



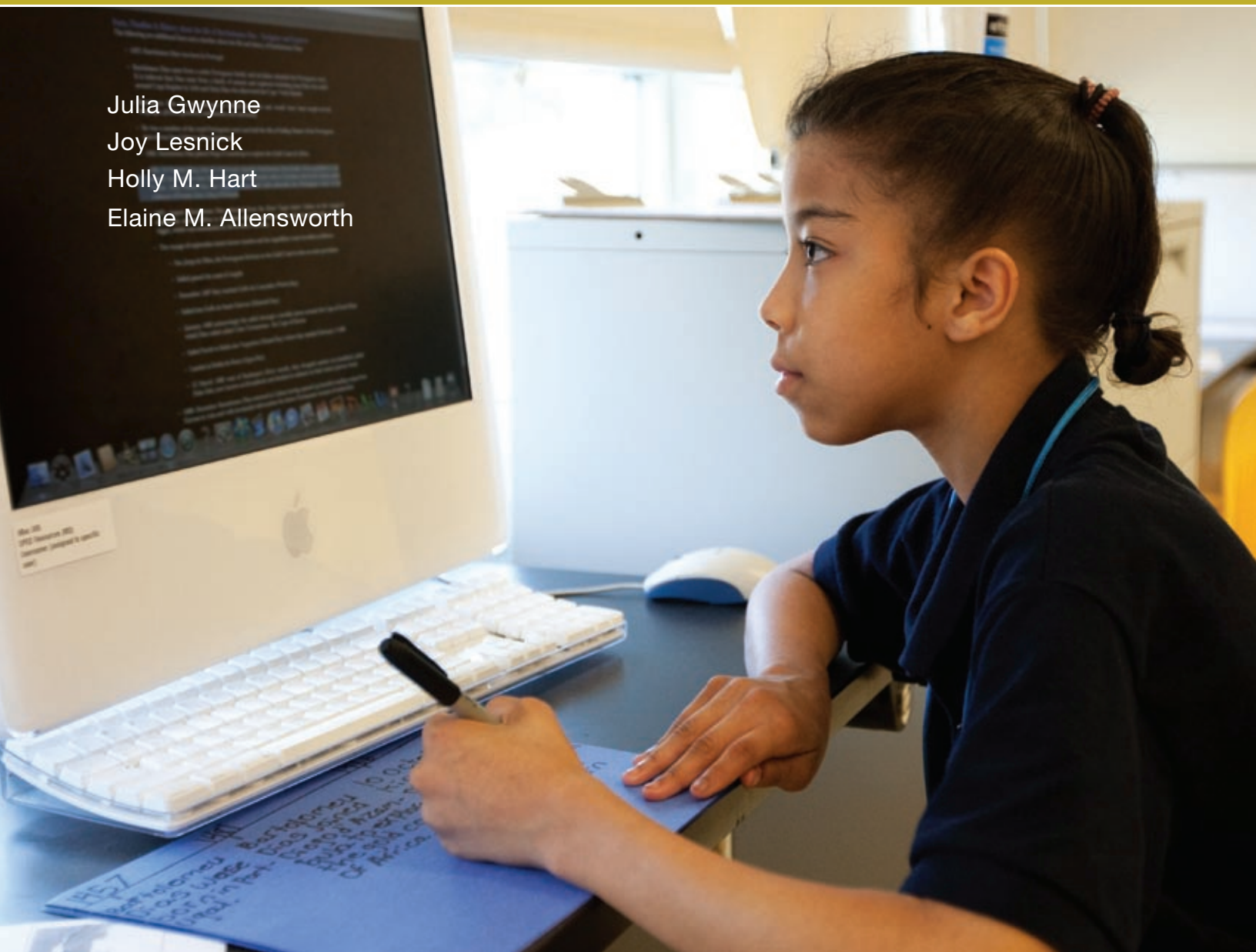
CONSORTIUM ON  
CHICAGO SCHOOL RESEARCH  
AT THE UNIVERSITY OF CHICAGO  
URBAN EDUCATION INSTITUTE



# What Matters for Staying On-Track and Graduating in Chicago Public Schools

## A Focus on Students with Disabilities

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# Executive Summary

In the United States, students who are identified as having a disability receive individualized services based on their strengths, weaknesses, and educational goals. Despite this individualized approach to supporting students, many students in special education continue to perform below their non-disabled peers. In an earlier Consortium on Chicago School Research (CCSR) report, *What Matters for Staying On-Track and Graduating in Chicago Public High Schools*, Elaine Allensworth and John Easton found that course performance during the freshman year—including grades, course failures, absences, and on-track status—could be used to identify students at risk of dropping out of high school.<sup>1</sup> These findings provide educators with tools to identify at-risk students at an early stage in their high school career, potentially reducing the risk of students dropping out. This is a promising approach, but questions remained after the first report about whether the early-warning indicators could be used in the same way for students with disabilities as for other students.

In this report, we look at the freshman year course performance of Chicago Public Schools (CPS) students who receive special education services and ask whether grades, course failures, absences, and on-track status are useful for identifying students who are at risk of dropping out. We also examine how academic behaviors, such as attendance and study habits, affect course failures and grades of students with disabilities.

Students receiving special education services are a diverse group. We take this diversity into account by separately analyzing the course performance and academic behaviors of five groups of students with different types of special needs. These include students with learning disabilities, mild cognitive disabilities, emotional disturbances, speech/language disabilities, and physical/sensory disabilities. In addition, we also consider the course

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performance and academic behaviors of a group of students who do not receive special education services but who have extremely weak academic skills: students who enter high school two or more years below grade level. These students have a prior achievement history that is similar to students with disabilities, and as a result, they may face similar challenges in their freshman year courses. But for unknown reasons, these students do not receive special education services in high school. A final group, students without identified disabilities, is included for comparison in each of our analyses. These students do not receive special education services and did not enter high school two or more years below grade level.

Consistent with the original *What Matters* report, most of the analyses in this report are based on information about the cohort of CPS students who were first-time freshmen in 2004. When reporting graduation rates, we use information about the cohort of CPS students who were first-time freshmen in 2001. We report four major findings.

**1. Students with speech/language disabilities and students with physical/sensory disabilities perform similarly to students without identified disabilities in their freshman year courses. Students with emotional disturbances and students who entered high school two or more years below grade level had the lowest level of course performance of any group we studied.**

In our analysis of course performance during the freshman year, we found three tiers of performance. The highest performing tier consisted of students without identified disabilities and students with speech/language disabilities or physical/sensory disabilities. Students in this “top tier” had approximately a C average and two semester course failures. They were absent an average of eight days per semester, and nearly two-thirds were on-track by the end of their freshman year.

The “second tier” included students with learning disabilities and students with mild cognitive disabilities. Students in this tier had a D+ average and three semester course failures on average. They missed an average of 12 to 13 days of school each semester, and only about half were on track to graduate by the end

of their freshman year. The “lowest tier” included students who entered high school two or more years below grade level and students with emotional disturbances. These students had a D average and failed more than four semester courses during the freshman year, one-third of their courses. They missed between three and four weeks of school each semester, and only about one-third of them were on-track after their freshman year.

**2. Freshman year course performance is a strong predictor of five-year graduation rates for students with disabilities and students who entered high school two or more years below grade level.**

Similar to the earlier *What Matters* report, we find that absences, GPA, course failures, and on-track status are strong predictors of five-year graduation rates for students with disabilities and for students who entered high school two or more years below grade level. For example, among these students, those who were on-track at the end of ninth grade were three to six times more likely to graduate than students who were off-track. Similarly, students with no course failures during their freshman year were about three times more likely to graduate than students with five or six course failures.

Despite the utility of absences, grades, course failures and on-track status in predicting graduation rates, we find that at each level of course performance, students with disabilities and students who entered high school two or more years below grade level were less likely to graduate than their non-disabled peers. For example, 87 percent of on-track students without disabilities graduated in five years, while only 78 percent of on-track students who entered high school two or more years below grade graduated in five years. Seventy-seven percent of on-track students with learning disabilities and 67 percent of on-track students with mild cognitive disabilities graduated in five years. Lastly, only 57 percent of on-track students with emotional disturbances graduated in five years. The low graduation rates of students with mild cognitive disabilities or emotional disturbances indicate that being on-track does not ensure that these students are no longer at risk of dropping out of high school.

### 3. Higher absence rates are an important factor explaining why students with disabilities fail more classes and have lower grades than students without identified disabilities.

Background characteristics (e.g., race, gender, socioeconomic status, and age) and the types of schools students attend explained part of the difference in course failures and grades between students with and without disabilities. However, absences were the most important factor explaining these differences. Once we take into account the fact that students with disabilities miss many more days of school, their course failures and grades are similar to those of students without disabilities. Self-reported study habits were not important in explaining the weaker course performance of students with disabilities.

### 4. Students with learning disabilities and students with mild cognitive disabilities do not benefit as much from rigorous study habits as students without identified disabilities.

On average, students with learning disabilities and students with mild cognitive disabilities report more rigorous study habits than students without identified disabilities.<sup>2</sup> However, they do not benefit as much from rigorous study habits as their peers without disabilities. For example, when students with learning disabilities reported more rigorous study habits, their course failures decreased by only two-thirds as much as students without identified disabilities. For students with mild cognitive disabilities, there was no relationship between study habits and course failures; self-reports of more rigorous study habits did not result in fewer course failures.

In the earlier *What Matters* report, the authors found that in order to improve graduation rates, educators should focus on students' freshman year course performance.<sup>3</sup> In this report, we find the same is true for students who receive special education services and students who enter high school two or more years below grade level. Helping these students pass more courses and get higher grades during their first year in high school may be an essential step in reducing the likelihood of dropping out. One way to do this could be to focus on support measures that might boost attendance. Reducing absences is an important step in limiting course failures and improving GPAs.

While similar challenges exist for students who receive special education services and for students who are two or more years below grade level as for other ninth grade students, there are also some issues unique to this population. For example, many of these students may have disengaged from school as a result of their history of academic difficulties. Additional research should focus on the types of school environments that promote higher rates of attendance among students who receive special education services and those significantly below grade level upon entering ninth grade. School personnel should also consider how to help students who receive special education services—especially students with learning disabilities and mild cognitive disabilities—benefit more from studying. Although they report study habits that are equal to those of students without identified disabilities, they do not reap the same benefits.





# Introduction

Graduating from high school has become a minimum requirement for success in terms of employment, salary, and future career choices. However, nearly one-third of students nationwide do not graduate from high school, and the dropout rate is even higher for minority students.<sup>4</sup> Although graduation rates have increased over time, in CPS almost half of all students fail to graduate.<sup>5</sup> Furthermore, students who receive special education services graduate at levels below their non-disabled peers. In 2005–2006, the national graduation rate for students with disabilities was 57 percent, according to the National Center for Education Statistics.<sup>6</sup> In Chicago, 45 percent of students with disabilities graduate within four years and 50 percent graduate within five years, compared with four-year and five-year graduation rates of non-disabled students that are 67 percent and 70 percent respectively.<sup>7</sup> Furthermore, graduation rates for students with disabilities vary across special education classifications: Students with physical/sensory disabilities and students with speech/language disabilities graduate at higher rates than students with learning disabilities and students with mild cognitive disabilities. Students with emotional disturbances graduate at alarmingly low rates, with only one-quarter of these students graduating from high school within five years.

Previous CCSR research has shown that freshman year performance can be an important indicator of whether a student is likely to graduate from high school.<sup>8</sup> In *What Matters for Staying On-Track and Graduating in Chicago Public Schools*, Allensworth and Easton looked at the graduation rates of students who failed no more than one core course and accumulated at least five full course credits during their freshman year.<sup>9</sup> They found that these “on-track” students were nearly four times more likely to graduate in four years than ninth grade students who failed two or more courses or

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> In Chicago, 45 percent of students with disabilities graduate in four years and 50 percent graduate in five years.

accumulated fewer than five credits. Furthermore, three other freshman year indicators were also useful predictors of graduation: grades, course failures, and absences. They also found that the main determinant of freshman year grades and course failures was student behavior—attendance and study habits were over eight times more important for passing courses than incoming achievement as measured by eighth grade standardized test scores.

While the analyses in the *What Matters* report did not exclude students who receive special education services, neither did they discern whether the findings were applicable in the same way to students with disabilities. In this report, we focus on describing the absences, course failures, GPA, and on-track status for students who receive special education services during their freshman year of high school; then we explore the relationship between these early-warning indicators and graduation rates. We focus primarily on the performance of students who receive special education services, but we also consider the performance of students who enter high school two or more years below grade level but do not receive special education services.<sup>10</sup>

The report proceeds in six chapters. In Chapter 1, we provide a descriptive overview of students with identified disabilities and of students who enter

high school two or more years below grade level. In Chapter 2, we look at how these two groups of students perform in terms of course grades, course failures, absences, and the on-track indicator. In Chapter 3, we consider the usefulness of these performance indicators for predicting graduation from high school. In Chapter 4, we look at factors that help to explain why students with disabilities and students who are two or more years below grade level perform below students without identified disabilities in freshman year courses. In Chapter 5, we consider whether students with disabilities and students who enter high school two or more years below grade level benefit as much in terms of course performance as students without identified disabilities when they are absent less or when they report rigorous study habits. In Chapter 6, we discuss the implications of our findings and possible directions for future research.

Most of the analyses in this report rely on information about the cohort of CPS students who were first-time freshmen in 2004. When reporting graduation rates, we also use information about the cohort of students who were first-time freshmen in 2001. (See Appendix A for more information on these two cohorts.) These are the same cohorts of students studied in the original *What Matters* report.

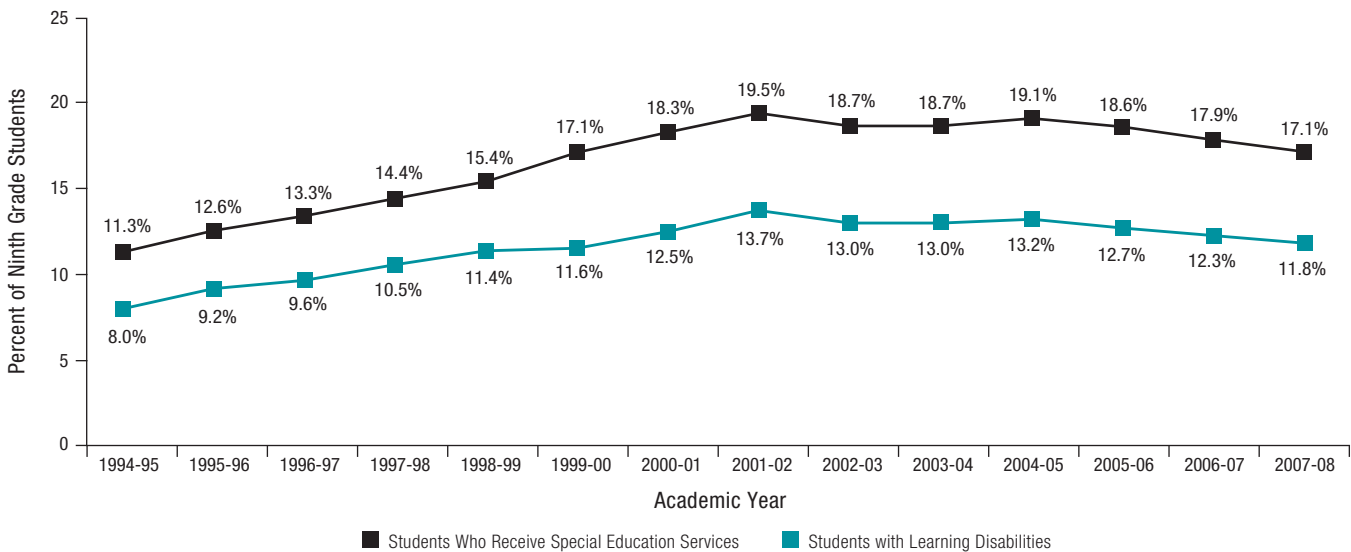
# Chapter 1

## Chicago Public School Students with Disabilities

Nationally, the Individuals with Disabilities Education Act (IDEA) identifies 14 categories of students who are eligible to receive special education services between ages three and 21, accounting for 6.6 million students in 2006–07 or 13.6 percent of the public school enrollment.<sup>11</sup> (See Appendix B for a description of these categories.) In CPS, the percentage of ninth grade students receiving special education services nearly doubled from 1994 to 2002, rising from around 11 percent to nearly 20 percent (Figure 1). Since then, the percentage of students receiving special education services has declined slightly; by 2007, students receiving special education services represented approximately 17 percent of all ninth grade students. (The sidebar *Policy Initiatives Influencing Special Education in CPS* describes two important CPS policy initiatives affecting the delivery of special education services and the proportion of students receiving them. See page 9.)

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> In CPS, the percentage of ninth grade students receiving special education services nearly doubled from 1994 to 2002, rising from around 11 percent to nearly 20 percent.

**FIGURE 1****Percent of CPS ninth grade students receiving special education services, 1994–95 to 2007–08***The percent of CPS ninth grade students receiving special education services nearly doubled between 1995 and 2002.*

**Note:** Of the six million children who receive special education services in the U.S. almost half are identified as having a specific learning disability, and this group has grown more than 300 percent since 1976. Similarly, in CPS, students with a learning disability comprise nearly

three-quarters of all special education students, and also increased through 2001-02. It is not surprising that an increase in students identified as having a learning disability has also resulted in an increase in the percentage of students receiving special education services.

In this study, we focus on seven groups of students, including four “high incidence” categories: students with learning disabilities, students with mild cognitive disabilities, students with emotional disturbances, and students with speech/language disabilities. A fifth group, which we refer to as students with physical/sensory disabilities, combines several of the CPS categories into a single group that includes students who have hearing, visual or other health impairments. The sixth group consists of students who do not receive special education services but who are two or more years below grade level when they enter high school (see sidebar on page 10, *Description of the Seven Categories of Students Included in this Report*, for a description of this category and all others included in this study). For unknown reasons, these students did not receive special education services in ninth grade, despite a large discrepancy between their performance and grade level status. We include students who enter high school two or more years below grade level as a separate group because it is possible that their learning challenges and needs are similar to students who have been identified as requiring special education

(see sidebar on page 13, *Who Are the Students in the “Two or More Years below Grade Level” Category?*, for a description of students in this group). The final group, students without identified disabilities, is included for comparison. This group contains students who did not receive special education services and who were not two or more years below grade level when entering high school. Table 1 displays the distribution of ninth grade students across these groups. (See Appendix A for additional details about our study sample.)

Nationally, students who receive special education services are disproportionately low-income, African American, and male;<sup>12</sup> and we find similar patterns in CPS (see Figure 2 on page 11 and Table 3 in Appendix A). For example, students with learning disabilities, emotional disturbances, mild cognitive disabilities, physical/sensory disabilities, and speech/language disabilities are much more likely to be African American and male than the full population of ninth-graders (compare each colored bar to the black bar representing the percent of students who are male, African American, and Latino, and who receive free or reduced-price lunch in the full population of ninth-graders to see the

## Policy Initiatives Influencing Special Education in CPS

Special education services in CPS continue to be influenced by two major policy events that occurred more than 10 years ago. First, in 1996, CPS began an initiative intended to end social promotion and raise student achievement. This policy required third, sixth, and eighth grade students to reach a minimum score on the Iowa Tests of Basic Skills (ITBS) in order to be promoted to the next grade. Students who did not pass the test prior to the start of the next year, after attending a special summer school program and retaking the exam, were either retained or, if over age, were sent to transitional schools called academic preparatory centers (APCs).

Implementation of this promotion policy corresponded with a sharp rise in special education classification in the grades with promotion tests and a rise in the number of students ending eighth grade eligible for special education services (see Figure 1). In a CCSR report describing the changing special education enrollments from 1993 to 2000, Miller and Gladden<sup>13</sup> identified two possible explanations

for this increase: teachers in the gate grades may have recommended academically weaker students for special education evaluation because they either noticed special needs or were trying to help students bypass the promotion requirements, or teachers may have identified students with a disability after they failed to pass the promotion gate and were retained.<sup>14</sup>

A second policy event of importance to students with disabilities occurred in 1998, after the finalization of the settlement of the Corey H. lawsuit.<sup>15</sup> At that time, CPS restructured its policies and practices affecting students with disabilities. As a result, schools were required to develop schoolwide plans to educate students with disabilities in the least restrictive environment (LRE), and schools received professional development and support for doing this effectively. In addition, decisions about student placements were required to be made according to the individual needs of each student, rather than according to their type of disability.<sup>16</sup>

**TABLE 1**

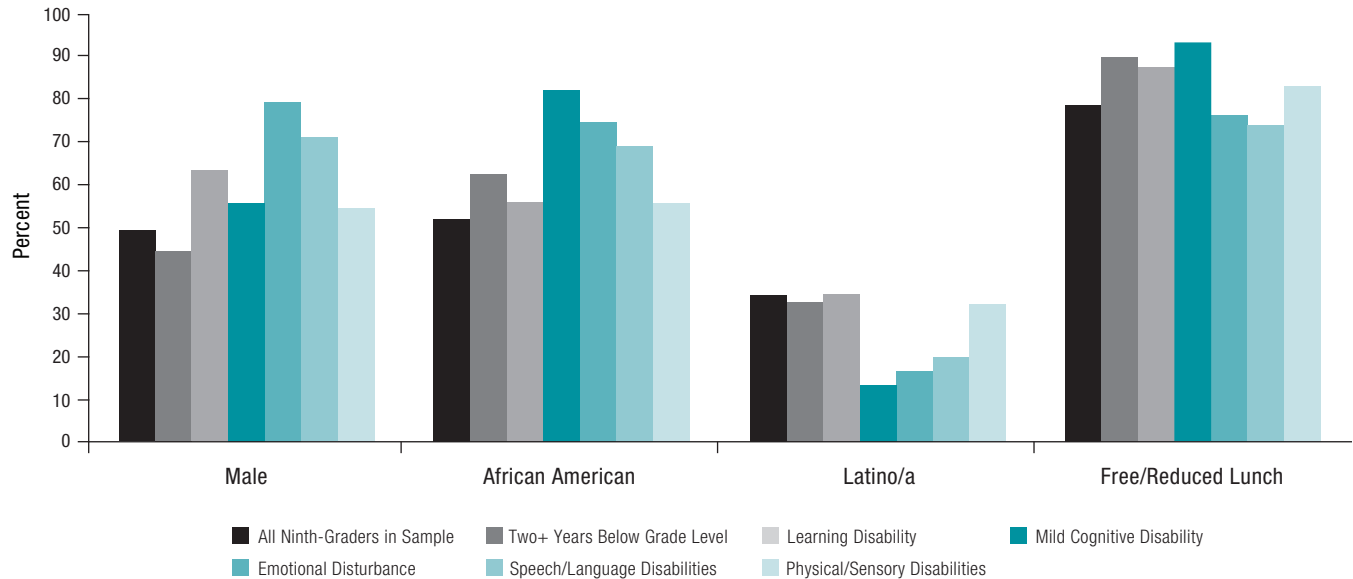
Categories of Students Included in This Study				
	2001		2004	
	Count	Percent of All CPS Ninth-Graders	Count	Percent of All CPS Ninth-Graders
Students without Identified Disabilities	19,317	81.1%	20,657	81.0%
Two+ Years below Grade Level	366	1.5%	525	2.1%
Learning Disability	3,221	13.5%	3,306	13.0%
Mild Cognitive Disability	435	1.8%	458	1.8%
Emotional Disturbance	290	1.2%	336	1.3%
Speech/Language Disabilities	97	0.4%	65	0.3%
Physical/Sensory Disabilities ( <i>including Hearing Impairment, Visual Impairment, and Other Health Impairment</i> )	89	0.4%	152	0.6%

## Description of the Seven Categories of Students Included in this Report

	<b>Definitions in italics are from the Individuals with Disabilities Education Act (IDEA).<sup>17</sup> CPS and author distinctions are included where applicable.<sup>18</sup></b>	<b>Students Receive Special Education Services?</b>
<b>Learning Disability</b>	<i>Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.</i>	Yes
<b>Mild Cognitive Disability</b>	<i>Mental retardation means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance.</i>  This category includes students with mild mental retardation, classified by CPS as educable mentally handicapped (EMH). The measured intelligence of an EMH student generally falls between 50 and 69, plus or minus three points.	Yes
<b>Emotional Disturbance</b>	<i>A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: (A) An inability to learn that cannot be explained by intellectual, sensory, or health factors. (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers. (C) Inappropriate types of behavior or feelings under normal circumstances. (D) A general pervasive mood of unhappiness or depression. (E) A tendency to develop physical symptoms or fears associated with personal or school problems.</i>	Yes
<b>Speech/Language Disabilities</b>	<i>A communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance.</i>	Yes
<b>Physical/Sensory Disabilities</b>	In this category, we combine students from the following categories: deaf-blindness, deafness, hearing impairment, other health impairment (e.g., asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome), orthopedic impairment, and visual impairment.	Yes
<b>Two or More Years below Grade Level</b>	This category includes students who do not receive special education services and who, as eighth-graders, scored at a sixth grade level or below on the reading and math portions of the Iowa Tests of Basic Skills.	No
<b>Students without Identified Disabilities</b>	Students who do not receive special education services and who are not two or more years below grade level when entering high school.	No

**FIGURE 2****Demographic composition of first-time ninth-graders in 2004**

*Students with disabilities and students who are two or more years below grade level are more likely to be African American and to receive free/reduced price lunch.*



difference in prevalence across categories). Students with learning disabilities and students with mild cognitive disabilities are also more likely to receive free or reduced-price lunch.

Like students who receive special education services, students who enter high school two or more years below grade level are more likely to be African American and to receive free or reduced-price lunch. They are also more mobile, with nearly half having changed schools at least once during the three years prior to entering high school. This higher rate of mobility may be one reason that students were not identified as needing special education services in ninth grade, despite their very low achievement. Finally, students entering high school two or more years below grade level are more likely to be female.

The average achievement of most students with disabilities and students who entered high school two or more years below grade level is well below the level for students without identified disabilities. Figure 3 shows the distribution of eighth grade scores on the reading portion of the Iowa Tests of Basic Skills (ITBS) for each category of students in our sample. Students

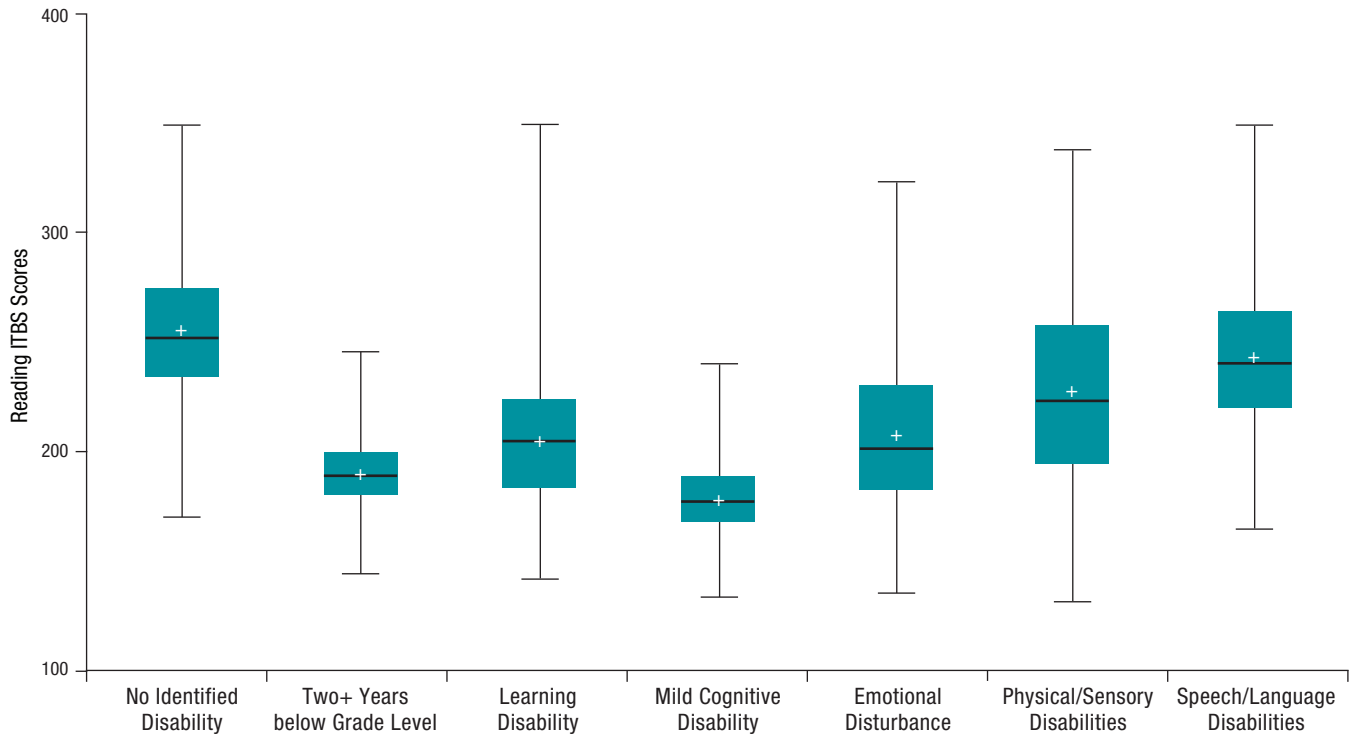
with mild cognitive disabilities and students who entered high school two or more years below grade level had the lowest achievement of any group. Students with learning disabilities and students with emotional disturbances had average reading scores that were only marginally higher. However, students with speech/language disabilities had scores that were similar to students without identified disabilities.

In general, most CPS students who either receive special education services or enter high school two or more years below grade level are much less likely to graduate than students without identified disabilities (see Table 2). For example, nearly 70 percent of students without identified disabilities graduate in five years.<sup>19</sup> However, only about half of students who enter high school two or more years below grade level or who have learning disabilities or mild cognitive disabilities graduate from high school in five years; only one-quarter of students with emotional disturbances graduate in five years. On the other hand, students with speech/language disabilities and physical/sensory disabilities have graduation rates that are similar to students without identified disabilities.

**FIGURE 3**

**Eighth grade reading ITBS scores by student category**

Students who are two or more years below grade level, students with learning disabilities, students with mild cognitive disabilities, and students with emotional disturbances enter high school with achievement levels that are well below those of students without identified disabilities.



**How to Read the “Box-and-Whisker” Plots**

The box plots in Figure 3 show the distribution of eighth grade reading scores on the Iowa Tests of Basic Skills (ITBS) for the seven categories of students included in this report. For each category, the rectangle (“box”) represents the scores of students who fell within the 25th and 75th percentile of all scores in that category. The upper boundary represents the score in the 75th percentile of the distribution, and the lower boundary represents the score in the 25th percentile of the distribution. The line inside the box is the median, and the “+” is the

mean of the sample distribution. The two lines (the “whiskers”) are drawn from the rectangle to the extreme values (highest scores at the top and lowest scores at the bottom). For example, for students without identified disabilities, eighth grade ITBS reading scores ranged from 170 at the low end to 349 at the high end (the “whiskers”). The median score was 252, and the mean was 255. The majority of student scores (those indicated by the “box”) fell within the 25th and 75th percentiles, from 234 to 275.



## Who Are the Students in the “Two or More Years below Grade Level” Category?

In this report, we consider students who are two or more years below grade level according to their performance on eighth grade standardized tests as a unique category of low performing students who did not receive special education services in ninth grade. These students constitute only 2 percent of the population of first-time ninth-graders, but their weak course performance, poor attendance, and low graduation rates indicate that they require additional attention and support.

In an attempt to further understand the experiences of students who constitute this group, we examined previous special education identification records for grades K to 8, mobility rates, and the concentration of students who are two or more years below grade level at the high school and elementary school level. We found:

1. In both the 2001 and 2004 freshman cohorts, nearly all (95 percent) of the students who entered ninth grade two or more years below

grade level had never received special education services prior to ninth grade.

2. The majority of these students were not new to CPS. Five years prior to ninth grade, three-quarters of the students who entered high school two or more years below grade level were attending CPS elementary schools.
3. Nearly half of the students who were two or more years below grade level changed schools at least once in the three years prior to entering high school, compared with 40 percent of all students and 34 percent of students without identified disabilities (see Table 3 in Appendix A).
4. Students who are two or more years below grade level are not concentrated in certain schools but tend to spread out across schools at both the elementary and high school levels, suggesting that these students are likely to be “slipping through the cracks.”

**TABLE 2**

**Four and five year graduation rates for 2001 freshman cohort**

	Four-Year Graduation Rate	Five-Year Graduation Rate
Students without Identified Disabilities	67.1%	69.6%
Two+ Years below Grade Level	45.5%	49.0%
Learning Disability	47.8%	52.7%
Mild Cognitive Disability	41.7%	47.2%
Emotional Disturbance	18.7%	23.5%
Speech/Language Disabilities	58.1%	63.5%
Physical/Sensory Disabilities	75.0%	77.5%



# Chapter 2

## Student Performance on Freshman Year Indicators

In the next two chapters, we consider four freshman year indicators and their usefulness for predicting graduation for students who receive special education services or who are two or more years below grade level: freshman GPA,<sup>20</sup> freshman year semester course failures,<sup>21</sup> average semester absences,<sup>22</sup> and on-track status.<sup>23</sup> In this chapter, we look at how students in our seven categories perform on average on these indicators. In the next chapter, we examine the relationship between the indicators and graduation rates.

Figures 4 to 7 display the average performance of students in each of our focus categories. In all four figures, the two black bars on the left represent students who do not receive special education services and the five teal bars represent categories of students who receive special education services. The first black column represents all students without identified disabilities who are not two or more years below grade level. The second black column represents students who do not receive special education services but enter high school two or more years below grade level. The five teal bars represent categories of students who receive special education services, listed in order of group size, from largest to smallest: students with learning disabilities, students with mild cognitive disabilities, students with emotional disturbances, students with physical/sensory disabilities, and students with speech/language disabilities.

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> Students who are two or more years below grade level and students with emotional disturbances have a barely passing average GPA of about 1.1 (D).

We find a fairly consistent pattern across the four indicators, with students in the seven categories falling into three performance tiers. In the highest performing tier, students with physical/sensory disabilities tend to do as well as, or slightly better than, students without identified disabilities, followed closely by students with speech/language disabilities. Next, students with learning disabilities and mild cognitive disabilities tend to perform similarly across indicators, at a substantially lower level than students without identified disabilities. Finally, the two groups of students in our sample that struggle the most across all indicators during freshman year are students who enter high school two or more years below grade level and students with emotional disturbances. In this chapter, we describe the performance of each of these groups. In Chapter 4, we examine factors that may contribute to differences among groups.

## GPA

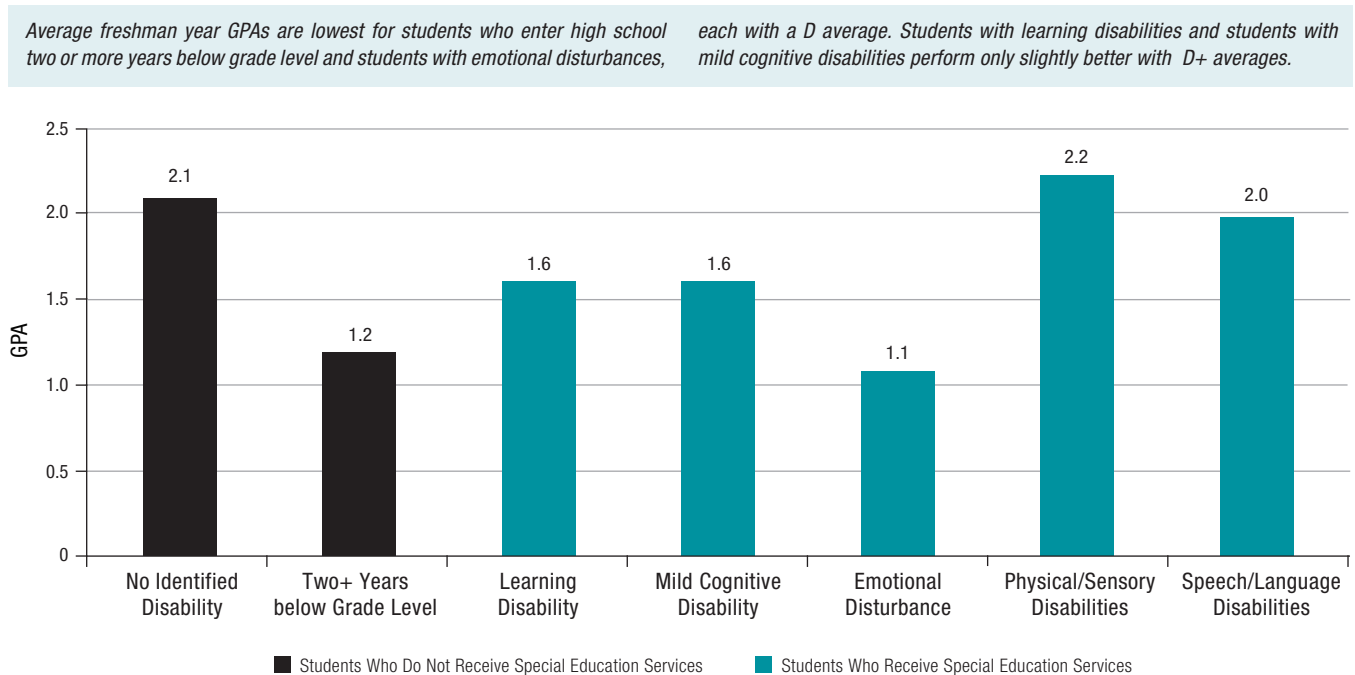
Figure 4 shows that students without identified disabilities, students with physical/sensory disabilities, and students with speech/language disabilities earn

GPA's that average about 2.0 (C). Students with learning disabilities and mild cognitive disabilities have an average GPA of 1.6 (D+). Students who are two or more years below grade level and students with emotional disturbances have a barely passing average GPA of about 1.1 (D).

## Course Failures

Figure 5 depicts the number of freshman year course failures for each of our seven focus groups of students. Typically, CPS freshmen take seven courses each semester for a total of 14 courses per year. On average, students with physical/sensory disabilities have the lowest average number of semester course failures (1.6), followed by students without identified disabilities and students with speech/language disabilities who average 2.1 and 2.0 respectively. Students with learning disabilities and mild cognitive disabilities failed approximately one more semester course, with an average of 3.0 and 2.7 course failures respectively. Students entering high school two or more years below grade level and students with emotional disturbances

**FIGURE 4**  
**Freshman GPA by student category**



have very high rates of failure, on average. They failed approximately one-third of their courses in ninth grade (four to five courses out of 14). Course failure is a very serious problem for these two groups of students.

## Absences

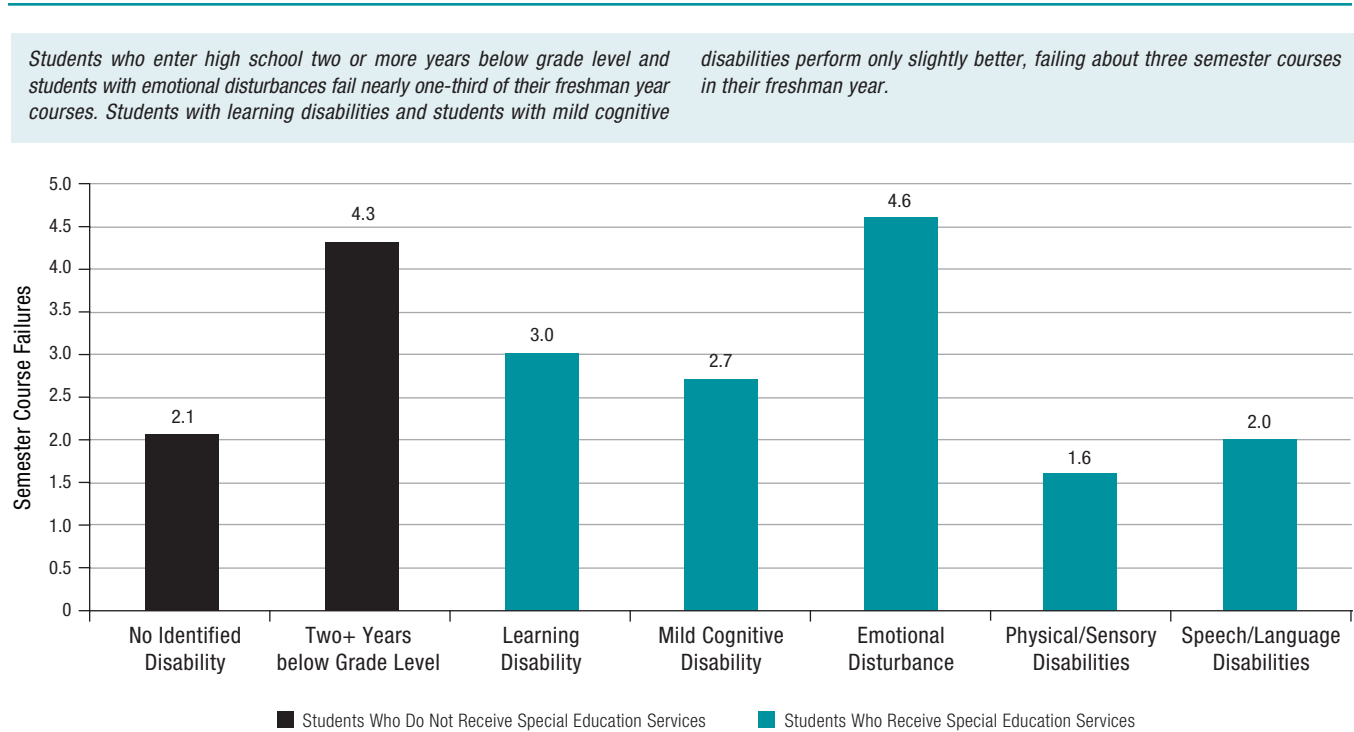
Student absences are shown in Figure 6. Similar to the pattern described for the two previous indicators, students without identified disabilities, students with physical/sensory disabilities, and students with speech/language disabilities have the fewest absences per semester (eight days). Students with learning disabilities and mild cognitive disabilities were absent an additional four to five days per semester (12 and 13 days respectively). Contrary to previous patterns, students who enter high school two or more years below grade level are more similar to students with learning disabilities and mild cognitive disabilities, averaging 14 absences per semester. However, students with emotional disturbances are absent a full week more per semester—19 days. This extraordinary rate of nearly a month of absences per semester may be due to high

suspension rates for students with emotional and behavioral challenges, although currently we do not have data to examine the accuracy of this speculation.

## On-Track

Figure 7 presents the freshman year on-track rates for the seven groups of students in our sample. Recall that a student is on-track if he or she has accumulated five full-year credits (10 semester credits) and has no more than one semester F in a core subject (English, math, science, or social science) by the end of the first year of high school. Similar to the pattern described in the three previous indicators, students with physical/sensory disabilities and students with speech/language disabilities have on-track rates that are comparable to their peers without identified disabilities (68 percent on-track and 63 percent on-track respectively). Slightly more students with mild cognitive disabilities were on-track to graduate at the end of freshman year (58 percent) compared with students with learning disabilities (52 percent). Students who entered high school two or more years below grade level and students

**FIGURE 5**  
**Semester course failures by student category**



**Note:** Out of 14 possible semester courses in one year.

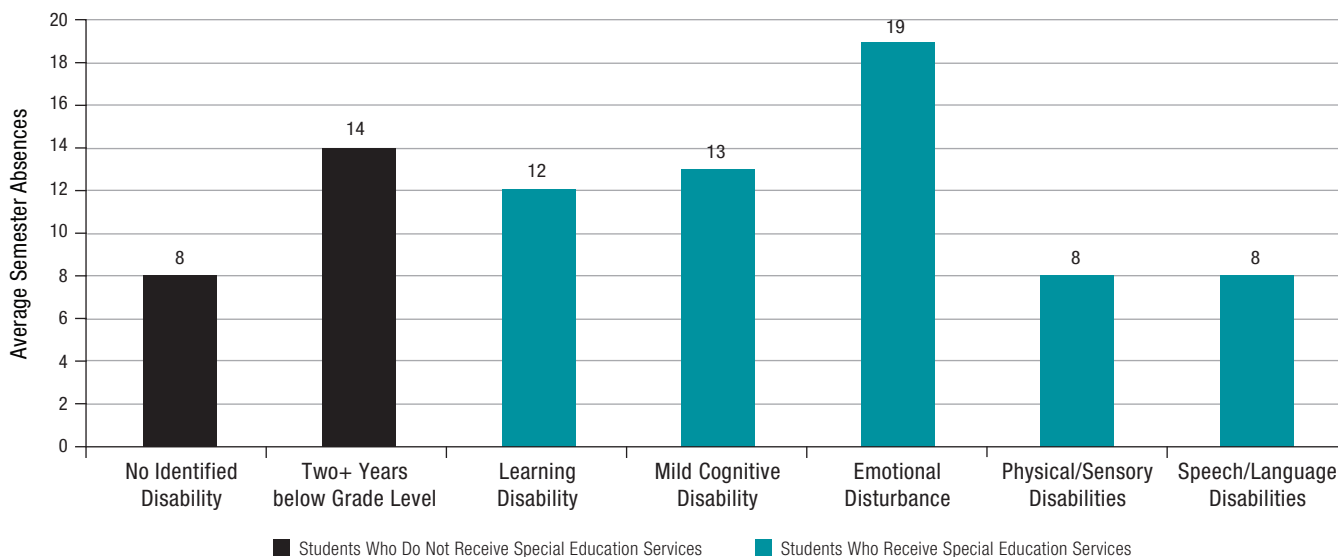
with emotional disturbances were much less likely to be on-track than students in the other groups (32 percent and 28 percent respectively). Higher numbers of course failures (Figure 5) explain why the majority

of students who are two or more years below grade level and students with emotional disturbances were off-track. We examine explanations for these patterns in more detail in Chapter 4.

**FIGURE 6**  
**Average semester absences by student category**

*The highest absence rates are found among students with emotional disturbances who are absent nearly a month per semester in their freshman year. Students with learning disabilities, students with mild cognitive disabilities, and students*

*who enter high school two or more years below grade level are absent, on average, about a week more per semester than students without identified disabilities.*

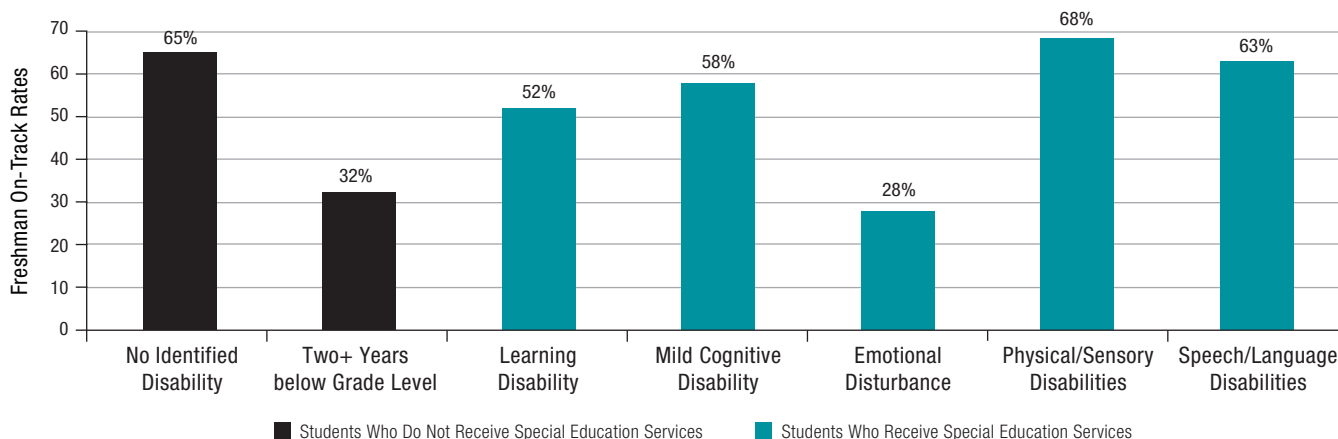


**Note:** Absences in days per semester. Includes course cutting.

**FIGURE 7**  
**Freshman on-track rates by student category**

*Slightly over one-fourth of students with emotional disturbances and only one-third of students who enter high school two or more years below grade level are on-track to graduate by the end of their freshman year. More than*

*one-half of students with learning disabilities and students with mild cognitive disabilities are on-track.*



# Chapter 3

## Using Performance Indicators to Predict Graduation

In this chapter, we examine the relationship between the four ninth grade performance indicators presented in Chapter 2 and five-year graduation rates for five categories of students: students without identified disabilities, students who enter high school two or more years below grade level, students with learning disabilities, students with mild cognitive disabilities, and students with emotional disturbances. We do not include students with physical/sensory disabilities and students with speech/language disabilities in our analyses in this chapter for two reasons. First, in the previous chapter, we found that students in these two categories performed similarly to their non-disabled peers on all four ninth grade performance indicators. Second, we look at graduation rates not only by group but also by the level of performance within each group (i.e., graduation rate for students with learning disabilities who receive one to two semester Fs); therefore, small sample sizes in these two categories prevent accurate estimates of graduation rates by subcategories of performance.

- 
- > We find a strong relationship between course failures and graduation rates for students in all categories.

## GPA

As depicted in Figure 8, although there is variation in graduation rates across the groups, there is a strong relationship between GPA and five-year graduation rates for all five categories of students. Students with a 2.5 (C+) average or higher are very likely to graduate from high school within five years: 89 percent of students without identified disabilities, 78 percent of students who are two or more years below grade level, 86 percent of students with a learning disability, and 83 percent of students with a mild cognitive disability graduated within five years.

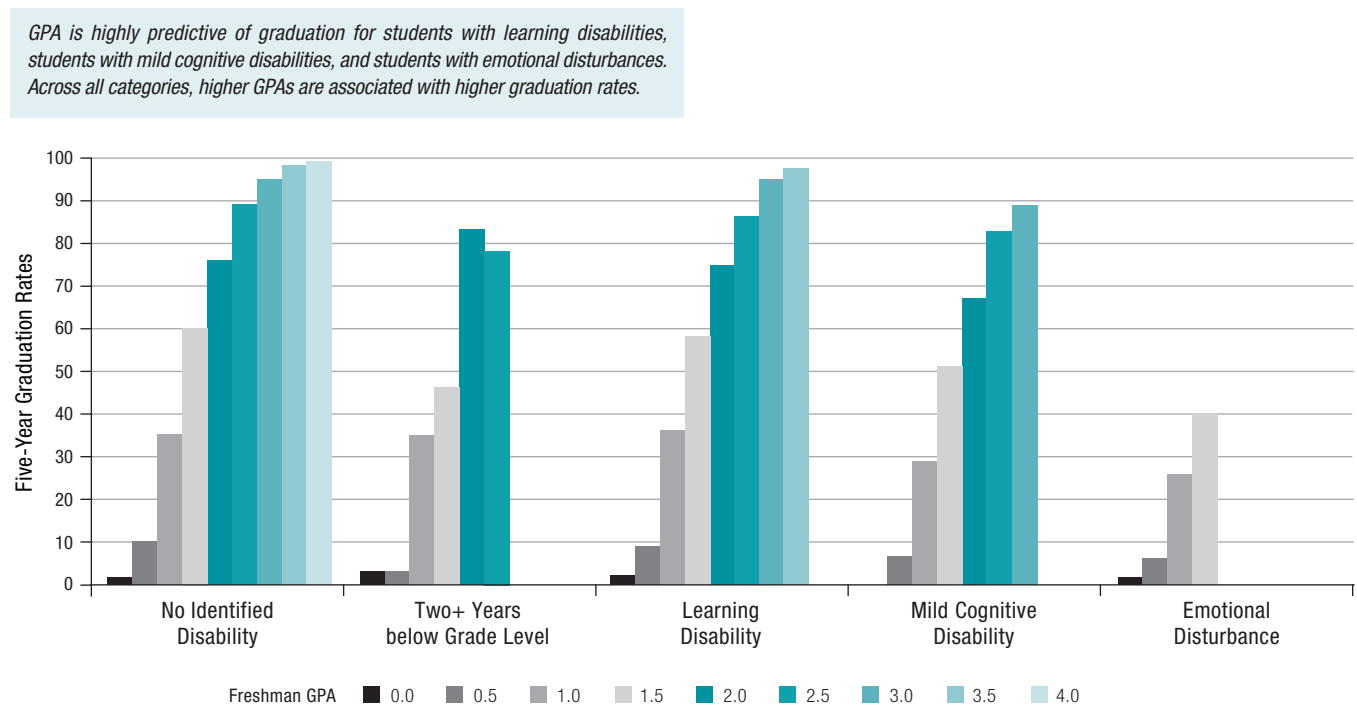
Across all five categories, a large decrease in graduation rates occurs when moving down each half-grade point. Only one-quarter to one-third of students with a 1.0 (D) average graduated in five years. This is cause for concern, given the overall low average GPAs across most of the special education categories. Recall that students in our sample who enter high school two or more years below grade level had an average ninth grade GPA of 1.2, students with learning disabilities and mild cognitive disabilities had a GPA of 1.6, and students with emotional disturbances had an average

GPA of 1.1 (see Figure 4). Students with certain special education classifications were unlikely to have GPAs above 1.5. Indeed, there were not enough students with emotional disturbances with GPAs higher than 1.5 to include their graduation rates in Figure 8; virtually no students with emotional disturbances had a GPA higher than a D+. Hence, it is not surprising that fewer than one-quarter of students with emotional disturbances graduated within five years.

## Course Failures

Similar to GPA, we find a strong relationship between course failures and graduation rates for students in all categories. Figure 9 shows that having fewer course failures corresponds to higher graduation rates, and large reductions in graduation rates occur for each additional course failure. For example, 91 percent of students without identified disabilities, 83 percent of students who enter high school two or more years below grade level, and 86 percent of students with learning disabilities graduate in five years if they have no course

**FIGURE 8**  
Five-year graduation rates by freshman GPA



**Note:** Graduation rates reported only for groups with at least 25 students.



failures. With only one to two Fs, graduation rates are reduced by 20 percentage points in these groups.

The extremely poor course performance of students with emotional disturbances means that their already low graduation rates drop precipitously to extremely small proportions with even one F. Only 57 percent of students with emotional disturbances who have zero semester course failures graduate in five years. This may be because most of these students are barely passing their classes—they are on-track with D grade point averages. Furthermore, failing one to two semester courses lowers the graduation rate among these students to only 33 percent compared with 60 to 71 percent of students in all other categories. In fact, students with emotional disturbances with one to two course failures have the same graduation rate as students without identified disabilities with five to six course failures.

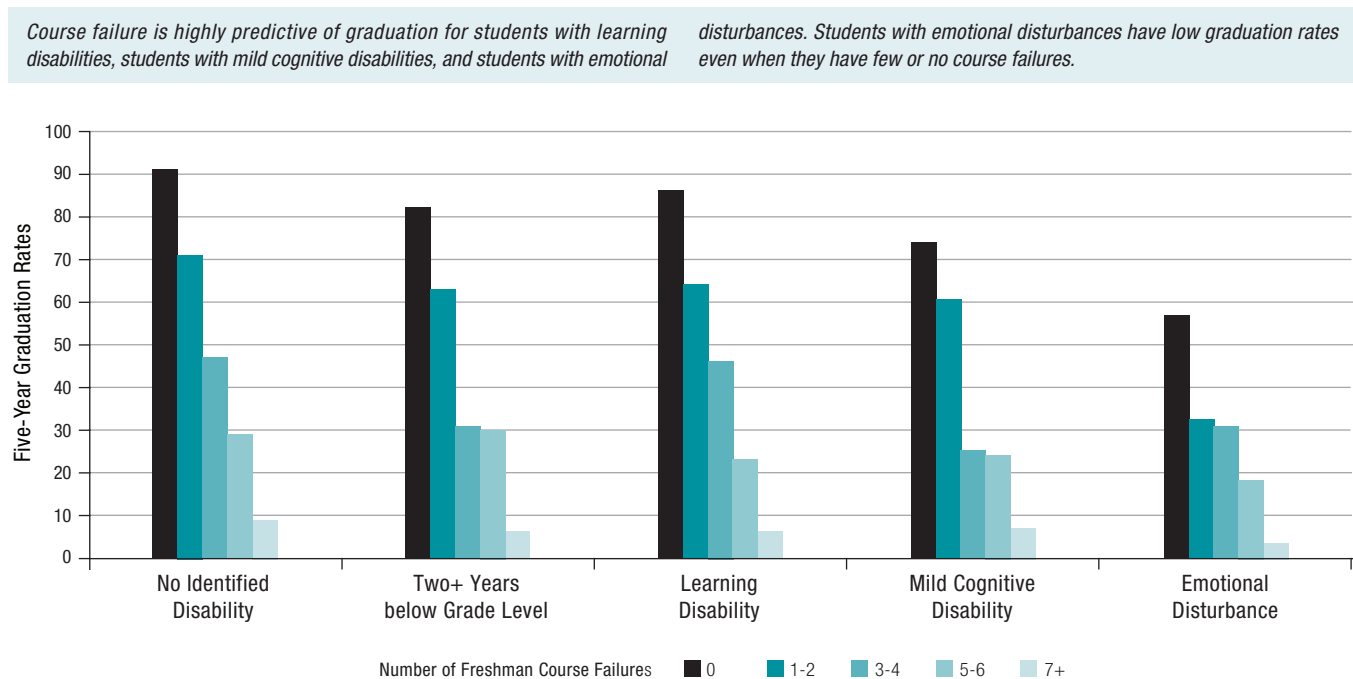
## Absences

The third indicator we consider in relationship to graduation rates is attendance, as presented in Figure 10.

Recall that Figure 6 showed that students who enter high school two or more years below grade level, students with learning disabilities, students with mild cognitive disabilities, and students with emotional disturbances all had more semester absences than their non-disabled peers. In fact, students with emotional disturbances were absent more than twice as often as students without identified disabilities, missing an average of 19 days per semester. As a result, in Figure 10, the bar for zero to four absences is missing for students with emotional disturbances because there were not enough students who were absent less than a week per semester to include them on the graph.

Looking across the remaining categories of students, we see a strong relationship between absences and graduation rates for students who do not receive special education services, for students with learning disabilities, and for students with mild cognitive disabilities; these students have graduation rates of 90 percent or greater for zero to four absences per semester. Students who enter high school two or more years below grade level and who miss zero to four days

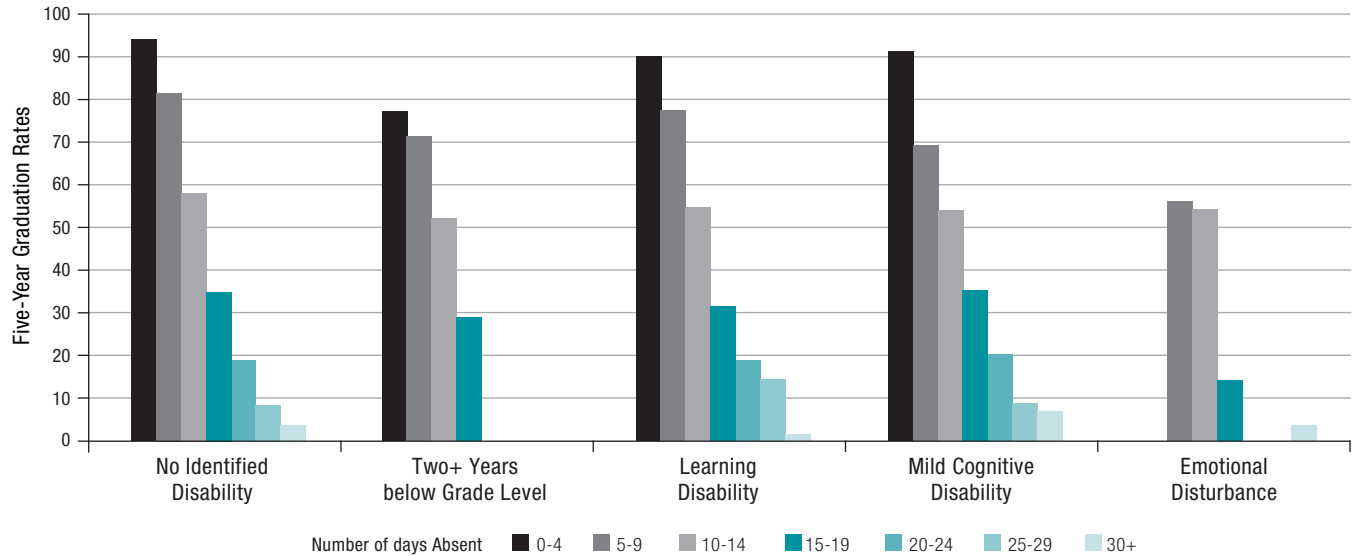
**FIGURE 9**  
**Five-year graduation rates by freshman course failures**



**FIGURE 10**

**Five-year graduation rates by freshman absences**

*Absences are highly predictive of graduation for students with learning disabilities, students with mild cognitive disabilities and students with emotional disturbances. Fewer absences are associated with higher graduation rates.*



**Note:** Graduation rates reported only for groups with at least 25 students.

per semester have graduation rates that are comparable to those of students without identified disabilities and to those of students with learning disabilities who miss five to nine days per semester.

### On-Track

Previous CCSR research has shown that students who are on-track at the end of their freshman year are about four times more likely to graduate than off-track students.<sup>24</sup> In this report, we find that the on-track indicator is equally or more predictive of graduation for students with disabilities. This is true even though average graduation rates for students with disabilities are lower than graduation rates for students without disabilities. For example, although only 57 percent of on-track students with emotional disturbances

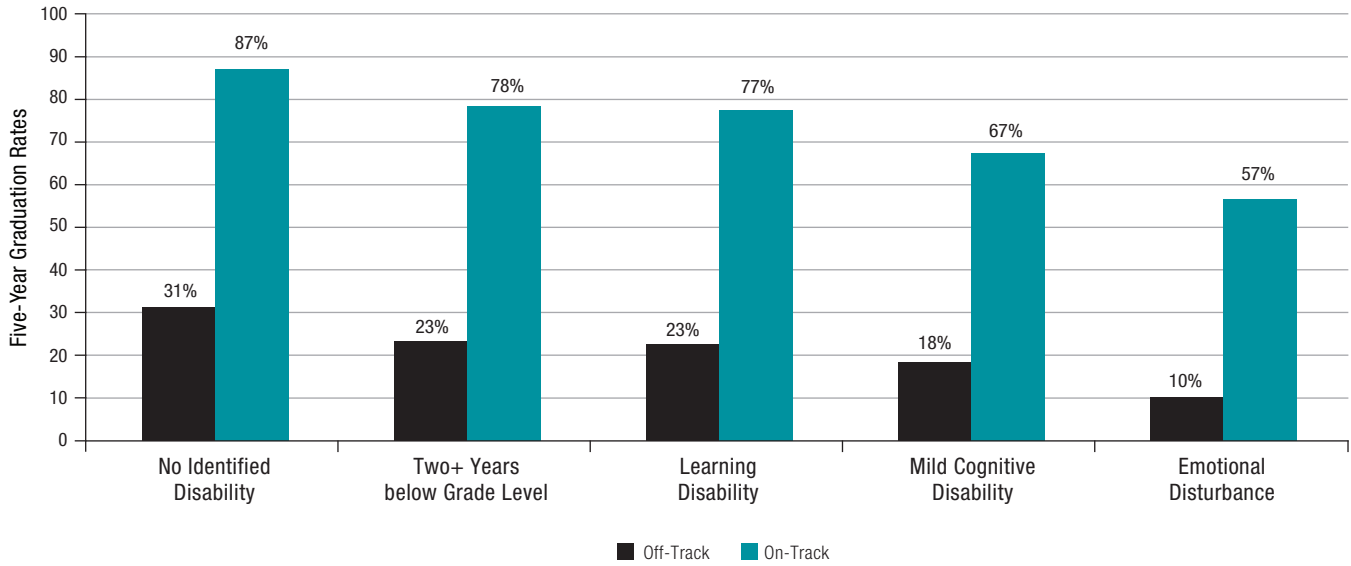
graduate in five years (compared with 87 percent of students without disabilities), on-track students with emotional disturbances are almost six times more likely to graduate than off-track students with emotional disturbances. Similar patterns exist for students with learning disabilities, students with mild cognitive disabilities, and students who enter high school two or more years below grade level, as shown in Figure 11.

These findings underscore an important concern: Even when students with disabilities and students who enter high school two or more years below grade level are on-track at the end of ninth grade, they are still at risk for dropping out. In the next chapter, we examine factors beyond special education status—specifically absences and study habits—that help explain why freshman year performance varies across groups of students with and without disabilities.

**FIGURE 11**

**Five-year graduation rates by freshman on-track status**

*The on-track indicator is highly predictive of graduation for students in all categories. Across all groups, students who are on-track are two to six times more likely to graduate than students who are off-track.*





# Chapter 4

## Explaining Differences in Absences, Study Habits, Course Failures, and GPA

As we saw in Chapter 2, students who enter high school two or more years below grade level, students with learning disabilities, students with mild cognitive disabilities, and students with emotional disturbances perform below their non-disabled peers in freshman year courses. In general, they fail more courses, have lower grades, and are absent from class more often. As a result, these students are much less likely to be on-track by the end of their freshmen year; not surprisingly, their four-year and five-year graduation rates are substantially lower than rates for students without identified disabilities.

In this chapter, we explore some of the reasons why these students do worse in their freshman year courses than students without identified disabilities. We focus on three sets of factors to explain this performance gap. First, we ask whether differences in performance are related to background characteristics. For example, students with learning disabilities, students with mild cognitive disabilities, and students with emotional disturbances are more likely to receive free or reduced-price lunch, to have higher rates of school mobility, and to be older when they enter high school than students without identified disabilities; these factors may contribute to their weaker course performance (see Table 3 in Appendix A).

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> Because students who receive special education services are absent more often, they fail more courses than similar students without identified disabilities.

The performance gap is also likely to be associated with students' prior achievement. By definition, students with learning disabilities, students with mild cognitive disabilities, and students with emotional disturbances have demonstrated a need for additional academic support. Depending on when students began receiving this support (e.g., first grade compared with eighth grade), they may or may not be adequately prepared for high school. Even with support, students receiving special education services enter ninth grade with lower academic achievement than their non-disabled peers, which is likely to influence their high school academic performance.

While students who enter high school two or more years below grade level do not receive special education services, these students also struggle academically. Their eighth grade achievement levels on standardized tests of math and reading are well below those of students without identified disabilities and somewhat below the levels of many students with identified disabilities. Their weak academic background, combined with a lack of additional support, will likely be a factor in their freshman year course performance.

We also ask whether the gap in freshman year performance is associated with the type of high schools that students attend. Many students with disabilities and students who enter high school two or more years below grade level attend some of the weakest high schools in the district—schools with very low levels of average student achievement. Attending academically weak schools may shape students' course performance through school climate, peer influences, and quality of classroom instruction.

Finally, we look at attendance and study habits of students during their freshman year. The original *What Matters* report showed that attendance and study habits explained most of the differences in course failure rates among students. These two factors were much more predictive of course failure than test scores or background characteristics. We have already seen that students who receive special education services and students who enter high school two or more years below grade level are absent more often than students without identified disabilities. In this chapter, we show to what extent higher absence rates and more rigorous study habits explain the differences in course failures and GPA.

## Absences and Study Habits

Before considering how absences and study habits may help explain differences in course performance, we first look at factors that contribute to the gaps in these two behaviors.

Figure 12 displays the gap in absences. The black bars describe the gap in absences for each group compared with students without identified disabilities. For example, students who entered high school at least two years below grade level are absent an average of six more days each semester than students without identified disabilities. Students with learning disabilities are absent nearly four more days each semester than students without identified disabilities. Students with mild cognitive disabilities are absent five more days each semester than students without identified disabilities. Students with emotional disturbances are absent about 10 more days than students without identified disabilities.

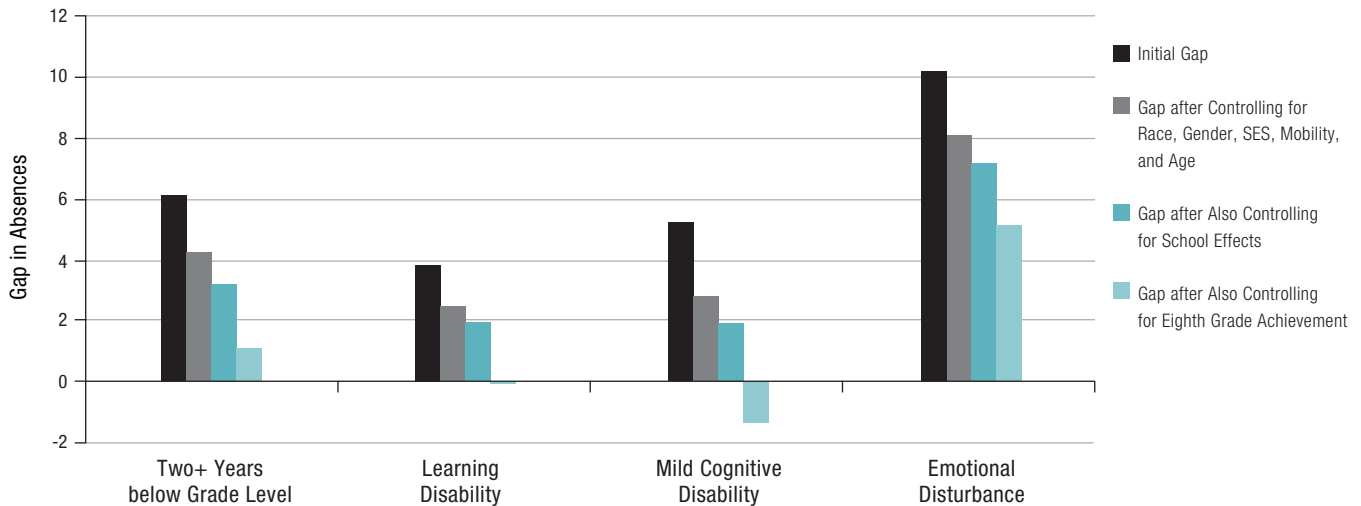
The second bar shows the gap in absences that remains once we remove differences that can be attributed to students' race, gender, socioeconomic status, age, and history of previous school changes. These student background characteristics explain between 20 percent (for students with emotional disturbances) and 50 percent (for students with mild cognitive disabilities) of the initial gap.

The third bar removes differences in absences that can be explained by the kinds of schools that students attend. Taking into account school effects explains an additional 10 to 15 percent of the gap between students without identified disabilities and each of these groups of students. Students with disabilities and students who enter high school two or more years below grade level are much more likely to attend neighborhood schools characterized by low levels of student achievement. These are schools where other students are also frequently absent.

The fourth bar describes the gap that remains once we remove differences that can be attributed to students' eighth grade achievement. After taking into account prior achievement, students with learning disabilities miss the same number of school days as similar students without identified disabilities who

**FIGURE 12****Gap in absences**

*Student background characteristics and school effects partially explain the higher absence rates of students with disabilities and students who enter high school two or more years below grade compared to students without identified disabilities.*



have the same eighth grade test scores. Students with mild cognitive disabilities actually have fewer absences than similar students without identified disabilities who have the same prior achievement. Given that students in these groups are classified as such partly because of their very low levels of achievement, it is not surprising that the initial gap in absences disappears or is reversed once we control for achievement.

For students with emotional disturbances, the gap in absences still remains even after controlling for achievement. Students with emotional disturbances are suspended from school at much higher rates than other students, and this may account for their higher absences even after accounting for background characteristics, school effects, and prior achievement.<sup>25</sup>

Although there is a strong relationship between achievement and absences, we cannot be certain if low achievement causes high absences or if high absences result in low achievement. In part, this is because we lack information about why students are absent from school. For example, high absences may be an indication of disengagement from school as a result of academic struggles. Alternatively, students may be absent more often because of medical reasons or family constraints. In any case, these factors are likely to perpetuate each other; academic frustrations may lead students to miss

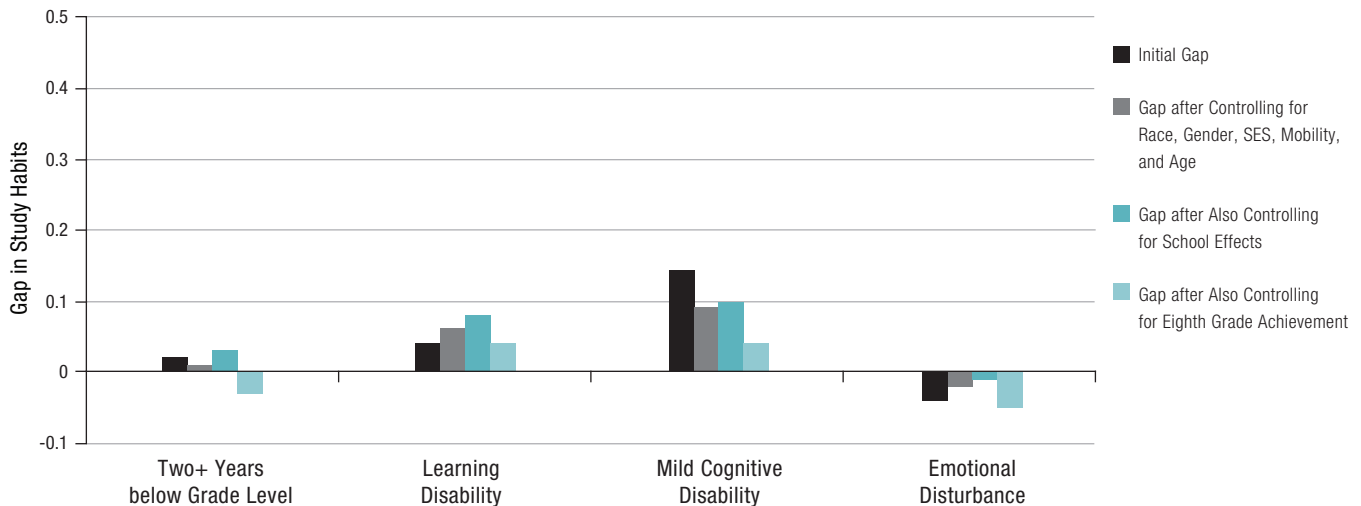
school, but achievement definitely suffers when students are absent from class.

### Study Habits

Figure 13 presents the gap in study habits and shows few differences between students without identified disabilities and each of the four focal groups of students in their self-reports of study habits.<sup>26</sup> In fact, students with emotional disturbances and students who entered high school two or more years below grade level report similar levels of rigorous study habits as students without identified disabilities. Students with learning disabilities and mild cognitive disabilities report higher levels of rigorous study habits than students without identified disabilities, although the differences are small.<sup>27</sup> For students with mild cognitive disabilities, the gap in study habits is partially reduced when we account for background characteristics; however, the largest reduction comes from taking into consideration prior achievement. In general, students with lower achievement report more rigorous study habits, and this relationship explains a portion of the gap between students without identified disabilities and similar students with mild cognitive disabilities.

**FIGURE 13****Gap in study habits**

*Students with learning disabilities and students with mild cognitive disabilities report more rigorous study habits than students without identified disabilities.*



## Course Failures

Figure 14 shows the gap in the number of courses that students fail during their freshman year. Students with emotional disturbances and students who are two or more years below grade level when they enter high school fail an average of three more courses than students without identified disabilities; students with learning disabilities and mild cognitive disabilities fail about one more course each year.

Background characteristics explain a portion of the gap in the number of course failures. For students with mild cognitive disabilities, it explains the entire gap. However, for most groups, the biggest gap reduction occurs when we remove differences that can be attributed to absences, as shown by the light gray bar. Because students who receive special education services are absent more often, they fail more courses than similar students without identified disabilities. Once we take absences into account, students with learning disabilities and mild cognitive disabilities actually fail fewer courses than similar students without identified disabilities who have the same absence rates. Students with emotional disturbances fail the same number of courses as students without identified disabilities with similar characteristics and attendance.

Study habits and school effects have very little additional impact on the gap in course failures. However, students with disabilities fail even fewer courses than similar students without identified disabilities, once we take into account eighth grade achievement. A portion of the gap in course failures between students who enter high school two or more years below grade level and students without identified disabilities still remains, even after taking into account background characteristics, absences, study habits, school effects, and prior achievement.

## GPA

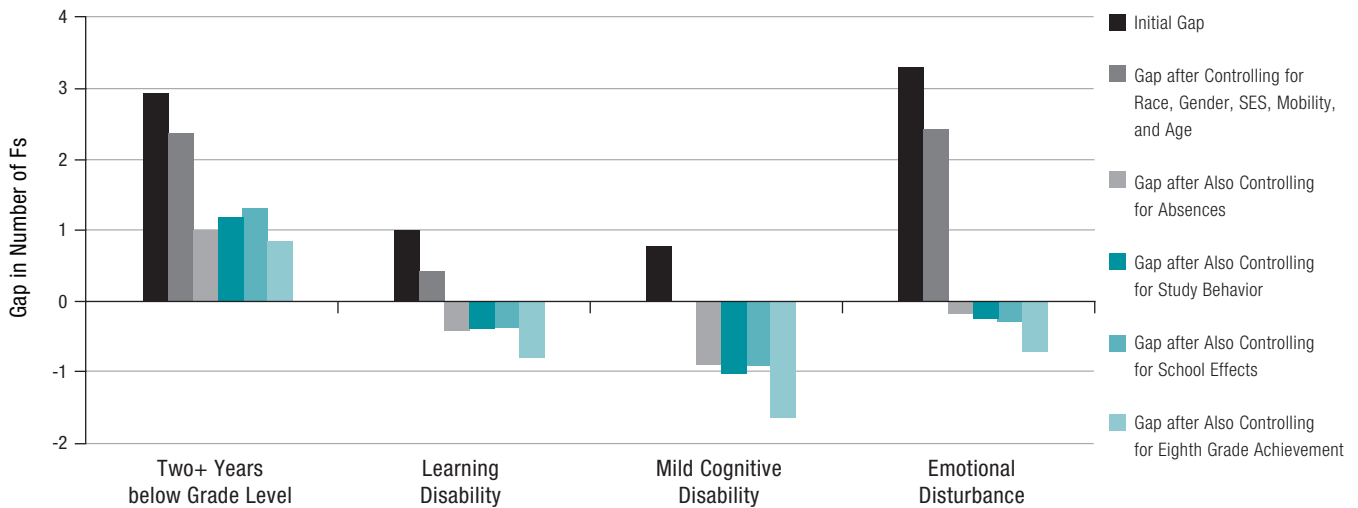
Similar patterns appear in the analysis of the gap in GPA (see Figure 15). As the black bars show, average GPAs for students who entered high school two or more years below grade level and for students with emotional disturbances are nearly a point lower than those of students without identified disabilities. Average GPAs for students with learning disabilities and mild cognitive disabilities are about half a point lower. Background characteristics explain a portion of the gap, but absences reduce the gap the most. Once absences are taken into consideration, students in the three special education categories have GPAs that are comparable to students without identified disabilities with similar background



**FIGURE 14**

**Gap in course failures**

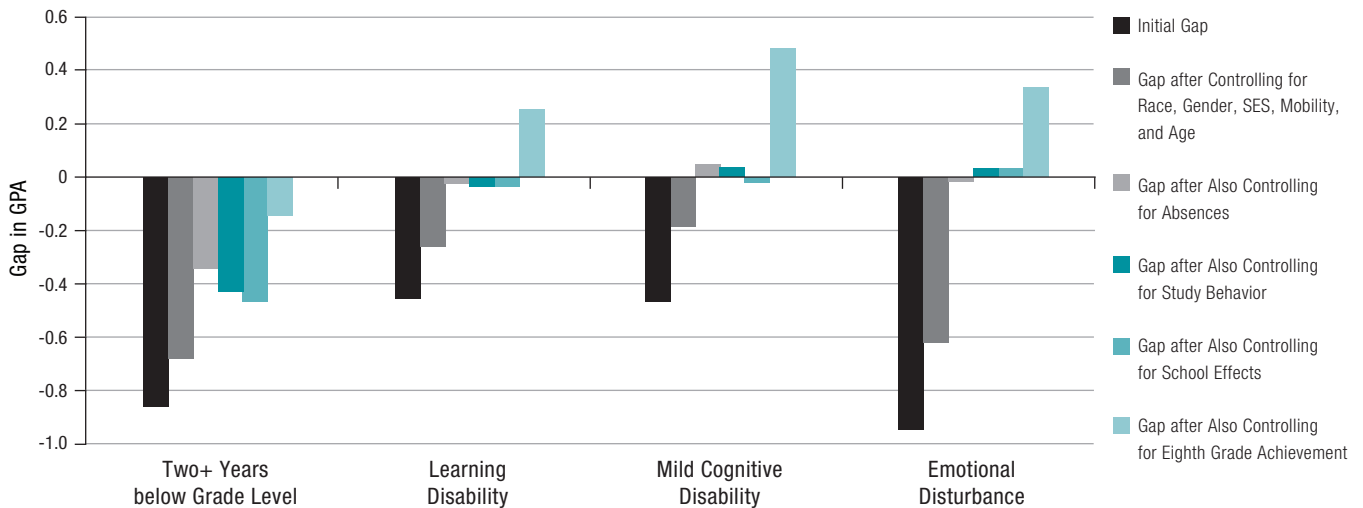
*Students with disabilities fail more classes than students without identified disabilities because they are absent more often.*



**FIGURE 15**

**Gap in GPA**

*Students with disabilities have lower GPAs than students without identified disabilities because they miss more days of school.*



characteristics and absences. After accounting for differences in prior achievement, students with disabilities have higher GPAs than students without identified disabilities with similar characteristics, absences, and prior achievement.

A small portion of the gap between students without

identified disabilities and students who enter high school two or more years below grade level still remains after removing differences due to background characteristics, absences, study habits, school effects, and prior achievement. However, most of the gap is explained by high absence rates and low skill levels upon entering high school.



# Chapter 5

## The Benefits of Coming to Class and Studying

Absences and study habits are important predictors of course performance during the freshman year, and absences explain a large portion of the gap between students with disabilities and students without identified disabilities in course failures and GPAs.<sup>28</sup> In this section, we examine whether the relationships between these behaviors and course performance are the same for students who receive special education services and for students who enter high school two or more years below grade level as they are for students without identified disabilities. In other words, do students with disabilities or students who enter high school two or more years below grade level benefit as much as students without identified disabilities when they are absent less often? Or when they report more rigorous study habits?

In general, the more students are absent, the more courses they fail (see Figure 16). However, the relationship between absences and course failures for students with learning disabilities and mild cognitive disabilities is weaker than it is for students without identified disabilities. (The shape of the dashed teal line and gray line differs from the shape of the black line.) In other words, students in these two groups fail fewer courses than similar non-disabled students who have the same number of absences. For example, students without identified disabilities who miss an average of 25 days per semester fail an average of 8.6 courses; students with learning disabilities fail an average of 7.7 courses; and students with mild cognitive disabilities fail an average of 6.9 courses.<sup>29</sup> A possible explanation for this finding is related to the schools that students attend. As mentioned previously, students with

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> For students with learning disabilities, the relationship between study habits and failing courses is weaker than for similar students without identified disabilities.

disabilities are more likely to attend neighborhood schools with very low levels of average student achievement. Grading policies in these schools may not be as strict as in other schools, so students are not penalized as much for missing classes.

For students with emotional disturbances, the relationship between absences and course failures is the same as the relationship for similar students without identified disabilities. (Although the shape of the dashed black line—which describes the relationship for students with emotional disturbances—looks different from the solid black line, the two lines are not statistically different; this is most likely due to the small number of students with emotional disturbances who are in the sample.)

Similarly, for students who enter high school two or more years below grade level, the relationship between absences and course failures is the same as for students without identified disabilities with similar characteristics. (The shape of the solid teal line is the

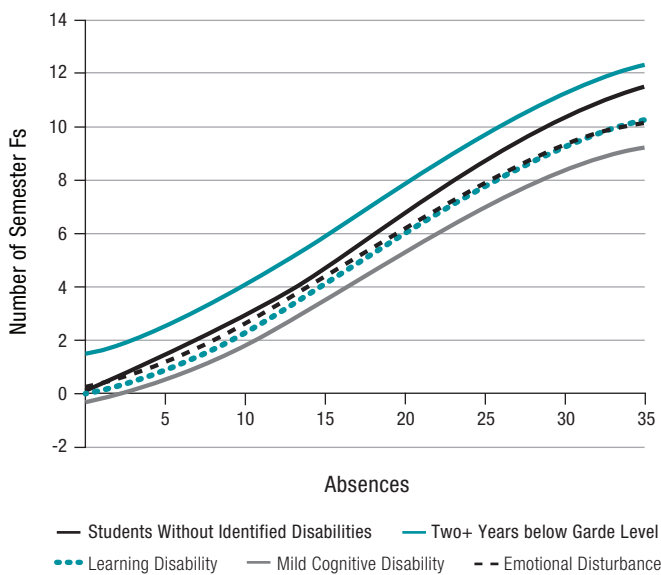
same as the shape of the black line.) However, at all levels of absences, students entering high school with skills two or more years below grade level are more likely to fail more courses than other students with the same absence rates.

The relationship between absences and GPA (see Figure 17) is slightly weaker for students with learning disabilities, students with emotional disturbances, and students with mild cognitive disabilities than for students without identified disabilities. In other words, when students with disabilities are absent more often, their GPA does not suffer as much as it does for similar students without identified disabilities who are absent the same number of days. For example, among students who are absent an average of 25 days per semester, students with disabilities have GPAs that are nearly one-quarter of a point higher than students without identified disabilities.

For students who are two or more years below grade level, the relationship between absences and GPA is

**FIGURE 16**  
**Relationship between course failures and absences**

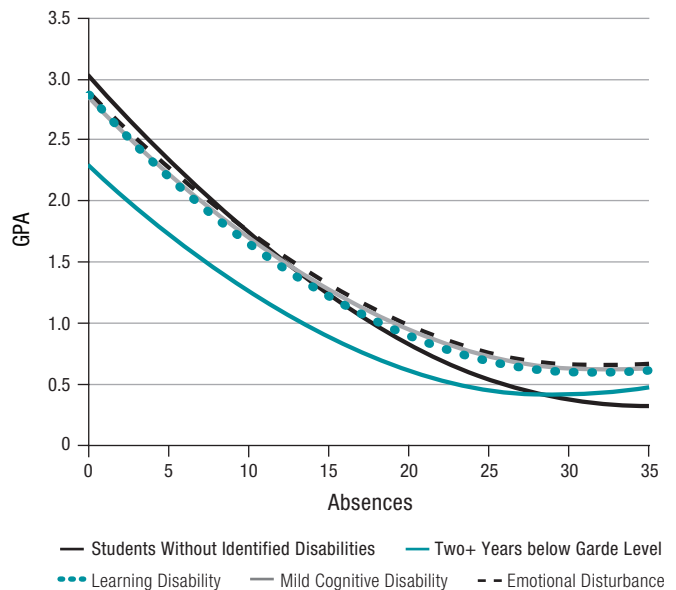
*Students with learning disabilities or mild cognitive disabilities fail fewer courses than similar students without identified disabilities who have the same number of absences.*



**Note:** The statistical models used to create these graphs control for differences in background characteristics, including race, gender, age, mobility, SES, and study habits.

**FIGURE 17**  
**Relationship between GPA and absences**

*Students with learning disabilities, students with mild cognitive disabilities, and students with emotional disturbance have slightly higher GPAs than similar students without identified disabilities who have the same number of absences.*



**Note:** The statistical models used to create these graphs control for differences in background characteristics, including race, gender, age, mobility, SES, and study habits.

somewhat weaker than for students without identified disabilities with similar characteristics. Students who are two or more years below grade level enter high school with very weak skills. Therefore, it is not surprising that, even if they attend school regularly, students in this group are unlikely to achieve high GPAs. On average, students who miss less than a week of school per semester, but who enter high school two or more years below grade level, have GPAs of 2.0 (C).

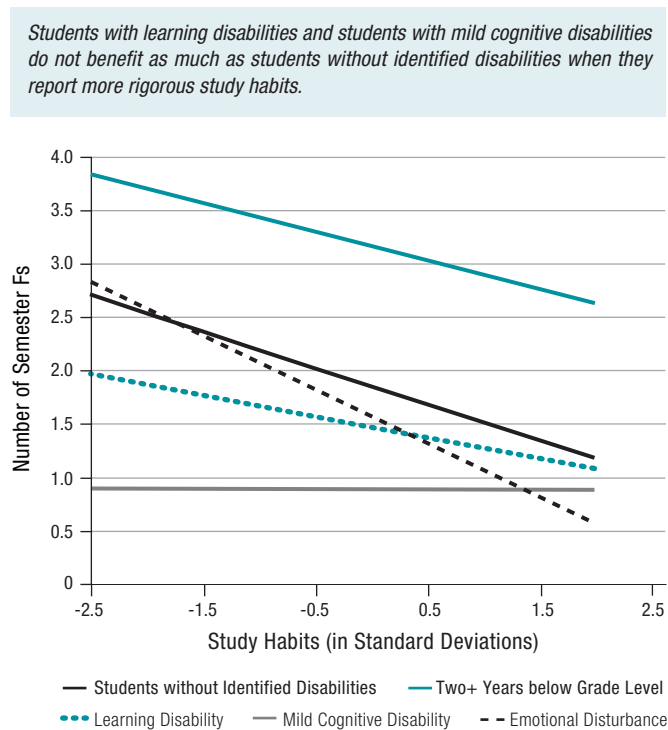
Study habits also are related to student performance. Students who report more rigorous study habits fail fewer courses. Figure 18 shows the relationship between study habits and course failures for each group of students. Students with emotional disturbances and students who enter high school two or more years below grade level benefit at least as much as similar students without identified disabilities when they report more rigorous study habits.<sup>30</sup>

For students with learning disabilities, the relationship between study habits and failing courses is

weaker than for similar students without identified disabilities. For students with mild cognitive disabilities, there is no relationship between study habits and course failures. In the previous section, we found that students with learning disabilities and mild cognitive disabilities are more likely to report rigorous study habits than students without identified disabilities; yet they do not benefit as much as students without identified disabilities in terms of passing more courses when they do so.

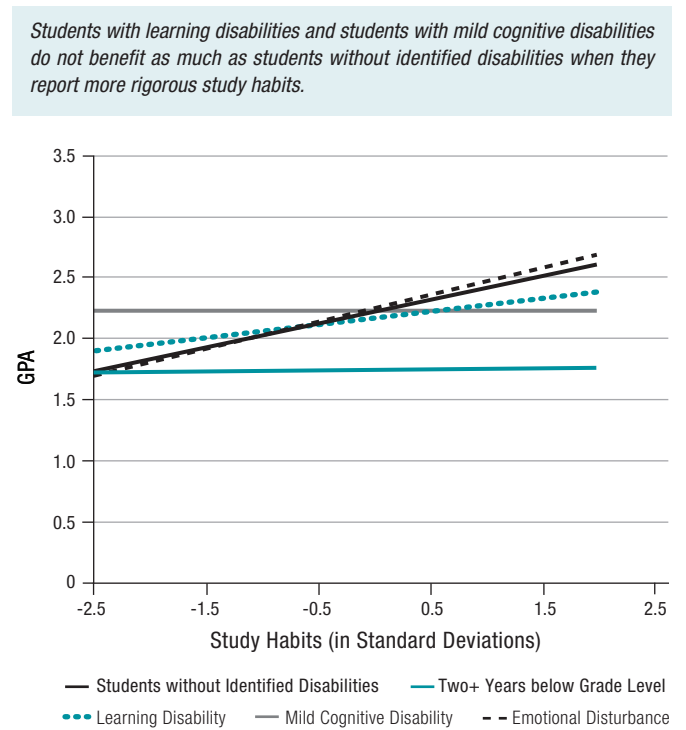
Figure 19 shows the relationship between study habits and GPA. Again, we find that this relationship is weaker for students with learning disabilities than for students without identified disabilities. There is no relationship between study habits and GPA for students with mild cognitive disabilities and for students who are two or more years below grade level. In other words, in our sample, more rigorous study habits were not associated with higher GPAs for these groups.

**FIGURE 18**  
**Relationship between course failures and study habits**



**Note:** The statistical models used to create these graphs control for differences in background characteristics, including race, gender, age, prior school mobility, SES, and absences.

**FIGURE 19**  
**Relationship between GPA and study habits**



**Note:** The statistical models used to create these graphs control for differences in background characteristics, including race, gender, age, prior school mobility, SES, and absences.



# Chapter 6

## Summary and Directions for Future Research

In an earlier CCSR report entitled *What Matters for Staying On-Track and Graduating in Chicago Public High Schools*, Allensworth and Easton provided evidence that four indicators of freshman course performance could be used to identify students at risk of dropping out: GPA, course failures, absences, and on-track status.<sup>31</sup> Results of the study described here confirm that these same indicators can be used to identify ninth grade students with disabilities who are at risk of dropping out in order to target timely support.

A strong relationship between freshman year indicators and graduation rates exists for all students; however, students with learning disabilities, students with mild cognitive disabilities, students with emotional disturbances, and students who enter high school two or more years below grade level graduate at lower rates than their non-disabled peers. In large part, these low graduation rates result from the fact that these students have lower GPAs, more course failures, and more frequent absences. Therefore, although freshman year indicators are similarly predictive for students with and without identified disabilities, many students with disabilities—especially students with emotional disturbances—remain at risk for dropping out even if they are on-track at the end of ninth grade.

Prior achievement is only part of the story when describing the reasons why students with disabilities have lower GPAs and more course failures. Our findings show that for students with disabilities and students two or more years below grade level, absences are the largest factor explaining the difference in performance compared with students without identified

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> Many students with disabilities—especially students with emotional disturbances—remain at risk for dropping out even if they are on-track at the end of ninth grade.

disabilities. In the original *What Matters* report, Allensworth and Easton found that attendance and study habits explained most of the differences in course failure between students. In fact, these two factors were more predictive of failures than test scores or background characteristics.

While it is clear that a strong relationship exists between attendance and course performance—higher absences are associated with lower academic performance—we suspect that this relationship is bidirectional. It is difficult for students with poor attendance to succeed in school, but it is also likely that struggling in school contributes to a student’s reluctance to attend class. As a result, although one important strategy for improving the course performance of students with disabilities would be to improve attendance, achieving this goal may be more challenging for students with disabilities. Their attendance patterns may be related to feelings of disengagement, to a lack of belonging, or to being dissatisfied with previous school success. Their absences may also be the result of disciplinary reasons, medical appointments, or other factors that exist outside of the school context. In this study, we did not investigate the reasons for student absences or how they are related to patterns in outcomes; rather, we looked broadly at absences in general and their relationship to student outcomes. We found that, while fewer absences were related to an increase in GPA for all students, increased attendance produced a smaller increase in GPA for students with learning disabilities, students with mild cognitive disabilities, and students with emotional disturbances than for students without identified disabilities.

Study habits, while important for course performance, did not differ widely between students with and without identified disabilities. Looking at student reports of their own study habits, we found a weaker relationship between studying and course performance for students with disabilities compared with students without identified disabilities. Although these students may report that studying is a priority, they may need more supports to benefit as much academically from their studying efforts.

## Directions for Future Research

Research on freshman year course performance is especially important in the current national climate. Nationally, the high school dropout rate of approximately 30 percent is attributable largely to the performance of just 12 percent of the nation’s high schools, referred to as “dropout factories.”<sup>32</sup> It is our hope that this study and others that focus on early-warning indicators can provide schools and districts that have large numbers of dropouts with a framework for targeting and supporting students at risk of leaving school without a diploma. Additional directions for future research to support the efforts of practitioners in this vein are presented below.

A first promising area for future research is to examine the types of school environments in which students with identified disabilities perform best in terms of attendance and ninth grade course performance. For example, it may be the case that schools where students have high levels of trust in their teachers and receive personal attention and support are the schools where students with disabilities are absent less often. The original *What Matters* report found that, even after controlling for characteristics of the student population, students in schools with high student-teacher trust averaged five fewer absences per year, received 0.8 fewer Fs, and had 0.2 higher GPAs than similar students at similar schools where there was little trust between students and teachers.<sup>33</sup> Conducting similar analyses for students with disabilities could help further explain the results presented in this report and could provide educators with practical directions for implementing interventions aimed at improving student attendance and course performance.

A second area for future research is to look closely at school level support structures in place for students with disabilities and how these supports are related to student performance. School level factors may include the student-teacher ratio in classrooms, the concentration of other students with disabilities in the school and core classes, and the coordination and alignment of the different support services that are available to students with disabilities (e.g., mental health supports for students with emotional disturbances).



Third, in order to design interventions to improve student attendance, it would be useful to have more information about the reasons why students with cognitive disabilities are absent from class more than their non-disabled peers. Similarly, more information about study habits of students with disabilities could inform practitioner efforts to support student learning and improve performance.

Finally, students who enter high school two or more years below grade level merit additional attention by researchers and by school and district practitioners. Like students with identified disabilities, students who enter high school two or more years below grade level have poor freshman year performance and low

graduation rates. Unlike students receiving special education services, however, neither background characteristics, class absences, school effects, nor prior achievement fully explained why these students failed more courses and had worse GPAs than other students. This lingering performance gap may be due to the fact that these students were not receiving special education services, despite their very low achievement. Additional research is necessary to determine whether or not these students were eligible for special education supports. Such information may aid in the identification and implementation of effective support programs early in the ninth grade year for extremely low performing students, regardless of their special education status.



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## Appendix A: Study Samples

Analyses in this report use data from two cohorts of CPS freshmen: students who were first-time freshmen in 2001 and students who were first-time freshmen in 2004. The 2004 freshman cohort is used whenever we present evidence on freshman year course performance (Table 3 describes the demographic composition for this cohort). However, because five-year graduation data were not yet available for this cohort at the time this report was written, we rely on data for the 2001 freshman cohort whenever we report graduation rates. These cohorts were chosen to be consistent with the original *What Matters* report.

Our analyses exclude students who are classified as having moderate or severe cognitive disabilities, autism, or traumatic brain injury. Most of these students are educated in special education schools or separate environments in general education schools and, as a

result, may have very different school experiences than their peers. Furthermore, graduation for these students may be postponed until the age of 22. Students who attend special education schools but are classified as having a disability other than a moderate or severe cognitive disability, autism or traumatic brain injury are also excluded.

We also exclude students who attend alternative, charter, or jail schools and students who are enrolled in academic preparatory centers (APCs). Students in charter schools are excluded from our analyses because charter schools are not required to provide data to CPS on attendance, course credits, or grades. Students in alternative or jail schools and students in APCs have specialized educational environments that are not representative of the typical ninth grade experience.

**TABLE 3**  
**Demographic Composition of the 2004 Cohort of First-Time Ninth-Graders**

	% Male	% White	% African American	% Asian	% Latino/a	% Free/Reduced	% With One or More School Moves
All Ninth-Graders in Sample	49.1	9.6	52.2	3.9	34.1	78.4	40.0
Students Without Identified Disabilities	46.0	10.0	50.2	4.7	35.0	76.5	34.1
Two or More Years below Grade Level	44.4	2.9	62.5	2.1	32.6	89.9	47.6
Learning Disability	63.4	8.6	56.1	0.8	34.4	87.4	35.5
Mild Cognitive Disability	55.7	3.9	82.1	0.7	13.3	93.5	42.8
Emotional Disturbance	79.5	7.4	74.7	0.9	16.7	76.2	53.6
Speech/Language Disabilities	70.8	7.7	69.2	3.1	20.0	73.8	38.5
Physical/Sensory Disabilities	54.6	9.9	55.9	2.0	32.2	82.9	28.3

## Appendix B: Special Education Categories

The Individuals with Disabilities Education Act (IDEA) lists 14 different disability categories under which children who are ages three to 21 may be eligible for service. These categories include: autism, deaf-blindness, deafness, developmental delay, emotional disturbance, hearing impairment, mental retardation, multiple disabilities, orthopedic impairment, other

health impairment, specific learning disability, speech or language impairment, traumatic brain injury, and visual impairment (including blindness). Table 4 shows the additional sub-categorizations used by CPS and how they correspond to the 14 federally approved categories and the categories used in this report.

**TABLE 4**  
**Special Education Categories**

IDEA Category	CPS Category	Category in this Report
Autism	Autism	<b>Excluded</b>
Deaf-Blindness	Deaf-Blindness	Physical/Sensory Disabilities
Deafness	Deaf	Physical/Sensory Disabilities
Developmental Delay	Developmental Delay (applicable only for children ages three to nine)	N/A
Emotional Disturbance	Emotional Disturbance	Emotional Disturbance
Hearing Impairment	Hearing Impairment Hard of Hearing	Physical/Sensory Disabilities
Mental Retardation	Mild Cognitive Disability Moderate Cognitive Disability Severe Cognitive Disability	Mild Cognitive Disability <b>Excluded</b> <b>Excluded</b>
Multiple Disabilities	None	None
Orthopedic Impairment	Physical Disability	Physical/Sensory Disabilities
Other Health Impairment	Other Health Impairment	Physical/Sensory Disabilities
Specific Learning Disability	Learning Disability	Learning Disabilities
Speech or Language Impairment	Speech/Language Disabilities	Speech/Language Disabilities
Traumatic Brain Injury	Traumatic Brain Injury	<b>Excluded</b>
Visual Impairment	Visual Impairment Partially Sighted Blind	Physical/Sensory Disabilities

## Appendix C: Statistical Models

We use a series of non-nested and nested models to estimate the gaps in absences, study habits, course failures, and GPA between students without identified disabilities, students with disabilities, and students who entered high school two or more years below grade level (Figures 12 to 15). Non-nested models are used to estimate the initial gap between these groups; the gap that remains once we take into account background characteristics (the first two bars in Figures 12 to 15); and the remaining gap in course failures and GPA after taking into account absences and study habits (third and fourth bars in Figures 14 and 15). Two-level hierarchical linear models (HLM), where students are nested in high schools, are used to take into account school effects and prior achievement (third and fourth bars in Figures 12 and 13; fifth and sixth bars in Figures 14 and 15). HLMs are also used to estimate the relationships between absences and study habits and course failures and GPA for each of our focal groups (Figures 16 to 19),

taking into account school effects after estimating these differences.

The HLM models include the same variables used in the non-nested models—including dummy variables identifying students with disabilities and students who entered high school two or more years below grade level; background variables describing race, gender, poverty, social status, age, and previous school moves; and variables describing absences and study habits. In addition, eighth grade ITBS scores in reading and math are included to estimate the gap after taking into account prior achievement. All of the variables in the HLM models are grand mean centered with the exception of the dummy variables identifying students with disabilities and students who entered high school two or more years below grade level. As a result, the intercept can be interpreted as the average level of performance on a given outcome for typical students without identified disabilities. Only the intercept is allowed to vary randomly at Level 2.

### Level 1 Model

$$\begin{aligned} \text{Outcome}_{ij} = & \beta_{0j} + \beta_{01}^*(\text{Learning Disabled})_{ij} + \beta_{2j}^*(\text{Emotional Disturbance})_{ij} + \beta_{3j}^*(\text{Mild Cognitive Disabilities})_{ij} \\ & + \beta_{4j}^*(\text{Two or More Years Below Grade Level})_{ij} + \beta_{5j}^*(\text{Male})_{ij} + \beta_{6j}^*(\text{African American})_{ij} + \\ & \beta_{7j}^*(\text{American Indian})_{ij} + \beta_{8j}^*(\text{Asian})_{ij} + \beta_{9j}^*(\text{Latino})_{ij} + \beta_{10j}^*(\text{Poverty})_{ij} + \beta_{11j}^*(\text{Social Status})_{ij} + \\ & \beta_{12j}^*(\text{Moved Once Before High School})_{ij} + \beta_{13j}^*(\text{Moved Twice})_{ij} + \beta_{14j}^*(\text{Moved Three+ Times})_{ij} \\ & + \beta_{15j}^*(\text{Began High School Early})_{ij} + \beta_{16j}^*(\text{Old-for-Grade When Starting High School})_{ij} \\ & + \beta_{17j}^*(\text{Number Months Old-for-Grade})_{ij} + \beta_{18j}^*(\text{Study Habits})_{ij} + \beta_{19j}^*(\text{Absences})_{ij} + \beta_{20j}^*(\text{Absences Squared})_{ij} \\ & + \beta_{21j}^*(\text{Absences Cubed})_{ij} + \beta_{22j}^*(\text{Math ITBS Score})_{ij} + \beta_{23j}^*(\text{Reading ITBS Scores})_{ij} + r_{ij} \end{aligned}$$

### Level 2 Model

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

All other  $\beta$ s were fixed at Level 2 without school level predictors.

**TABLE 5**

**Coefficients from Full Models Predicting Absences and Study Habits**

	Absences		Study Habits	
	Coefficient	T-Ratio	Coefficient	T-Ratio
Intercept	8.640	27.229***	-0.014	-0.990
Learning Disability	-0.046	-0.185	0.037	1.484
Emotional Disturbance	5.104	7.424***	-0.046	-0.691
Mild Cognitive Disability	-1.369	-2.665**	0.036	0.532
Two or More Years below Grade Level	1.057	1.899^	-0.025	-0.436
Male	0.767	6.492***	-0.186	-11.849***
African American	-0.620	-1.534	0.206	5.492***
American Indian	-0.064	-0.057	0.319	1.704^
Asian	-2.526	-6.674***	0.312	6.022***
Latino	-1.066	-3.658***	0.028	0.740
Poverty	0.709	5.179***	0.032	3.135**
Social Status	0.038	0.293	0.009	0.842
Moved Once in Three Years Before High School	1.038	7.175***	-0.008	-0.559
Moved Twice in Three Years Before High School	3.251	11.389***	-0.042	-1.745^
Moved Three+ Times in Three Years Before High School	5.547	8.195***	-0.046	-0.821
Began School Early	-1.635	-5.412***	0.080	1.626
Slightly Old-for-Grade when Began High School	0.285	2.188*	0.010	0.604
Months Old-for-Grade when Began High School	0.251	13.309***	0.003	1.538
Study Habits	-0.047	-12.528***	0.000	0.371
Absences	-0.009	-2.807**	-0.001	-3.679***
Absences Squared	0.635	11.006***	0.183	27.537***
Absences Cubed	-0.214	-9.175***		
Eighth Grade Math ITBS Score	-0.011	-10.306***	0.037	1.006
Eighth Grade Reading ITBS Score	-0.001	-1.514	0.013	1.053
	^ p<.10, * p<.05, ** p<.01, *** p<.001			
Sample Size	22,268		13,722	

**TABLE 6**

**Coefficients from Full Models Predicting Course Failures and GPA**

	Course Failures		GPA	
	Coefficient	T-Ratio	Coefficient	T-Ratio
Intercept	1.905	24.822***	2.189	78.924***
Learning Disability	-0.796	-10.515***	0.249	8.372***
Emotional Disturbance	-0.715	-2.653**	0.331	4.858***
Mild Cognitive Disability	-1.642	-8.862***	0.482	6.952***
Two or More Years below Grade Level	0.840	4.574***	-0.139	-3.094***
Male	0.702	14.223***	-0.350	-23.158***
African American	0.293	2.887**	-0.275	-7.655***
American Indian	0.456	1.215	-0.120	-0.878
Asian	0.174	2.562*	0.062	2.659*
Latino	0.323	4.432***	-0.188	-7.744***
Poverty	-0.040	-1.325	0.001	0.121
Social Status	-0.037	-1.533	0.002	0.238
Moved Once in Three Years Before High School	-0.010	-0.279	0.009	0.720
Moved Twice in Three Years Before High School	-0.124	-1.978*	0.010	0.443
Moved Three+ Times in Three Years Before High School	-0.148	-0.975	0.014	0.324
Began School Early	-0.008	-0.080	-0.003	-2.106*
Slightly Old-for-Grade when Began High School	-0.035	-1.015	0.007	17.469***
Months Old-for-Grade when Began High School	0.010	1.939^	0.002	5.154***
Study Habits	-0.328	-13.979***	0.188	18.985***
Absences	3.038	32.433***	-1.004	-73.668***
Absences Squared	0.635	11.006***	0.183	27.537***
Absences Cubed	-0.214	-9.175***		
Eighth Grade Math ITBS Score	-0.011	-10.306***	0.037	1.006
Eighth Grade Reading ITBS Score	-0.001	-1.514	0.013	1.053
	^ p<.10, * p<.05, ** p<.01, *** p<.001			
Sample Size	13,722		13,722	

Sample sizes are reduced for these analyses to only include students who reported on their study habits in the survey. See Appendix D for a discussion of sample attrition issues.



## Appendix D: Sample Attrition in Statistical Models

The analyses in Chapters 4 and 5 are based on 22,268 students who were in ninth grade for the first time in the fall of 2004. However, the sample size drops to 13,722 students for those models that include the measure of study habits, either as an outcome (Figure 13) or as a predictor (fourth to sixth bars in Figure 14 and 15; Figures 18 to 19). The decrease in sample size is because the measure of study habits was created from student responses to the 2005 CCSR survey, which is voluntary. (See endnote 26 for an explanation of how the measure was created.) In 2005, 58 percent of students completed the survey.

In the full sample of 22,268 students, nearly 18 percent (3,908 students) are students with learning disabilities, students with emotional disturbances, students with mild cognitive disabilities, or students who entered high school two or more years below grade level. In the reduced sample of 13,722 students, only 14 percent (1,960 students) are students with disabilities or are students who entered high school two or more years below grade level. In other words, half of the original sample of students with disabilities and students who are two or more years below grade level are excluded from those models in which the study measure is a predictor or an outcome. Sample attrition is less severe for students without identified disabilities: only about one-third of the students without identified disabilities are excluded from these models.

When we compare students who are included in the reduced sample to those who are not included but were in the larger sample, we find that included students are more likely to be Latino and female and less likely to be African American and from poor neighborhoods. They are also absent less often, fail fewer courses, and have higher GPAs. These patterns are also true

for comparisons between included students with disabilities and students who are two or more years below grade level and excluded students with these same characteristics.

Given that the reduced sample is academically more successful, our estimates of the performance gap between students without identified disabilities and students with disabilities or students who entered high school two or more years below grade level may be somewhat biased in those models that include the study measure. We assess this potential bias by comparing results from three analyses that were conducted using the full sample to results from the same three analyses conducted using the reduced sample.

Figure 20 summarizes the findings from these analyses. For each group of students, the black bar describes the gap in course failures that is obtained from an analysis using the full sample (the black bars are the same as those that appear in Figure 14); the gray bar describes the gap that is estimated from an analysis using the reduced sample. For students with learning disabilities and students with emotional disturbances, the analysis using the reduced sample produces an estimate of the gap that is only two-thirds as large as the estimate that uses the full sample. For students with mild cognitive disabilities, the estimate from the reduced sample is only a tenth the size of the estimate using the full sample. For students who entered high school two or more years below grade level, there are few differences in the estimates of the gap produced by the reduced sample and the estimates produced from the full sample.

The third and fourth bars describe the gap in course failures after taking into account background characteristics. The third bar for each group is estimated using the full sample; the fourth bar is estimated using

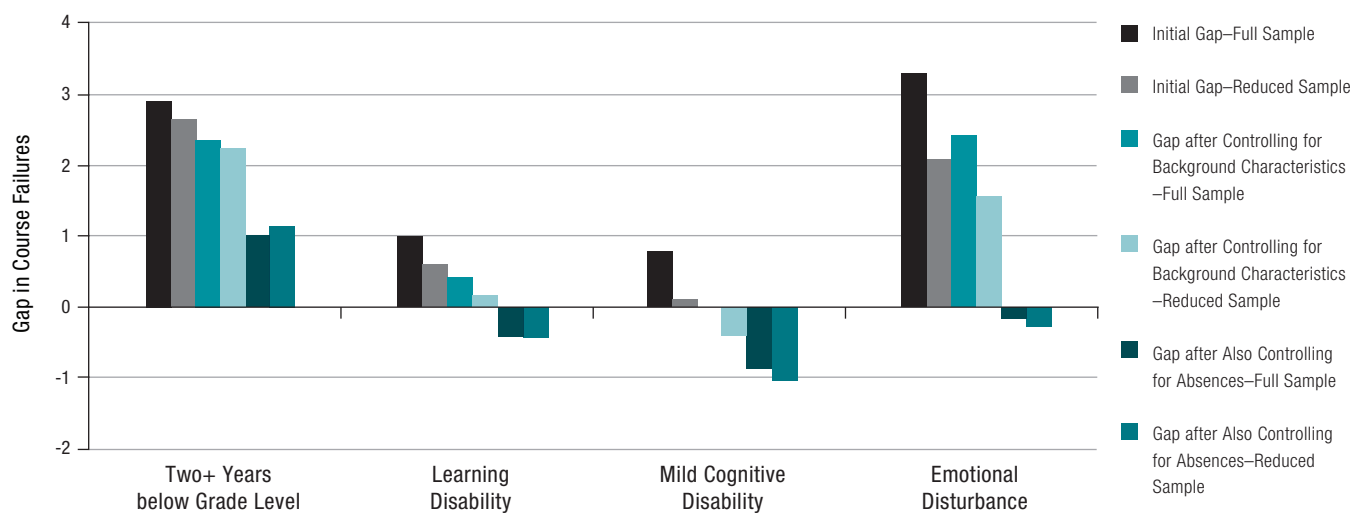
the reduced sample. Except for students who entered high school two or more years below grade level, the two analyses produce different estimates of the gap after taking into account background characteristics. However, the difference in estimates is not as large as the differences in the estimates of the initial gap, which do not account for background characteristics.

The fifth and sixth bars describe the gap in course failures after also taking into account absences. The fifth bar was estimated using the full sample while the sixth bar was estimated using the reduced sample. For

each group of students, these two estimates are fairly similar to one another. Once we also account for differences in absence rates, the estimates obtained from the reduced sample are similar to those of the full sample. This makes conceptual sense as well, since higher absence rates likely explain lower rates of survey participation.

The findings suggest that we can be reasonably confident that our estimates of the gap in models that use the reduced sample are accurate, once we control for background characteristics and absences.

**FIGURE 20**  
Gap in course failures estimated with full vs. reduced samples



# Endnotes

## Executive Summary

- 1 Allensworth and Easton (2007). Students who are on-track at the end of their freshman year have accumulated at least five year-long course credits and failed no more than one core course. Allensworth and Easton found that on-track students were nearly four times more likely to graduate in four years than off-track students.
- 2 Our measure of study habits is created from four items from the 2005 CCSR survey of ninth and tenth grade students. Students were asked how much they agreed or disagreed with the following questions:
  - (1) I set aside time to do my homework and study,
  - (2) I try to do well on my schoolwork even when it isn't interesting,
  - (3) If I need to study, I don't go out with my friends, and
  - (4) I always study for tests.
- 3 Allensworth and Easton (2007).

## Introduction

- 4 According to Greene and Winters (2005), in the class of 2002, approximately 78 percent of white students graduated from high school with a regular diploma compared with 56 percent of African American students and 52 percent of Latino students.
- 5 The four-year graduation rate for all CPS students who were first-time ninth-graders in 2001 (including students in alternative, charter, jail, and special education schools, and Academic Preparatory Centers (APCs)) is 57 percent, and the five-year graduation rate is 60 percent. When we exclude students in alternative, charter, jail, and special education schools, and APCs (as we do throughout this report), the four-year graduation rate is 63 percent and the five-year graduation rate is 66 percent. These graduation rates are different from those reported by the Illinois State Board of Education (ISBE) because of differences in the formulas used to calculate graduation rates. See Allensworth (2005) for a discussion of the variety of flaws in the ISBE formula. See also Monrad (2007).
- 6 National Center for Education Statistics (2008). The Office of Special Education Programs calculates graduation rates by dividing the number of students age 14 and older who graduated with a standard diploma by the number of students age 14 and older who are known to have left school (i.e., graduated with a standard diploma, received a certificate of completion, reached the maximum age for services, died, moved and not continuing in an education program, or dropped out).
- 7 These figures are for students who were first-time ninth-graders in 2001 and did not attend alternative, charter, jail, or special education schools, or APCs. See Allensworth (2005) for a discussion of the formula used to calculate graduation rates in this report.
- 8 Allensworth and Easton (2005); Allensworth and Easton (2007).
- 9 Allensworth and Easton (2007).
- 10 Although we refer to students receiving special education services as "students with disabilities," the population of students with disabilities is larger than those receiving special education services. Students with disabilities go through an identification process that determines their eligibility for special education services. Some students have a disability that does not pose a challenge to their ability to learn in typical school settings (e.g., mild speech, visual, or hearing disabilities). As such, they are not qualified for special education services.

## Chapter 1

- 11 U.S. Department of Education, National Center on Education Statistics (2008).
- 12 According to Patton (1998), the ambiguity and subjectivity associated with the mild disabilities categories combined with teacher judgments in the referral process and inherent biases in the assessment process "contribute to the disproportionate referral and special education placement of African American students." (p. 26). There is also an over-representation of minorities and males in some categories of special education: African American children are twice as likely as white children to be labeled mentally retarded, and they are also more likely to be labeled emotionally disturbed (PCESE, 2002); ratios of male to female students in special education range from 1.5:1 to 3:1 (Coutinho and Oswald, 2005).
- 13 Miller and Gladden (2002).
- 14 This finding is consistent with the President's Commission on Excellence in Special Education (PCESE) (2002), which found that "the current system uses an antiquated model that waits for a child to fail, instead of a model based on prevention and intervention. Too little emphasis is put on prevention, early and accurate identification of learning and behavior problems, and aggressive intervention using research-based approaches. This means students with disabilities do not get help early when that help can be most effective. Special education should be for those who do not respond to strong and appropriate instruction and methods provided in general education." (p. 7).
- 15 Corey H., et al., vs. The Board of Education of the City of Chicago, et al., 27 IDELR 713 (N.D. Ill. 1998).
- 16 Soltman and Moore (2000). A court monitor was initially appointed to monitor all aspects of the implementation of the settlement for eight years after the settlement. As of September 2009, however, the matter remains in litigation. Judge Robert Gettemen of the U.S. District Court entered an order requiring CPS to maintain the status quo on all initiatives covered by the Corey H. settlement agreement. See [http://www.oism.cps.k12.il.us/dept\\_oss\\_lre.shtml](http://www.oism.cps.k12.il.us/dept_oss_lre.shtml) for more information.

- 17 These definitions are taken from Assistance to States for the Education of Children with Disabilities, 34 C.F.R. §300.8 (2007).
- 18 Even though most educational regulation is governed by state statute, eligibility criteria for access to special education is controlled primarily by the federal Individuals with Disabilities Education Act (IDEA). IDEA (2004), describes the minimum provisions required by the statute. States and districts may provide greater protection than is required by the federal statute.
- 19 We consider five-year graduation rates as opposed to four-year graduation rates in this report to allow extra time for students with special needs to meet the academic requirements necessary for graduation. See Table 2 for the differences in four-year and five-year graduation rates across groups of students.

## Chapter 2

- 20 In this report, we analyze unweighted GPAs (which use values of 4 points for an A, 3 for a B, 2 for a C, 1 for a D, and 0 for an F) for all credit bearing classes after completion of the freshman year. We use unweighted GPA rather than weighted GPA because students do not have equal access to courses that receive extra points, such as honors, International Baccalaureate (IB), and Advanced Placement (AP).
- 21 Course failures are the number of semester courses in which a student received an F during the entire year across all courses. Students can take up to seven courses per semester or 14 possible semester courses per year. This differs from the on-track indicator, which only incorporates failures in core subjects.
- 22 Average semester absences are calculated by averaging the number of days absent in the fall and spring semesters. Partial days are counted as a fraction of the total day (e.g., missing one out of seven classes equals one-seventh of a day of absence). Averages are rounded to the nearest whole day for displays.
- 23 A student is on-track if he or she has accumulated five full year credits (10 semester credits) and has no more than one semester F in a core subject (English, math, science, or social science) by the end of the first year of high school.

## Chapter 3

- 24 Allensworth and Easton (2005) found that 82 percent of students who were on-track at the end of the ninth grade graduated in four years compared with 22 percent of students who were not on-track. This analysis included all first time ninth-graders in the calculations.

## Chapter 4

- 25 Osher, Morrison, and Bailey (2003).
- 26 Our measure of self-reported study habits is created using four items from the CCSR survey of ninth and tenth grade students. Students were asked how much they agreed or disagreed with the following questions: (1) I set aside time to do my homework and study, (2) I try to do well on my schoolwork even when it isn't interesting, (3) If I need to study I don't go out with my friends, and (4) I always study for tests. As a result, the models that include the study measure have a lower sample size (N=13,722) than models without the study measure (N=22,268).
- 27 The probability that the gap between students without identified disabilities and students with learning disabilities is significantly different from 0 is .06.

## Chapter 5

- 28 Some students with disabilities may have excused absences due to medical issues related to a disability or not be recorded as absent when away from the classroom due to planned time away for health-related reasons wherein appropriate accommodations are provided. Nevertheless, this report includes all recorded absences regardless of reason and charts the likelihood that these absences are predictors of subsequent academic performance and graduation.
- 29 Nearly 30 percent of students with emotional disturbances and 20 percent of students who are two or more years below grade level miss an average of 25 days or more each semester. Thirteen percent of students with learning disabilities and 17 percent of students with mild cognitive disabilities miss 25 or more days each semester.
- 30 Although the black dashed line—which describes the relationship between studying and course failures for students with emotional disturbances—descends more quickly as absences increase, it is not statistically different from the solid black line.

## Chapter 6

- 31 Allensworth and Easton (2007).
- 32 Balfanz and Legters (2004).
- 33 Allensworth and Easton (2007).



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Julia Gwynne is a Senior Research Analyst at CCSR. Her research interests include student mobility, curriculum policies, and special education. She received a PhD in Sociology from the University of Chicago.

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Joy Lesnick is a Researcher at Chapin Hall at the University of Chicago and a Senior Research Analyst at CCSR. She is currently examining the relationship between reading on grade level in elementary school and future educational outcomes. In addition, she is studying new teacher induction programs in the Chicago Public Schools. Joy received her PhD in Educational Policy from the University of Pennsylvania.

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Elaine Allensworth is the Interim Co-Executive Director of the Consortium on Chicago School Research. She has published widely on the structural factors that affect high school students' educational attainment, particularly the factors that affect graduation and drop out rates. Elaine is currently leading a mixed-methods study of the transition to high school, as well as several studies on the effects of rigorous curricular reforms on instruction, grades, test scores, high school graduation and college attendance. She holds a PhD in Sociology and an MA in Sociology and Urban Studies from Michigan State University, and she formerly worked as a high school Spanish and science teacher.

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## Our Mission

The Consortium on Chicago School Research (CCSR) at the University of Chicago conducts research of high technical quality that can inform and assess policy and practice in the Chicago Public Schools. We seek to expand communication among researchers, policy makers, and practitioners as we support the search for solutions to the problems of school reform. CCSR encourages the use of research in policy action and improvement of practice, but does not argue for particular policies or programs. Rather, we help to build capacity for school reform by identifying what matters for student success and school improvement, creating critical indicators to chart progress, and conducting theory-driven evaluation to identify how programs and policies are working.



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