The transition from eighth grade to high school results in a substantial drop in course performance for many students. Those with weak performance in the middle grades—students who were earning Cs and Ds—often begin failing classes in high school. Even students with very high grades, attendance, and test scores in eighth grade are at risk of not earning As and Bs in ninth grade. These declines in performance lead students to fall off-track for obtaining high school and college degrees; in order to graduate high school, students need to pass their classes, and they need to earn Bs or better in their classes to be ready for college.

By using data on students’ middle grade performance, high school staff can set goals for their students to help them meet their potential and provide support before students fall off-track for either high school graduation or college success. This brief highlights a few key findings from the study *Looking Forward to High School and College: Middle Grade Indicators of Readiness in Chicago Public Schools* that have implications for how high schools support their incoming ninth-grade students.

**THE 4 KEY FINDINGS**

1. **Students’ attendance and GPA in the middle grades provide the best indication of how they will perform in their high school classes, compared to other potential indicators such as test scores.** These are the best indicators to use for setting goals with students and identifying which students need support and intervention at the start of the school year.

2. **Many students with the highest levels of achievement in the middle grades fall off-track for college in the ninth grade.** Students who enter ninth grade with high achievement in the middle grades could benefit from monitoring and intervention if they fail to earn high grades in high school, to make sure they reach their college potential.

3. **Students who were chronically absent or receiving Fs in the middle grades are already very likely to be off-track in ninth grade before they even begin high school.** Supporting these students early in ninth grade is a critical step to helping them graduate.

4. **Most students who are off-track in ninth-grade courses did not show signs of academic trouble in the middle grades.** Ninth-grade early warning monitoring systems, based on course grades and attendance in high school, are critical to keep all students on-track to graduate—for many students, academic problems start when they enter high school.
ACKNOWLEDGEMENTS

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To download the full report, visit ccsr.uchicago.edu/publications.
Students’ attendance and overall GPA in the middle grades provide the best indication of how they will perform in their high school classes, compared to other potential indicators such as test scores.\(^1\)

There are many different indicators of how students are performing in school, including test scores, grades, attendance, and disciplinary records. Additionally, recent attention has been focused on “noncognitive factors” that are not measured by tests, such as students’ academic perseverance (grit) and study habits.

It is also common to hear that students’ high school performance is strongly related to their background characteristics, such as their race, gender, or family income. With so many factors potentially related to later outcomes, it may seem difficult to identify which students are at risk for poor performance in high school. It turns out, however, that the best prediction of passing classes and earning high grades in high school comes from a combination of just two indicators—grades and attendance. Adding other information about students, including their test scores, suspensions, eighth-grade study habits, and background characteristics, does not improve the prediction of whether students will reach high school test benchmarks once their middle grade test scores are considered. However, as discussed further below, test score benchmarks are not the best indicators of college readiness.

Implications

High school staff do not need to wait until students are failing ninth-grade classes to intervene. They can use eighth-grade GPA and attendance to create a simple indicator system to identify students who are at risk of failing classes in high school even before they enter ninth grade. Many potential indicators are correlated with high school outcomes, but it is not necessary or efficient to track all of them. Grades and attendance are the most accurate indicators to use for setting coursework goals for students and identifying students who need intervention for staying on-track to graduate.\(^2\)

Currently, many high schools use test scores to identify students who will need support to pass Algebra or English I, providing double-period classes or tutors. However, prior grades and attendance provide a much better indication than test scores of who is likely to struggle. If only students who have low test scores receive support, high schools may miss many students who are at risk of failure. To get more students on the path to college readiness, high school practitioners can also use eighth-grade GPA and attendance data to identify students’ risk for earning less than As and Bs in high school.

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1. See Chapters 4 and 7 of the full report for details about the relationships between middle grade indicators and high school performance.
2. Students who are on-track to graduate in the ninth grade have at least five full course credits and no more than one semester F in a core course; this indicator is highly predictive of eventual graduation (Allensworth and Easton, 2007).
The Role of ACT Scores and High School GPAs for Predicting Students’ College Achievement

Prior research shows passing classes and earning high grades in high school are essential for high school and college graduation, while test scores primarily matter for college access. There is often a perception that students’ performance on tests is what matters for high school and college graduation. While there are innumerable studies showing significant relationships between test scores and educational attainment, grades are consistently found to be more strongly related to educational attainment than test scores. Furthermore, the relationship of test scores to high school and college graduation becomes small, once we take into account students’ GPAs. It is students’ grades that ultimately matter more for high school and college graduation than their test performance, and grades are affected by many factors other than test scores. This does not mean that test scores are irrelevant—it is easier for students with higher test scores to get good grades—but a focus on test scores as the dominant factor affecting college readiness would be misplaced. It is crucial that students are engaged and working hard in their classes, as indicated by their course grades. It is by working hard in their classes that students gain the academic skills, the behavioral skills, and the noncognitive skills they need to be successful in college and careers.

College readiness benchmarks are poor indicators of how well schools are preparing students for college; EPAS gains and GPAs are better metrics. Schools and the public are concerned about meeting ACT benchmarks as an indication of whether students are ready for college, and whether schools are preparing students well for college. However, test benchmarks are not the most meaningful indicators of college readiness. Not only are they less predictive of college graduation than students’ GPAs but they are also poor goals to set for most students—for some students they are too easy and for others they are impossible to reach, even if they have extraordinary learning gains in high school. In fact, over half of CPS students enter high school with less than a 5 percent chance of meeting PLAN or ACT benchmarks of the EPAS system; others already have skills above the benchmarks when they begin high school. This makes benchmarks irrelevant for all but a subset of students. Setting one testing goal for all students sets up many students and schools for failure and does not push students at the high end to meet their potential. It also sends the message that students who miss the benchmarks will not succeed in college, when their chances are about the same compared to students who meet the benchmarks and have similar high school GPAs.

The ACT benchmarks indicate the point at which a student has a 50 percent chance of receiving a B or better in a first-year college course. That means that half of the students who score just at or above the benchmark do not receive at least a B, which is far from a guarantee of success for students who meet the benchmark. At the same time, many students who score below the benchmark do attain grades of at least B in college. With ACT’s reading benchmark, for example, a score of 21 gives a student a 50 percent chance of a B in a college social science class, but a score of 16—one that is four points lower and equivalent to about three to four years of growth in high school—gives a student a 40 percent chance of earning a B or better. Thus, a large difference in scores results in only a slight difference in the probability of success.

While students’ probability of reaching the ACT benchmarks is largely determined by their prior test scores in the middle grades, there are still substantial differences in the gains that students make on ACT’s EPAS system in high school. Two students with same middle grade ISAT score, who came from the same elementary school, can vary in their PLAN math score by as much as two points, depending on which high school they attend. Students gain about a point a year on average, which suggests that students gain about twice as much each year on their EPAS scores at some schools than at others. Even though students at these schools might not reach the benchmark scores, their options for college enrollment improve with higher test scores.

A Rumberger and Lim (2008); Allensworth and Easton (2007).
B Geiser and Santelices (2007); Roderick et al. (2006); Bowen, Chingos, and McPherson (2009); Allensworth (2013); Healey, Nagaoka, and Michelman (2014).
C Farrington et al. (2012).
D Roderick et al. (2006).
E Allen and Sconing (2005); Bowen, Chingos, and McPherson (2009).
F See Chapter 7 in the full report.
Even High Achievers Struggle with Ninth-Grade Transition

Many students with the highest levels of achievement in the middle grades fall off-track for college in the ninth grade. Many students with strong grades, attendance, and test scores in middle school do not earn high grades in high school. As shown in Figure 1, students with an eighth-grade GPA between 3.0 and 3.3 have no greater than a 37 percent chance of earning As or Bs in ninth grade, even with ISAT math scores that exceed standards (above 310). It is only those students with an eighth-grade GPA above 3.7 who have better than a 52 percent chance of earning As or Bs in ninth grade. Among these students, having higher test scores increases students’ likelihood of earning As and Bs. But for students with an eighth-grade GPA below 3.7, higher test scores do not substantially increase students’ likelihood of earning As and Bs (Figure 1). High school GPA can be a crucial roadblock for students’ college aspirations; prior research shows that only students who graduate from high school with at least a 3.0 GPA have a 50/50 chance of obtaining a four-year college degree in six years after high school graduation. Students need to earn Bs or better in high school to be on the path to college success.

Implications

High school staff might try to identify reasons why high-achieving students show drops in performance in their school and why it occurs. Are there problems during particular times of the day—such as first period, when students arrive late? Are there problems in classes that use a particular type of grading structure? Do grades and attendance drop more in the second semester than in the first semester? Understanding the scope of underperformance in a school is the first step to addressing structural problems that may be leading students to disengage from learning.

Many high schools have systems in place to reach out to students who are falling off-track for graduation. Students who are not meeting their college potential are another group that is ripe for intervention. Systems can be set up to flag students whose middle grade performance suggests they should be earning good grades in high school but are not, so that school staff can find out why it is that students’ grades are declining in high school and provide the supports they need to put them back on-track for college success.

3 Roderick et al. (2006); Bowen, Chingos, and McPherson (2009).
Some Students Enter High School at High Risk for Failure

Students who were chronically absent or receiving Fs in the middle grades are already very likely to be off-track in ninth grade. Students who were chronically absent in eighth grade—missing more than 10 percent (equivalent to missing at least 18 days or three and half weeks) of the school year—are more likely to be off-track in ninth grade (see Figure 2a). Students who receive Ds and Fs in the middle grades are at high risk for failure in high school. Most students with an eighth-grade GPA below a 2.0 have less than a 50/50 chance of being on-track for graduation in ninth grade. The combination of low attendance and low grades is a clear signal that students are very likely to fail in high school (see Figure 2b).

Implications
Without support, students who enter ninth grade with low eighth-grade attendance or grades have slim chances of being on-track for high school graduation, let alone college success. If information to identify these students is available early, high schools can use the summer and the first weeks of ninth grade to establish supportive relationships between students at high risk of failure and adults in the building. They can reach out to parents to establish relationships and trust before students encounter difficulty.

A number of programs provide examples of strategies which have been successful for improving the academic performance of at-risk students. One example is the Check-and-Connect program, in which mentors monitor students’ attendance and course performance, providing support as they need it.4 For students with a moderate risk of failure, low-cost programs, such as the NYC Success Mentors, have shown some success at improving students’ attendance, grades, and test scores.5 For students at extremely high risk of failure, intensive programs, such as the model developed by Match Education, have been shown to improve students’ performance, although they are more costly.6

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4 Sinclair et al. (1998); Lehr, Sinclair, and Christensen (2004).
5 Balfanz and Byrnes (2013).
6 Cook et al. (2014).
FIGURE 2A
Chronically-Absent Eighth Graders Are More Likely to be Off-Track Than On-Track in Ninth Grade

9th-Grade On-Track by 8th-Grade Attendance

<table>
<thead>
<tr>
<th>8th-Grade Attendance</th>
<th>9th-Grade On-Track</th>
<th>9th-Grade Off-Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 80%</td>
<td>19%</td>
<td>81%</td>
</tr>
<tr>
<td>80-85</td>
<td>32%</td>
<td>68%</td>
</tr>
<tr>
<td>85-90</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>90-92</td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td>92-94</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>94-96</td>
<td>70%</td>
<td>30%</td>
</tr>
<tr>
<td>96-98</td>
<td>77%</td>
<td>23%</td>
</tr>
<tr>
<td>98-100</td>
<td>85%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Note: Based on students entering ninth grade in the 2009-10 school year, followed through the 2011-12 school year.

FIGURE 2B
Middle Grade Students With High Absences or Low Grades Are Likely to Be Off-Track in Ninth Grade

9th-Grade Off-Track by 8th-Grade GPA and Attendance

<table>
<thead>
<tr>
<th>8th-Grade Core GPA</th>
<th>Chance of Being Off-Track</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Low (&lt;10%)</td>
</tr>
<tr>
<td></td>
<td>Low (10%&lt;25%)</td>
</tr>
<tr>
<td></td>
<td>Moderate (25%&lt;50%)</td>
</tr>
<tr>
<td></td>
<td>High (50%&lt;75%)</td>
</tr>
<tr>
<td></td>
<td>Very High (75%+)</td>
</tr>
</tbody>
</table>

Note: Based on students who began ninth grade in the 2009-10 school year.
Many Off-Track Freshmen Do Not Show Signs of Failure Before High School

Most students who are off-track in ninth-grade courses did not show signs of academic trouble in the middle grades. While students who were chronically absent in the middle grades can be identified as at high risk for failing in high school, most students who are off-track in ninth grade cannot be identified with precision based on their middle grade performance. About one-third of first-time ninth-graders are at moderate risk of being off-track (between a 25 and 50 percent chance of being off-track) based on their eighth-grade performance (see Figure 3). Students with a moderate risk of being off-track had about a C average and a 95 percent attendance rate in eighth grade. Another quarter of students enter high school at low risk of being off-track (between a 10 and 25 percent chance of being off-track). Students who were at low risk of being off-track had a B average and a 97 percent attendance rate, on average, in eighth grade. While the risk of being off-track is not high for these two groups, because of their size, these two groups account for just over half of all students who were off-track at the end of ninth grade.

FIGURE 3
The Percent of Students at Low, Moderate, and High Risk of Being Off-Track in Ninth Grade

Based on Students Who Began Ninth Grade in the 2009-10 School Year

Note: The five risk groups shown in this chart were created by first running a logistic regression in which the probability of being off-track is modeled as a function of eighth-grade core GPA, attendance, ISAT math scores, and any significant interaction terms between these three indicators. Using predicted probabilities generated from the analysis, we then created the five groups, using the cut points described in the parentheses above. Based on students entering ninth grade in the 2009-10 school year.
Implications
High school early warning systems are critical to keep most students from failing; the problem is not simply that they entered high school unprepared. While there are calls for early identification of dropouts in middle school, the change in context from elementary school to high school makes it difficult to predict exactly who will struggle in ninth grade, beyond the students with very high risk. Once students show signs of struggle in ninth grade—with absence from classes or low grades—they become at high risk of not graduating.

One reason it is difficult to predict who will fail in high school based on their middle grade performance is that the probability of failure is strongly influenced by which high school a student attends. Whether a student is “ready” for high school depends not only on their academic performance in the middle grades but also on the context in which they enter in ninth grade. Students with the same academic records in middle school have different high school outcomes depending on which high school they attend. Students are more likely to pass their ninth-grade classes in some high schools rather than in others; this is especially true for students with moderate GPAs (between a 1.0 and 3.0). For example, among students with moderate probability of being on-track (50 to 75 percent)—based on their eighth-grade GPAs, attendance, and test scores, actual on-track rates range from 31 percent at some high schools to 75 percent at others, after accounting for differences in which school they attended for the middle grades (i.e., middle school differences in GPAs).7 When students enter some high schools, their attendance and work effort drop considerably, while students at other high schools show much smaller declines in academic behaviors.8

UChicago CCSR’s 2014 report Free to Fail or On-Track to College: Why Grades Drop When Students Enter High School and What Adults Can Do About It (Rosenkranz, de la Torre, Stevens, and Allensworth) provides a description of the school factors that influence the decline in academic behaviors from eighth to ninth grade.

Absences increase dramatically from eighth to ninth grade, driving course failure and low grades in high school, even among students with strong test scores. Many students stop attending every class regularly in high school. In eighth grade, only 5 percent of students had less than 80 percent attendance (see Figure 4); one year later, in ninth grade, a quarter of

FIGURE 4
Attendance Declines Dramatically from Eighth to Ninth Grade

Note: Average attendance rates for students entering ninth grade in 2009-10 who were eighth-graders in 2008-09. The same set of students is represented in each year (eighth and ninth grade).

7 See Chapter 3 in the full report for more information.
8 Rosenkranz et al. (2014).
these eighth-graders had less than 80 percent attendance. A student with 80 percent attendance is missing, on average, one day of school a week. In eighth grade, 60 percent of students had attendance rates of 96 percent or higher. In ninth grade, only 37 percent of students attended at least 96 percent of the time. Unexcused absences quadruple from eighth to ninth grade on average.

At the same time, students also report putting less effort into studying and completing their work. According to the CPS student connection survey, 27 percent of seventh-graders in spring 2007 said they “strongly agree” that they “try hard on schoolwork even if it is boring;” two years later, in 2009 when they were ninth-graders, only 18 percent of the same group of students strongly agreed to the same question. There were also declines in the percentage of students who said they set aside time for homework and studying and the percentage of students who said they always study for tests. The changes in attendance and study habits account for most of the decline observed in students’ grades. Statistical models show that almost all of the gap in GPA between eighth and ninth grade can be explained by students’ attendance and study habits.

Absences not only lead students to struggle to pass their classes, but they also prevent students with strong academic skills from earning high grades. Students who earn high grades in high school tend to miss less than a week of school days in a year. Even students who enter high school meeting ACT’s college readiness benchmarks on the EXPLORE (a score of 16 in math) are unlikely to earn B averages unless they have very strong attendance (see Figure 5). These students enter high school with the academic skills to be on the path to college, but weak attendance leads them to receive low grades. In 2009-10, almost a quarter of students scoring at the math benchmark on the EXPLORE in ninth grade missed 20 days or more of class during the ninth-grade year. On average, these students with high test scores and high absences had a ninth-grade GPA of 1.8. Furthermore, students’ grades generally do not improve as they progress through high school; in fact, they tend to get worse. Thus, low GPAs in ninth grade take students out of the running to be eligible for college when they graduate.

Implications

It may seem like a low bar—get students to come to school every day. But if students are not in school, they miss instructional time and the assignments and assessments that make up their course grades. Efforts aimed at improving attendance—getting students to school close to 100 percent of the time—could have a substantial pay-off in students’ eventual success in college and careers, but problems with attendance are often dismissed as being of low importance compared to progress on tests.

There are many reasons that students miss school, from sickness to transportation and family issues to a lack of interest in coursework. School staff can help students and families prevent obstacles from interfering with high school attendance. Attendance is also a basic, but essential, requirement for workforce success—an employee cannot show up 90 percent of the time and keep a job. High schools need to convey the importance of strong levels of effort and engagement and work to ensure that instruction is engaging, relevant, and rigorous so students are motivated to attend every day.
Summary

Everyone is concerned about getting students ready for college. Many students leave the middle grades with strong achievement only to fall off-track for college when they get to high school. However, even students with strong grades, high test scores, and good attendance in the middle grades are not sure to get strong grades in high school. The assumption is often that students enter high school unprepared, with insufficient academic skills. However, many students leave the middle grades with strong achievement only to fall off-track for college when they get to high school. The main driver is not weak academic skills but a decrease in course attendance and work effort. For almost all students, it is important to monitor their performance in the first year of high school and reach out to students who are not living up to their potential, and particularly to students who start to show signs of failure or withdrawal. Getting students to attend every day and complete their work is the basic requirement for improving learning and achievement—both for earning higher grades and for improving test scores.

High schools in Chicago have shown substantial success at getting more students on-track in the ninth-grade year by monitoring students’ grades and attendance closely and reaching out right away when students fall behind. It is easy to lose focus on supporting students’ academic behaviors, with all of the changing demands around curriculum, pedagogy, and assessments. Monitoring indicators, such as attendance, is not a substitute for improving instruction or creating engaging environments. But figuring out why students have low grades and poor attendance, and addressing those issues, is essential to establish an engaging classroom environment with challenging instruction. Otherwise, the best-planned lesson falls flat. Getting students to be more engaged in their classes—coming every day they are not sick, turning in all assignments, and putting in their best effort—is what matters the most for their later outcomes.

9 Roderick et al. (2014).
10 Allensworth et al. (2014).
References


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This report reflects the interpretation of the authors. Although UChicago CCSR’s Steering Committee provided technical advice, no formal endorsement by these individuals, organizations, or the full Consortium should be assumed.
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