environment and changing the curriculum. In New York, it was achieved by a dramatic restructuring of the nature of high schools in the city. And in Chicago, it was achieved by a relatively inexpensive approach to bringing research evidence to bear and providing supports for schools to focus on their students and intervene appropriately. Indeed, the contrast in these differential approaches makes the changes we observe in Chicago even more remarkable not only because of the relatively low-cost approach but because what we observe is that by building the capacity of schools, Freshman OnTrack became a system of continuous improvement.

²⁵ Rosenkranz et al. (2014).

²⁶ Roderick & Camburn (1996); Kaplan et al. (1997).

Increases in Freshman OnTrack rates were sustained and translated into improvements in graduation. These schools continued to improve Freshman OnTrack rates through 2016.

Initially, the comparison to the NYC evaluation of the move to small schools looks like Chicago's improvement in Freshman OnTrack produced comparable results. Among secondary movers, the initial increase in Freshman OnTrack rates of 11 percent between the baseline and 2008–09 cohorts seems comparable to the 10 percent increase in on-track attributed to the move in NYC to small schools. The 11 percentage point increase in Freshman OnTrack, however, represented only one year of improvement in these schools. What complicates the story in Chicago is that many of these schools have continued to improve with some high schools making dramatic gains.

FIGURE 25

Not Only were Initial Increases in Freshman OnTrack Rate Sustained, but most Schools Continued to Improve Through 2016

High school	Baseline	Change by 2009	Change 2009-2016	2016
Hancock	63%	9%	27%	98.5%
Phoenix Academy	50%	31%	13%	94.9%
Kenwood	61%	12%	22%	94.2%
Bogan	46%	8%	39%	92.9%
Michele Clark	70%	11%	10%	91.2%
Corliss	49%	12%	27%	88.4%
Sullivan	47%	7%	33%	87.1%
Uplift	73%	10%	2%	85.1%
Lake View	76%	5%	2%	84.1%
Hirsch	44%	10%	29%	83.3%
Juarez	47%	8%	27%	81.5%
Steinmetz	48%	14%	16%	78.0%
Douglass	37%	24%	17%	77.8%
Kelly	50%	6%	18%	74.4%
Phillips	50%	10%	14%	73.5%
Richards	44%	6%	21%	71.4%
Tilden	44%	6%	21%	70.8%

Note: This figure represents first-time freshmen at primary and secondary mover schools. Years refer to the spring of the school year. Three secondary mover schools, Chicago Discovery, School of Entrepreneurship, and School of the Arts

Figure 25 presents Freshman OnTrack rates for both the early and secondary movers from the baseline period through the 2016 school year sorted by their OnTrack rates in 2016. In this report, we focused on differences in the performance of the ninth-grade cohort in the baseline period and the 2007–08 school years for early movers and the baseline and 2008–09 school year for secondary movers. The continued growth in Freshman OnTrack rates among these high schools suggests that these effects may ultimately far outpace improvements seen in New York's small schools and Talent Development initiatives. At Hancock high school, which increased its Freshman OnTrack rate from 63 percent at baseline to 72 percent in the 2008–09 school year, consistent improvements in the subsequent years drove that rate to 98 percent. Other high schools, including Bogan, Kenwood, Juarez, Richards, and Tilden doubled and even tripled their initial gains in Freshman OnTrack. These five high schools, moreover, were strikingly different from one another in size, racial composition, and geography, underscoring the reach of the efforts around ninth grade. However, it is also true that while many high schools have continued to improve, some did not. The differences

between these high schools may provide important clues for understanding the conditions that support successful and sustained efforts at making school change.

The scale of improvements in Freshman OnTrack rates in these schools is virtually unheard of in public education reform. If these improvements continue to translate into higher graduation rates, which all the evidence presented in this report would suggest they should, the question becomes not whether increasing Freshman OnTrack rates is effective in preventing high school dropout, but instead what made Chicago's approach to increasing Freshman OnTrack so effective?

Takeaway 3. The Freshman OnTrack initiative in Chicago provides an important case study of the potential use of data to build the capacity of high school educators to manage complex problems and create systems of continuous improvement.

The success of this initiative raises important questions about how the use of data changed educators' behaviors, why some schools continued to improve and others did not, and, in particular, why this approach was so effective in generating improvements the lowest-performing schools. So far in this summary, we have focused on the lessons learned in this report around whether improvements in Freshman OnTrack rates are effective in improving graduation rates and what this tells us about the nature of the school dropout problem more generally. These findings raise additional sets of questions about the nature of this approach for high school reform. What was it about the tracking system that was so effective? This may, in the end, be the most important question we raise in this interpretive summary, but unfortunately, at present we can only conjecture about possible explanations and raise questions for further research.

One hypothesis is that the particular approach used by CPS was a perfect match to the problem of the ninth-grade transition. First, as described above, ninth grade is characterized by marked changes in student attendance, academic behaviors, and grades, which means that high schools could observe those changes very early in the school year and intervene appropriately. Thus, the Freshman OnTrack initiative placed the data systems at the point in which problems begin to occur.

Second, once identified, the primary causes of that academic difficulty could be directly addressed and influenced by high school educators. While high schools cannot directly change the entering skills of their students or their family background, they can intervene to ensure that students are attending class regularly and can monitor and intervene quickly when students begin to fall behind in their homework.

And, third, and perhaps most importantly, tracking and monitoring systems may be particularly effective when managing complex problems in which the outcome (e.g., difficulty in math may be driven by many different problems). What educators have found is that there are a myriad of reasons for failing courses. One student may be arriving for school late every day while another may be leaving early to pick up a younger sibling after school. One student may be failing multiple courses because of non-attendance while another may be in school but selectively attending classes. And yet another student may have not turned in homework which turned out to be a major portion of their grade. The traditional approach in high schools has been to focus on content—mandate algebra tutoring for students failing algebra. In contrast, the use of data to monitor students' performance and intervene at the student level may provide a much more effective approach.

We began this report with a graph demonstrating the near one-to-one relationship between Freshman OnTrack and the graduation rate of that same cohort four years later. Given that results of this magnitude were unexpected, it is critical to delve into the circumstances that brought about this direct link between Freshman OnTrack and graduation rates. Schools were not given a program to solve the dropout problem, but rather an approach to use and employ differently across schools to meet their needs. Schools were tasked with raising the Freshman OnTrack rate and given the data and monitoring systems to identify students at risk for failure. The use of technology broke down many of the barriers to provide timely data for at risk students. The use of data made Freshman OnTrack research actionable and provided a process of managing support to monitor students. Data tools and quick feedback mechanisms allowed schools to develop approaches to ensure quick action and support when students started to struggle with their courses.

It is easy to read this report and the compelling results and conclude that Freshman OnTrack is the answer to the dropout problem and should be replicated everywhere. However, improving the Freshman OnTrack rate is easy to state as a goal, but much more difficult to successfully implement because it requires an investment not in a program, but in staff and data tools. Turning the Freshman OnTrack indicator from an idea into a strategy that has had a tremendous impact on the graduation rate took commitment and a coordinated effort from the essential players: researchers who developed the measure and provided the monitoring system, district leadership who initially endorsed and promoted the measure as an effective strategy to prevent students from dropping out, facilitators who provided training and guidance to schools, and the school staff who embraced the measure and developed a system of supports and intervention to ensure that students were on-track at the end of ninth grade. Although schools tackled the goal in a variety of ways that continued beyond ninth grade, the central premise remained the same across all schools; embrace the idea that students can succeed and use strategies to organize ways that produce better outcomes for students.

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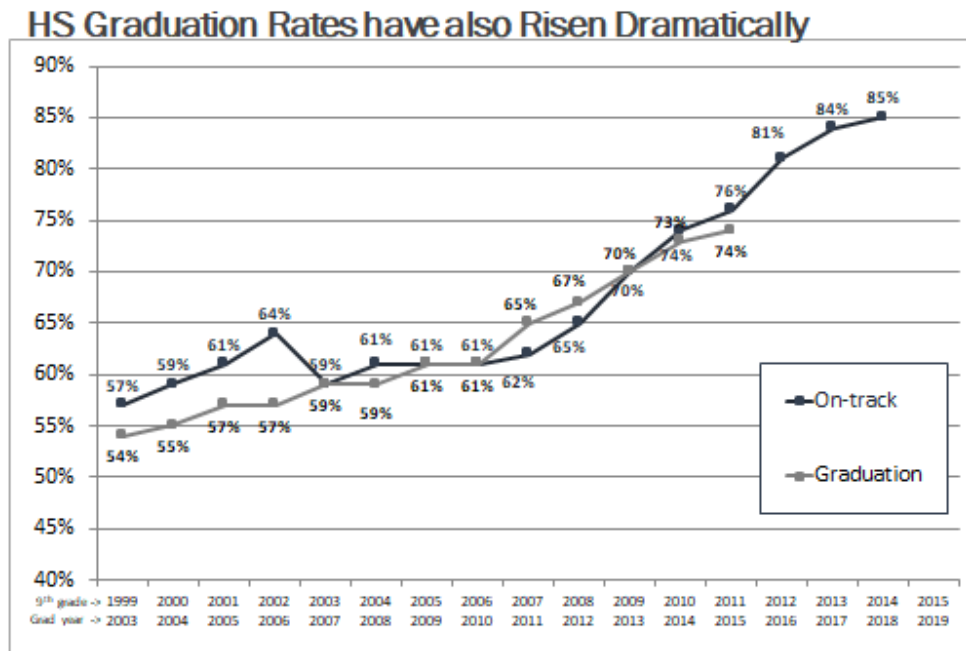
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Appendix A

Lining up trends on Freshman OnTrack and Graduation

In the Introduction, we presented trends in the proportion of ninth-graders on-track for graduation and the actual graduation rate for that cohort using the publicly reported data available on the CPS website. We noted that in 2015, CPS revised its calculation of both the Freshman OnTrack measure and of graduation to be more rigorous in the treatment of unverified transfers. The data on the website reports both methods for several years before 2015 so that we can observe how using the new measure affects the estimate and trend. In general, the change resulted in more students being included in the cohort, reducing both the Freshman OnTrack and graduation rates by approximately 1-2 percentage points a year. In addition, while the graduation and Freshman OnTrack cohorts are aligned, the graduation rate includes more schools because Freshman OnTrack cannot be calculated for charter schools in the city. Figure A.1 shows trends in the Freshman OnTrack measure and graduation when both problems have been corrected.

Figure A.1. High School Graduation Rates Have also Risen Dramatically



Note: Source: Internal communication UChicago Consortium on School Research.

Appendix B

Increases in Freshman OnTrack and Validation Outcomes for High Schools in the Secondary Mover Group

In Chapter 3, we presented the average effects across the 17 secondary mover schools. In the 2008–09 school year, the Freshman OnTrack rate among the secondary mover high schools was 11 percentage points higher than in the baseline period. The average graduation rate for the 2008–09 cohorts was 13 percentage points higher than that of the baseline cohorts. These increases in graduation rates reflected both that the increases in ninth grade were sustained in tenth and eleventh grade and that students on-track in the 2008–09 period were actually more likely to graduate—essentially the relationship between being on-track in ninth grade and later graduation increased. While the average is particularly important because it allows us to look beyond the specific case study schools to think about system outcomes, it often hides important variation across schools.

Figure B-1 On-track, on-track graduation, and off-track graduation rates for secondary mover schools

	2004-2006			2009			Change Over Time			
	On Track Rate	On Track Grad Rate	Off Track Grad Rate	On Track Rate	On Track Grad Rate	Off Track Grad Rate	On Track Rate	On Track Grad Rate	Off Track Grad Rate	Overall Grad Rate
All Secondary Movers	52.0	67.1	15.9	63.0	72.5	19.2	+11.0	+5.4	+3.3	+10.8
Bogan	45.5	74.3	20.8	54.0	78.7	24.7	+8.4	+4.4	+3.9	+8.7
Chicago Discovery	55.2	68.5	26.4	71.5	75.0	11.4	+16.4	+6.5	-14.9	+7.4
Corliss	49.2	67.6	14.9	61.6	67.6	16.0	12.4	+0.1	+1.2	+7.0
Douglass Middle	37.1	73.4	18.7	61.2	55.0	6.6	+24.1	+18.4	-12.1	-2.8
Entrepreneurship	42.9	69.7	18.7	64.6	60.9	5.7	+21.7	-8.7	-12.9	+0.9
Hancock	62.9	73.9	18.8	71.6	84.6	20.9	+8.7	+10.7	+2.1	+13.0
Hirsch	43.9	60.5	14.8	53.9	64.1	21.8	+10.1	+3.5	+7.1	+9.9
Kelly	49.8	73.8	15.7	56.1	79.1	26.1	+6.3	+5.3	+10.5	+11.2
Lake View	76.5	80.7	19.5	82.0	85.3	23.3	+5.5	+4.6	+3.8	+7.8
Michelle Clark	70.0	53.7	30.0	80.8	77.6	15.4	+10.8	+23.9	-14.6	+19.2
Phillips	49.7	60.7	10.3	59.3	49.3	9.9	+9.6	-11.5	0.4	-2.0
Phoenix Acad	50.4	63.3	13.6	81.5	76.4	24.0	+31.1	+13.0	+10.4	+28.0
Richards	44.4	69.1	24.7	50.6	71.6	20.9	+6.1	+2.4	3.8	+2.1
School of Arts	62.7	65.9	15.0	75.0	66.7	8.7	+12.3	+0.8	6.3	+5.2
Sullivan	46.8	57.8	16.3	54.2	69.2	22.4	+7.3	+11.4	+6.1	+12.1
Tilden	43.9	53.4	9.4	49.8	67.9	16.2	+5.9	+14.4	+6.8	+13.1
Uplift	73.5	63.9	23.3	90.8	81.3	23.1	+17.3	+17.4	0.3	+22.8

Note: This figure represents first-time ninth-graders without a special education status. Years refer to the spring of the school year. Number of ninth-graders is of the 2008–09 cohort. Graduation rate is the percentage of entering ninth-graders in the cohort graduating on time. On-track graduation rate is the percentage of entering ninth-graders who were on-track in ninth grade who later graduated. Off-track graduation rate is the percentage of entering ninth-graders who were off-track in ninth grade who later graduated.

First, schools in our secondary mover group differed in their initial shifts in Freshman OnTrack rates. Changes in Freshman OnTrack rates ranged from improvements that were just above the district average to improvements of over 20 percentage points. Some of these differences may be the artifact of different starting points. Schools with higher Freshman OnTrack rates to begin with had less to grow. Smaller schools, moreover, showed more volatility from year to year. All of the schools with over 15 percentage point increases were small schools.

Schools in the secondary mover group also demonstrated very different changes in the overall graduation rate of the cohort, given their change in Freshman OnTrack rates. For the most part, differences between the increase in Freshman OnTrack rates and the cohorts' graduation rates depended upon the extent to which improvements in ninth-grade outcomes were also accompanied by improvement in recovery (e.g., students who were off track recovered) or in retention (e.g., fewer ninth-grade students got off-track in later grades). In this report, we have seen several patterns:

- Freshman OnTrack rates improved and these ninth-graders received the same payoff to on-track as previous cohorts (e.g., Kenwood Academy);
- Freshman OnTrack rates improved and this effort was matched with investment in recovery in later grades get off-track students back on-track (e.g., Juarez);
- Freshman OnTrack rates improved and students who got on-track in ninth grade were more likely to stay on-track and graduate (e.g., the average pattern in secondary movers); and
- Freshman OnTrack rates improved, but were not sustained and did not lead to improved graduation rates (e.g., Phillips). This is the pattern that critics of on-track predicted would happen if schools simply passed more students—essentially delaying failure until later grades.

What's striking is that even though schools took different paths to improving Freshman OnTrack and subsequently graduation rates, the averages between the early and secondary movers were very similar.

Figure B.2 groups the schools in the secondary mover group by these predominant patterns. The average trend in the secondary mover group is well captured by the pattern at Hancock High School. For example, the Freshman OnTrack rate at Hancock increased by 8.7 percentage points. In addition, the graduation rate of on-track students increased substantially. In the baseline period, 74 percent of students who were on-track in ninth grade graduated four years later, but in 2009, that graduation rate increased to 85 percent, leading to an 11 percentage point improvement in graduation rates for that cohort over the baseline. Thus at Hancock, more students ended ninth grade on-track and substantially more stayed on-track in subsequent years.

Figure B.2. Categorizing Patterns in the Relationship between Improvements in Freshman OnTrack and Graduation

	Change Over Time (baseline to 2009)			
	On Track Rate	On Track Grad Rate	Off Track Grad Rate	Overall Grad Rate
All Secondary Movers	11	5.4	3.3	10.8
	Schools where the change in graduation rate in 12th grade is larger than that cohorts increase in 9th grade on track rates			
Hancock	8.7	10.7	2.1	13
Kelly	6.3	5.3	10.5	11.2
Lake View	5.5	4.6	3.8	7.8
Michele Clark	10.8	23.9	-14.6	19.2
Sullivan	7.3	11.4	6.1	12.1
Tilden	5.9	14.4	6.8	13.1
Uplift	17.3	17.4	-0.3	22.8
	Schools where the change in graduation rates for the cohort is equivalent to that cohorts' change			
Bogan	8.4	4.4	3.9	8.7
Hirsch	10.1	3.5	7.1	9.9
Phoenix Academy	31.1	13	10.4	28
Chicago Discovery*	16.4	6.5	-14.9	7.4
	Schools where the change in graduation rates for the cohort is less than that cohorts' change			
School of Arts	12.3	0.8	-6.3	5.2
Corliss	12.4	0.1	1.2	7.0
Douglass Middle	24.1	-18.4	-12.1	-2.8
Entrepreneurship	21.7	-8.7	-12.9	0.9
Phillips	9.6	-11.5	-0.4	-2
Richards	6.1	2.4	-3.8	2.1
*Chicago Discovery is difficult to categorize. Even though the graduation rate increase is less than the on track increase, this was due to a severe drop in the off-track graduation rate which blunted the over all graduation rate.				

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The UChicago Consortium's work on the Freshman OnTrack indicator has been recognized as a model for how research and data can inform school improvement. The movement is grounded in the basic research finding that students' grades dramatically decrease from eighth to ninth grade, setting off a downward spiral for many students until they drop out. This finding led to a creation of the indicator, a theory of action, and finally to a system that educators embraced, which led to dramatic improvements in graduation occurred over 20 years, with researchers at UChicago Consortium building on each other's work.

This impact speaks to the initial vision of Anthony Bryk in establishing the UChicago Consortium as a method in bringing researchers to the table in advancing school reform. It also required that we understand how researchers interacted with practitioners in building their capacity. We can largely credit the impact of the Freshman OnTrack indicator to the leadership and vision that John Easton brought to the UChicago Consortium. Easton implemented a reciprocal relationship between researchers and practitioners that guided the research to ensure that each step informed practice at the school level. The role of the researchers was not to do independent research, but rather to ask questions and listen to the problems that educators were struggling with, in order to determine the research that would help to elevate their efforts.

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