

**Preparing for life after high school:
The characteristics and experiences of youth in
special education**

**Volume 1:
Comparisons with other youth**

Findings from the National Longitudinal Transition Study 2012

Chapters 1 through 6

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Chapter 1. Why and how is this study being conducted?

Policymakers and educators have long recognized the importance of addressing the needs of youth in special education, who today account for 12 percent of all youth in the United States. Concern that this objective was not being adequately met led Congress to pass landmark legislation in 1975, now known as the Individuals with Disabilities Education Act (IDEA) (U.S. Department of Education, 2010). IDEA mandates that children and youth with disabilities have access to a free appropriate public education. It also authorizes nationwide funding to help school districts provide services to meet their unique needs. A core component of IDEA is the requirement that schools and families work together to develop an individualized educational program (IEP) for each student in special education to guide the provision of educational and related services that they need to progress academically. Congress has updated IDEA several times, most recently in 2004, placing an increased emphasis on helping youth prepare for postsecondary education, careers, and independent living.

Despite these policies, concern about the challenges youth with an IEP face and interest in understanding their experiences remains. Research beginning more than two decades ago found that many of these youth struggled during and after high school, although the extent and nature of their challenges varied with their characteristics (e.g., Newman et al., 2010; Wagner et al., 1991). Since then, the educational and social landscapes for all youth, including those with an IEP, have changed in important ways. Schools and teachers face greater demands to help students progress academically, and school climate has received greater public attention (Dee, Jacob, & Schwartz, 2012; Thapa et al., 2013). The nation is more racially and ethnically diverse, the economy is recovering from the Great Recession, and employers place greater value on postsecondary education (Colby & Ortman, 2015; Oreopoulos & Petronijevic, 2013; Oreopoulos, von Wachter, & Heisz, 2012).

The National Longitudinal Transition Study (NLTS) 2012 provides updated information on youth with disabilities in light of these changes. Sponsored by the U.S. Department of Education under a congressional mandate to examine IDEA 2004, the NLTS 2012 is the third in the series of NLTS studies. The new study offers a current picture of the backgrounds of secondary school youth and their functional abilities, activities in school and with friends, academic supports received from schools and parents, and preparation for life after high school. The NLTS 2012 collected data that, for the first time, allows direct comparisons of youth with and without an IEP. The study also compares youth with different disabilities, and uses data from the prior NLTS studies to examine trends in their characteristics and experiences over three decades. Three initial report volumes are being developed, each with a different focus (see box 1). Together, the volumes are designed to inform efforts by educators and policymakers to address the needs of youth in special education.

Box 1. Three volumes reporting findings from the National Longitudinal Transition Study 2012

Preparing for life after high school: The characteristics and experiences of youth in special education

Volume 1: Comparisons of youth in special education with other youth examines the characteristics of youth in special education overall and how these youth are faring relative to their peers. Comparisons are made between youth with and without an IEP, and within the latter group, those with a disability under Section 504 of the Rehabilitation Act. The findings highlight the distinctive features of the characteristics and experiences of youth with an IEP.

Volume 2: Comparisons of youth in special education across disability groups describes the characteristics of youth in 12 disability groups based on IDEA 2004 definitions and how these groups of youth are faring relative to one another. The findings highlight the diversity of needs and challenges faced by youth in special education.

Volume 3: Comparisons of youth in special education over time identifies trends in the characteristics and experiences of youth in special education over the past three decades. The findings highlight the extent of progress students in special education are making.

Note: The three volumes will be available on the [Institute of Education Sciences website for the NLTS 2012](#) when published.

This volume, the first from NLTS 2012, examines the characteristics and experiences of youth with an IEP as compared with their “peers” – youth without an IEP. The differences between youth with an IEP and their peers point to the distinctive challenges that youth in special education face. Understanding these challenges can inform efforts to ensure educational excellence for all students, including those with disabilities. IDEA 2004’s mandate to provide youth with disabilities with an appropriate education and set of services to meet their needs is consistent with this objective.

To provide additional context for assessing how youth with an IEP are faring, this volume also compares them with a growing segment of the public school population without an IEP who receive disability accommodations (though not IDEA special education services) through a plan developed under Section 504 of the Rehabilitation Act.⁵ Section 504 is a civil rights statute that prohibits excluding individuals from programs and activities that receive federal assistance based on their having a physical or mental impairment that substantially limits major life activities.⁶ The definition of a disability is broader under Section 504 than under IDEA 2004, which defines disabilities in terms of adversely affecting students’ educational performance. The NLTS 2012 is the first national study to describe the experiences of youth with a 504 plan (but no IEP), and it provides richer information on their backgrounds than has been documented previously (Holler & Zirkel, 2008; Zirkel & Weathers, 2015). By comparing youth with an IEP and youth with a 504 plan but no IEP, this volume sheds lights on the extent to which the two groups have different needs and face distinct challenges.

Overview of the National Longitudinal Transition Study 2012

The NLTS 2012 is a national study of nearly 13,000 youth, including youth with an IEP (81 percent) and without an IEP (19 percent). These students were chosen to represent all students with and without an IEP in the United States in grades 7 through 12 (or secondary ungraded classes). Among the youth with an IEP are students who represent each of 12 disability categories recognized by IDEA 2004: autism, deaf-blindness, emotional disturbance, hearing impairment⁷, intellectual disability, multiple disabilities, orthopedic impairment, other health impairment, specific learning disability, speech or language impairment, traumatic brain injury, and visual impairment. Among the youth without an IEP is a representative set of students with a 504 plan (5 percent of the nearly 13,000 youth). The study surveyed youth and their parents in 2012 or 2013 when the vast majority of youth (97 percent) were 13 to 21 years old.⁸ It spans multiple ages and grades to provide a broad view of students’ school experiences at a point in time. Box 2 provides more information on the NLTS 2012.

⁵ The share of public school students with a 504 plan has grown from 0.7 percent in 2000 to 1.5 percent in 2012 (U.S. Department of Education, Office of Civil Rights 2016).

⁶ Examples of major life activities include the following: performing manual tasks, speaking, learning, working, thinking, and communicating. Section 504 also covers individuals who have a history of, or are regarded as having, a physical or mental impairment that limits major life activities.

⁷ Because youth with deafness and hearing impairments are small groups, they have been combined into one group for this study.

⁸ Youth were ages 12 to 23 when interviews took place. Less than two percent were 12 years old, and less than one percent were 22 or 23 years old. All students were enrolled in grades 7 through 12 or a secondary ungraded class when sampled for the study.

Box 2. National Longitudinal Transition Study 2012 at a glance

Students in the study and how they were selected

NLTS 2012 provides information on a nationally representative set of students in grades 7 through 12 or who were ages 13 to 21 and attending secondary ungraded classes when selected for the study in December 2011. To represent all secondary school youth with an IEP in the United States for each disability category, the study team first drew a nationally representative sample of 572 school districts, charter schools, and special schools for deaf and/or blind students from a list supplied by the U.S. Department of Education; 432 districts and special schools (76 percent) agreed to participate in the study. The participating districts and schools provided lists of enrolled students with their IEP status and category, from which students within each disability category, students with a 504 plan but no IEP, and students with neither a 504 plan nor an IEP were selected. The study team then attempted to locate and interview a parent of each selected student and, with a parent's consent, the student. Surveys were completed for 12,988 parents and 11,128 youth, response rates of 59 and 49 percent, respectively. This volume examines youth with and without an IEP who were enrolled in school and surveyed during 2012 or 2013, including data from 11,853 parent surveys and 10,144 youth surveys. It excludes about 1,000 youth who were not enrolled in school during the school year in which their parent was surveyed. See [appendix A](#) for more detail on the study.

Collection of information for the study

Parent and youth surveys were completed during the winter, spring, and summer of 2012 and 2013, when youth were ages 12 to 23, using a combination of computer-assisted interviewing (over the telephone and in person) and responses to web-based surveys. Parent survey respondents provided proxy responses for youth who were unable to self-report even with accommodations offered by the study (16 percent of youth respondents overall; 19 percent of those with an IEP). Proxy responses were not obtained for questions that depended on the youth's perspective. See appendix A for more detail. The U.S. Department of Education plans to collect transcripts and other administrative data in the future.

Analysis and presentation of information collected

This volume presents comparisons of group averages and tests for statistically significant differences between groups.¹ The key comparisons are between youth with an IEP and all youth without an IEP to assess how youth served by IDEA 2004 are faring relative to their peers. Youth without an IEP include both those with a 504 plan and those without either a 504 plan or an IEP. This volume also compares youth with an IEP and youth with a 504 plan (but no IEP) to shed light on the extent to which the groups identified as having a disability through IDEA 2004 and the Rehabilitation Act have different needs and face distinct challenges. Because of the large number of comparisons made, the text highlights only the statistically significant differences that are at least 5 percentage points between groups.² The study team selected this level in consultation with IES and content experts, judging differences of lesser magnitude not large enough to inform policy, practice, or the targeting of technical assistance. The five percentage point level was not empirically derived or based on an external standard. The main analyses combine the experiences of multiple ages and grades to provide a broad view of students' school experiences at a point in time. The volume also includes analyses for specific youth age groups.

Limitations of the study

Because low response rates can lead to a bias in results if survey nonrespondents have different characteristics than the respondents, several kinds of analyses were conducted to examine the potential for nonresponse bias in the NLTS 2012 parent and youth surveys (see appendix A for detail). Together, the results from applying these methods suggested that nonresponse adjustments to the weights succeeded in limiting the potential for bias. However, it remains possible that the nonresponse-adjusted weights do not fully account for all differences between respondents and nonrespondents. Thus, readers should draw conclusions with caution. Another limitation is that the study only describes similarities and differences between groups; it does not attempt to definitively explain why groups are similar or different.

Notes

1. The threshold for statistical significance in the report is $p < .05$. Given the large number of comparisons in the report, an increased chance exists that two groups will appear to differ on at least one measure by random chance alone. Multiple comparison adjustments have not been made in the findings presented in this report, perhaps increasing the number of statistically significant findings.

2. In a few cases, the report also discusses statistically significant differences that are at least 3 percentage points and in which one group's proportion is at least double (or at most half) the proportion for the other group.

Key questions of interest and the organization of this volume

This volume is organized around five questions of interest to policymakers, educators, and other stakeholders. As such, only the survey measures most relevant to addressing these questions are described.⁹ The most important findings pertain to key experiences, supports, and expectations selected by the study team that prior research suggests may be predictors of students' post-high school outcomes (appendix A provides more detail about these predictors referred to in this report as key indicators).

- **Chapter 2: What are the background characteristics of youth and the schools they attend?** Because individual, household, and school traits can influence youth experiences and aspirations, it is essential to describe how characteristics such as income, race-ethnicity, age, gender, and school quality differ among youth with and without an IEP. Subgroups of youth defined by these characteristics are examined in other chapters to more fully understand the differences among youth.
- **Chapter 3: What challenges do youth face relating to health, functional abilities, and independence?** Helping youth with an IEP enhance their functional abilities and become more independent is a key objective of transition planning under IDEA 2004, making it important to compare the health and functional abilities between youth with and without an IEP. In addition, how youth participate in secondary school and plan for the future can depend on their health, communication and physical abilities, independence, and sense of self-control. *Key indicators: general health status and performance on daily living activities.*
- **Chapter 4: How engaged are youth in school and with friends?** Youth who enjoy school, are involved in activities, have friendships, and stay out of trouble are more likely to progress in school and develop socially. Hence, it is important to describe how youth with and without an IEP differ in their engagement in school and with friends, including the extent to which they experience negative events such as bullying, repeating grades, suspensions or expulsions, or being arrested. *Key indicators: suspensions, being teased or called names, participation in school extracurricular activities, and getting together with friends.*
- **Chapter 5: What academic supports do youth receive?** Students' success hinges in part on whether they receive the academic supports and services they need to address their disabilities. Both schools and families can help address these needs. Recognizing that academic needs vary, it is important to examine how the supports that youth receive from schools and their parents differ among those with and without an IEP. *Key indicators: receipt of school-provided academic instruction outside school hours, and whether the parent or another household adult provided homework help at least weekly during the school year.*
- **Chapter 6: How are youth preparing for life after high school?** How successful youth will be at continuing their education, finding jobs, and being self-sufficient can depend on the steps they take to prepare for adulthood. To inform efforts to enhance the transition-planning process, it is useful to examine the aspirations of youth with and without an IEP, how both groups are preparing for postsecondary education and work, and the expectations and challenges their parents perceive for them in adulthood. *Key indicators: whether youth expect to obtain postsecondary education, youths' college entrance or placement test-taking, youths' paid employment, and parents' expectations that youth will live independently.*

⁹ For example, the report excludes measures on the reasons youth left school because the analyses focus on youth still enrolled in secondary education. It also excludes parent-reported youth disabilities because the report uses information provided by the districts instead. Finally, this volume excludes measures that pertain only to youth with an IEP.

More detail on the NLTS 2012 and the findings in this volume is available in appendices, described below.

- ***Appendix A: Technical notes and methodology.*** This appendix includes technical information on the NLTS 2012 and the analyses in this volume. The appendix includes sections describing the purpose and design of the study; the sample design; the parent and youth surveys; data collection methods, procedures, and results; weighting; unit nonresponse bias analysis; imputation of variables; disclosure risk analysis and protection; statistical procedures; variance estimation; and analytic variables.
- ***Appendices B through F: Detailed tables for chapters 2 through 6.*** These appendices, one supporting each chapter, include detailed findings for measures in the main text and for supplemental measures.

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Chapter 2. What are the background characteristics of youth and the schools they attend?

It has long been known that the characteristics of students, their families, and the schools they attend are related to—though do not necessarily determine—the supports students need and their later success (Aud, KewalRamani, & Frohlick, 2011; Fryer & Katz, 2013). Students with an IEP may have characteristics that, perhaps separate from their disability, are linked to greater difficulty in transitioning to college, employment, and self-sufficiency, as suggested in previous research (Newman et al., 2011; Wagner et al., 2003; Wagner, Newman, & Javitz, 2014). Describing the extent to which students with and without an IEP differ in their socioeconomic status, gender, race-ethnicity, English proficiency, and school quality provides a foundation for understanding their experiences.

Key findings in chapter 2

- **Youth with an IEP are more likely than their peers to be socioeconomically disadvantaged.** For example, 58 percent of youth with an IEP live in low-income households, compared with 46 percent of youth without an IEP. Moreover, parents of youth with an IEP report being less likely than other parents to have a college education, be employed, or be married. Youth with a 504 plan have relatively advantaged socioeconomic backgrounds, compared with both youth with an IEP and other youth without an IEP.
- **Males and black youth represent larger shares of youth with an IEP than of youth without an IEP.** Two-thirds of youth with an IEP are male, compared with about half of their peers. Youth with an IEP are also 5 percentage points more likely than youth without an IEP to be black (19 versus 14 percent), but about as likely to be Hispanic (24 and 25 percent) and limited English proficient (10 and 8 percent). The proportions of youth with a 504 plan who are male (60 percent) and black (13 percent) are lower than among youth with an IEP as well.
- **Youth with an IEP are not more concentrated than those without an IEP in lower-performing schools.** Similar proportions of youth with and without an IEP (27 and 24 percent) attend a school with state-reported academic proficiency rates in the bottom quarter statewide. Youth with a 504 plan (19 percent) are less likely than youth with an IEP to attend a lower-performing school.

The sources of the key information in this chapter are as follows:

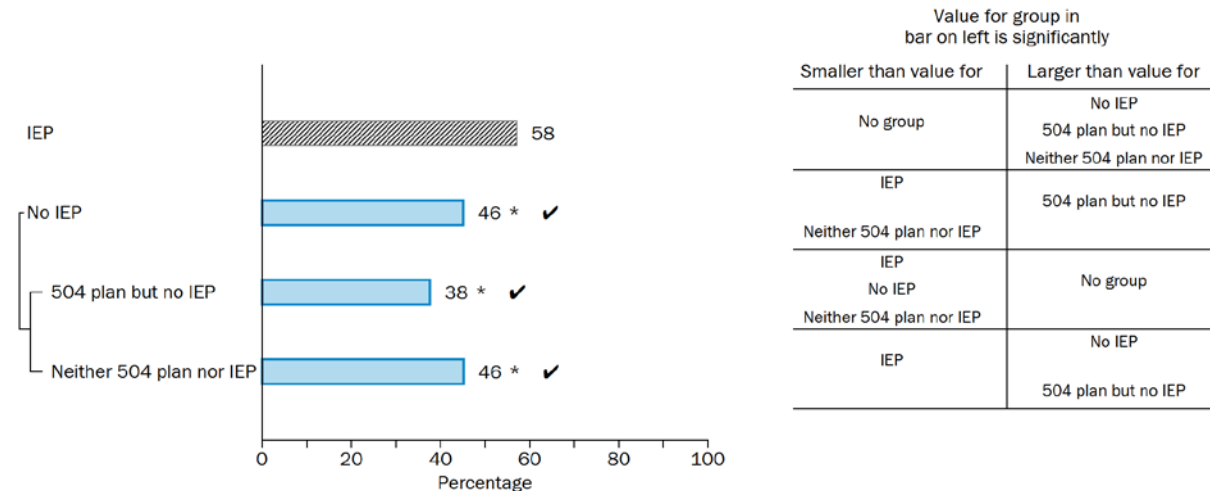
- *Socioeconomic characteristics:* parent survey and administrative data
- *Gender, race-ethnicity, English proficiency, and age:* parent survey and administrative data
- *School performance, locale, and type:* parent survey and administrative data

Detailed tables supporting the findings presented in this chapter are available in [appendix B](#).

Youth with an IEP are more likely than their peers to be socioeconomically disadvantaged

Socioeconomic status may play a role in students' access to high quality education and to their progress in school. Youth in households with lower resources more commonly than other youth have fewer books in the home and are more likely to move frequently (Duncan & Magnuson, 2005). A large body of research has linked lower family income and parental education with lower academic achievement, rates of high school completion and college attendance, and rates of post-high school employment (Aud et al., 2011; Wagner et al., 2014).

- **Youth with an IEP are more likely than their peers to live in low-income households and receive federal food benefits, but not welfare benefits** (figure 1 and table 1; see tables B-1 to B-5 for more detail). Specifically, 58 percent of youth with an IEP live in low-income households, compared with 46 percent of youth without an IEP. *Low-income* refers to household income below 185 percent of the federal poverty level—the eligibility standard for schools’ free or reduced-price lunch programs.¹⁰ Families with lower household incomes are more likely to be eligible for federal nutrition assistance and financial supports. Parents report that 35 percent of youth with an IEP live in households that received federal food benefits through the Supplemental Nutrition Assistance Program (SNAP) in the past two years, compared with 26 percent of their peers’ households. However, youth with and without an IEP do not differ by a statistically significant margin in their families’ participation in state welfare or federal Temporary Assistance for Needy Families (which in 1996 replaced a program that provided cash welfare to poor families with children since 1935). In contrast, youth with a 504 plan tend to be economically advantaged compared with both youth with an IEP and other youth without an IEP; only 38 percent live in low-income households and only 21 percent live in households recently receiving SNAP benefits.

Figure 1. Percentages of youth who live in low-income households, by IEP status

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group’s bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group’s bar and the values for the other groups’ bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, “504 plan but no IEP” will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, “No group” will appear in the right-hand column.

Note: Parent survey respondents were asked to indicate their income and household size in the previous year. Data for a small number of observations were imputed when not available from either the parent survey or the sample information. Low household income is household income below 185 percent of the federal poverty level, which was \$42,643 for a family of four living in the continental United States in 2012.

Source: National Longitudinal Transition Study 2012. The universe is youth who lived with their parents at least some of the time. More information is provided in appendix B, table B-1.

¹⁰ In 2012, this amount was \$42,643 for a family of four living in the continental United States. Youth with an IEP are also more likely than their peers to live in low-income households using an income threshold of \$80,000, or roughly twice the free or reduced-price lunch standard for a family of four (81 versus 70 percent) (table B-2).

Table 1. Percentages of youth in households that received benefits through three federal assistance programs for low-income households in the past two years, by IEP status

Federal benefit program	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Supplemental Nutrition Assistance Program	35	26*✓	21*✓	26*✓
Temporary Assistance for Needy Families or state welfare	10	9	5*	9
Supplemental Security Income	22	6*✓	9*✓	6*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents were asked whether anyone in their household had received Supplemental Nutrition Assistance Program, Temporary Assistance for Needy Families, or state welfare benefits in the past two years. For Supplemental Security Income, parent survey respondents were asked whether anyone in the household received money for the youth in the past two years.

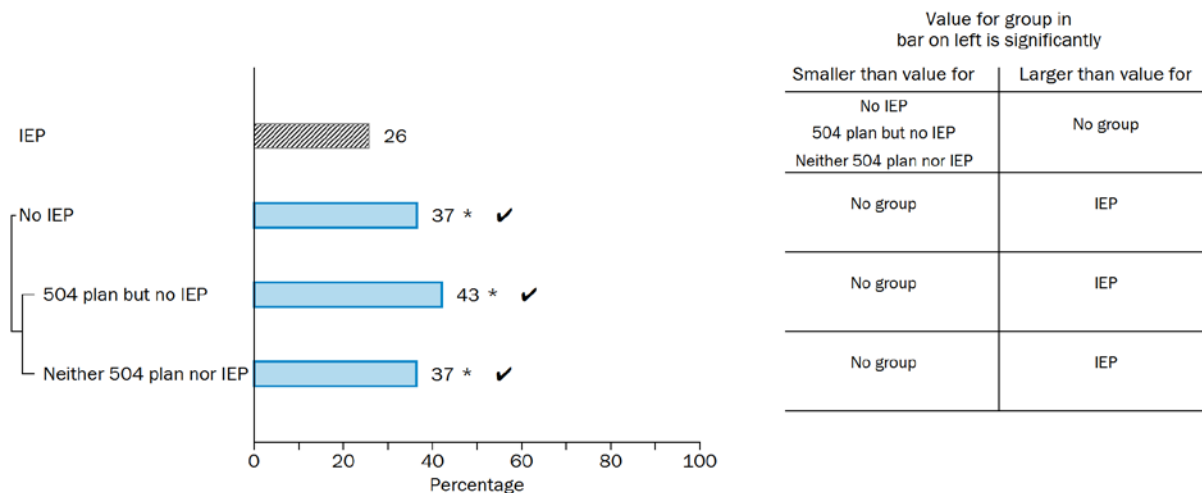
Source: National Longitudinal Transition Study 2012. The universe is youth who lived with their parents at least some of the time. More information is provided in appendix B, tables B-3, B-4, and B-5.

- **Nearly a quarter of youth with an IEP receive financial disability benefits through the Supplemental Security Income (SSI) program** (table 1; see table B-5 for more detail). Youth with an IEP are nearly four times more likely than youth without an IEP to have received disability benefits through SSI over the same past two years, according to parents (22 versus 6 percent).¹¹ This higher participation in SSI for youth with an IEP reflects both their households' greater financial needs and their own disability conditions. Parents report that 9 percent of youth with a 504 plan received SSI benefits during this period.

¹¹ Parents were asked about SSI benefits for youth, although adults with disabilities also can be eligible for SSI. Some parents may have been confused about this distinction, helping to explain why 6 percent of parents of youth without an IEP reported that their child had received SSI benefits in the past two years.

- Only one-quarter of youth with an IEP have a highly educated parent, compared with more than one-third of youth without an IEP (figure 2; see table B-6 for more detail). In particular, 26 percent of youth with an IEP and 37 percent of their peers have a parent (or parent's spouse) with at least a four-year college degree. Youth with a 504 plan are more likely than youth with an IEP to have a parent with a college degree (43 percent), consistent with their higher household incomes. Beyond potentially affecting a household's economic status, parental education has been associated with students' post-high school outcomes, including the likelihood that they will attend college (Dubow, Boxer, & Huesmann, 2009).

Figure 2. Percentages of youth whose parent or parent's spouse has a four-year college degree or higher, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

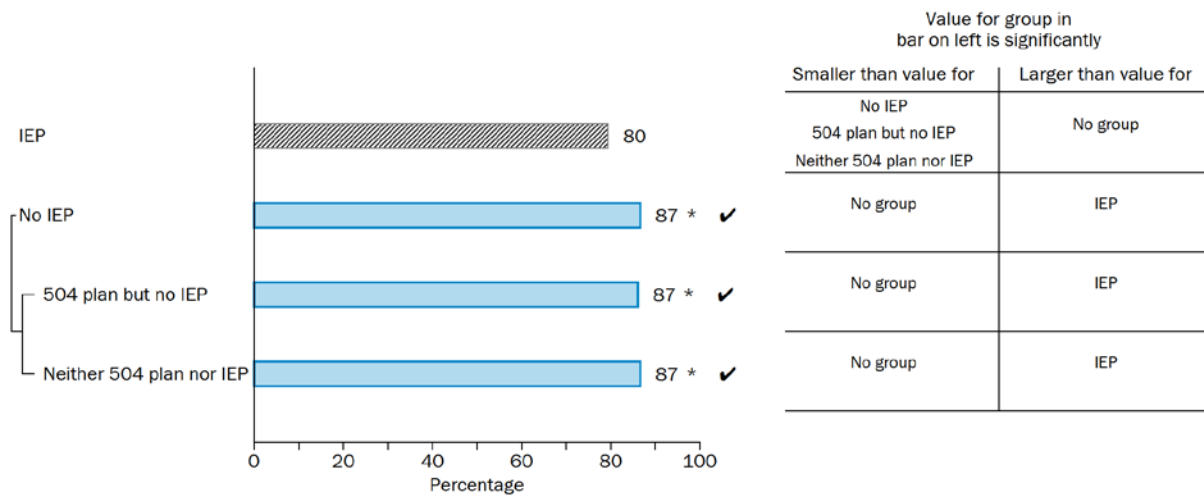
Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents, excluding proxies, were asked to indicate the highest year or grade that they and their spouse, if they have one, finished in school.

Source: National Longitudinal Transition Study 2012. The universe is youth who lived with their parents at least some of the time. More information is provided in appendix B, table B-6.

- **Youth with an IEP are less likely than their peers to have a parent who is employed, but not less likely to have health insurance** (figure 3; see table B-7 for more detail). Eighty percent of youth with an IEP have a parent (or parent's spouse) with a paid job, 7 percentage points less than among youth without an IEP (87 percent). Youth with a 504 plan are just as likely as other youth without an IEP to have an employed parent. Notably, gaps in parental employment between youth with an IEP and their peers do not translate into gaps in access to health insurance, even though jobs are a common way for people in the United States to obtain insurance. In particular, parents report 93 percent of youth with an IEP and 92 percent of youth without an IEP have health insurance coverage, although the sources of health coverage differ between the two groups (table B-8). For example, youth with an IEP are more than 10 percentage points less likely to have health coverage through a private plan (51 versus 63 percent) (table B-9). However, among those without private coverage, youth with an IEP are more likely to be covered through a government-assisted or public health plan such as Medicare or Medicaid (table B-10).¹²

Figure 3. Percentages of youth whose parent or parent's spouse has a job, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

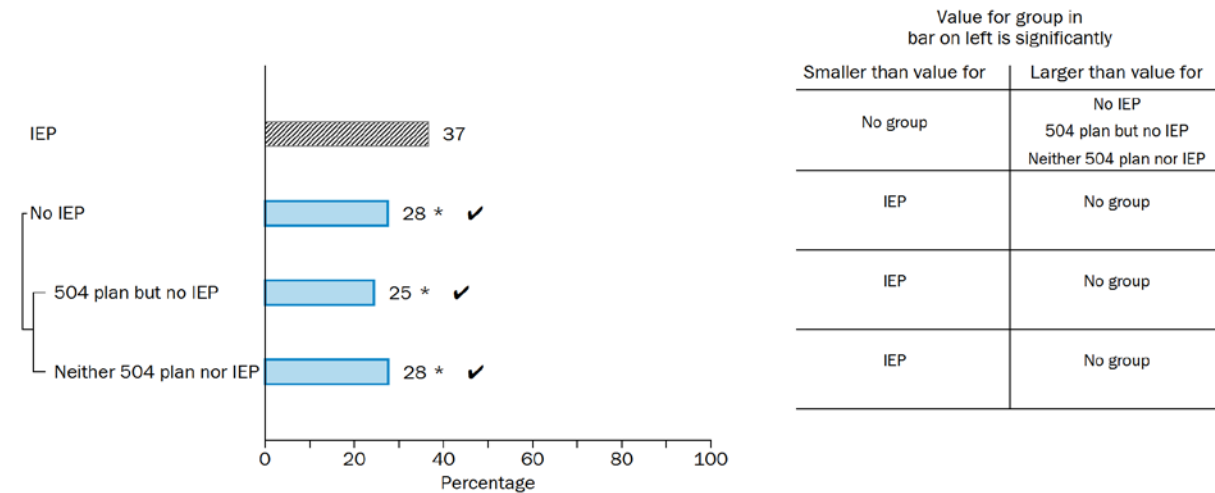
Note: Parent survey respondents, excluding proxies, were asked to indicate their employment status at the time of the survey and that of their spouse, if they have one.

Source: National Longitudinal Transition Study 2012. The universe is youth who lived with their parents at least some of the time. More information is provided in appendix B, table B-7.

¹² The NLTS 2012 data were collected prior to the first open enrollment period in fall 2013 for health insurance through marketplaces established by the Affordable Care Act.

- Youth with an IEP are almost 10 percentage points more likely than youth without an IEP to live in single-parent households (figure 4; see table B-11 for more detail). Specifically, 37 percent of youth with an IEP have a parent who is not married or in a marriage-like relationship¹³, compared with 28 percent of their peers.¹⁴ One-quarter of youth with a 504 plan do not live in dual-parent households, similar to the proportion for other youth without an IEP (28 percent).

Figure 4. Percentages of youth whose parent is not married or in a marriage-like relationship, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents were asked if they are married, in a marriage-like relationship, separated, divorced, widowed, or single (and never married).

Source: National Longitudinal Transition Study 2012. The universe is youth who lived with their parents at least some of the time. More information is provided in appendix B, table B-11.

¹³ The term *marriage-like relationship* is not defined in either the NLTS 2012 parent survey or the NLTS 2 parent survey from which the item was drawn. For this report, the term has been interpreted as including domestic partnerships. However, parents may have interpreted the term in other ways.

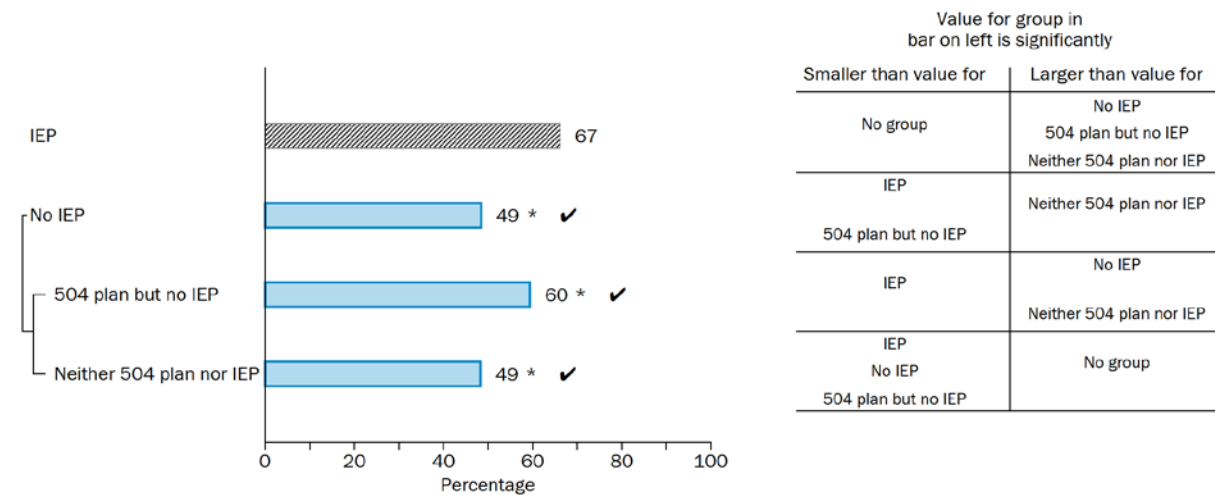
¹⁴ The number of adults in the households of youth with and without an IEP are not dramatically different, meaning that those with an IEP may be more likely to live with nonparental adults. On average, youth with an IEP have 2.4 adults in their households and their peers' households have 2.3 adults (table B-12).

Males, black youth, and youth who are over age 18 represent larger shares of those in special education than of other students

Demographic characteristics such as gender, race-ethnicity, and age in school are important to understanding the educational needs and pathways of youth with an IEP and those without. Among students overall, those over the traditional age for high school completion have a greater likelihood than other high school students of dropping out (Stark & Noel, 2015). Boys have lower academic achievement than girls in reading and writing, and have lower rates of completing high school, enrolling in postsecondary education, and completing four-year college degrees (Freeman, 2004; DiPrete & Buchmann, 2013). And, as a group, students who are Black or Hispanic have been less likely to achieve these educational milestones than have students with other racial or ethnic backgrounds (U.S. Department of Education, 2016). Longstanding concerns remain about whether males and minority students are being identified appropriately for special education and whether these or other groups of students are being over- or under-identified (Coutinho & Oswald, 2005; Harry & Klingner, 2014; Morgan et al., 2015).

Federal policy addresses some aspects of these participation and attainment gaps. IDEA 2004 permits youth in special education who are unable to complete high school with their same-age peers to remain in school and to continue receiving special education and related services through the year in which they turn 21. In addition, the law requires that states monitor and annually report on the percentage of their districts that they determine to have disproportionate representation of racial and ethnic groups in special education resulting from inappropriate identification.

- **Two-thirds of youth with an IEP are male, compared with about half of youth without an IEP** (figure 5; see table B-13 for more detail). Males also constitute a larger share of youth with a 504 plan than of other youth without an IEP (60 versus 49 percent), consistent with findings in prior studies (Zirkel & Weathers, 2015).

Figure 5. Percentages of youth who are male, by IEP status

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents were asked to confirm or correct school district information about a youth's gender. Sample information was used if parent-reported data were not available.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix B, table B-13.

- Black youth represent a larger share of youth with an IEP than of youth without an IEP (table 2; see table B-14 for more detail). In particular, 19 percent of youth with an IEP are Black, compared with 14 percent of their non-IEP peers.¹⁵ In contrast, one-quarter of youth in both groups are Hispanic. Youth with a 504 plan are about as likely as other youth without an IEP to be Black (13 percent) but are less likely to be Hispanic (16 percent).

Table 2. Percentages of youth who are Black, Hispanic, or another race or ethnicity, by IEP status

Race and ethnicity group	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Black (not Hispanic)	19	14*	13*✓	14*
Hispanic	24	25	16*✓	25
White, Asian, or other race (not Hispanic)	57	61*	71*✓	61

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

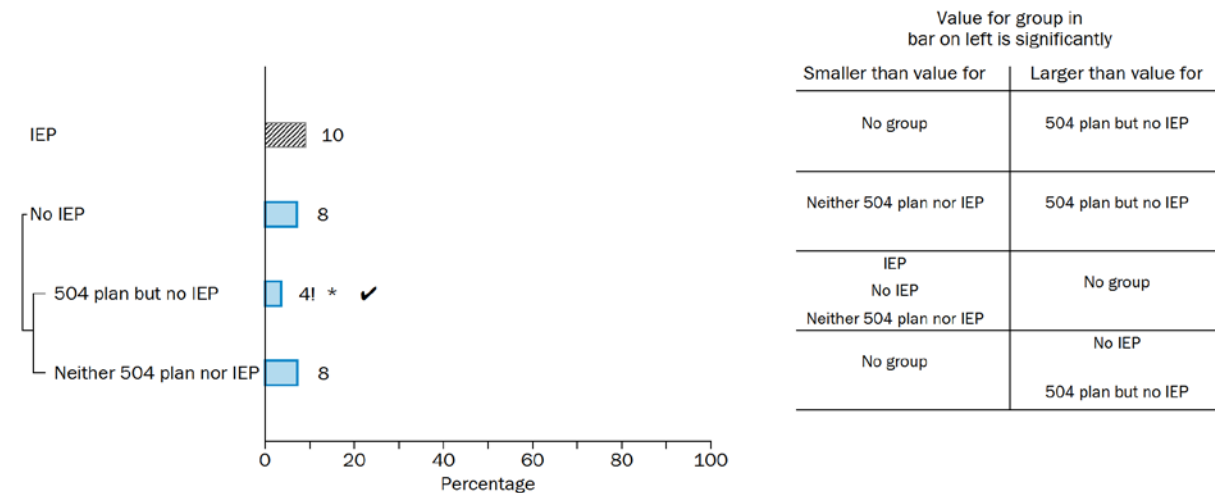
Note: Parent survey respondents were asked to indicate the youth's race and ethnicity. Sample information from the district at the time of sampling was used when parent-reported data were not available. Black includes African American; Hispanic includes Latino; and other race includes American Indian or Alaska Native, and Native Hawaiian or other Pacific Islander.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix B, table B-14.

¹⁵ The difference in the proportions of youth with and without an IEP who are Black is statistically significant and rounds to 5 percentage points, but is slightly less than 5 percentage points.

- **Similar proportions of youth with and without an IEP are limited English proficient** (figure 6; see table B-15 for more detail). Specifically, 10 percent of youth with an IEP and 8 percent of their peers are limited English proficient, according to their school districts.¹⁶ The comparability in limited English proficiency may reflect the fact that similar proportions of youth with and without an IEP are Hispanic and most youth with limited English proficiency (77 percent) have that racial-ethnic background. Educators have long struggled with identifying disabilities among youth with limited English proficiency, where language acquisition and learning problems can be hard to distinguish (Sánchez, Parker, Akbayin, & McTigue, 2010; Artiles & Klingner, 2006). For example, instruments for assessing special education eligibility are not always available in students' native languages and may not reflect their linguistic and cultural differences (Figueroa & Newsome, 2006). Inaccurate assessment of the educational needs of limited English proficient students can lead to either (1) staff identifying these youth as needing special education services even when they have no disability or (2) failing to identify some who do need special education services (Sullivan, 2011). The proportional representation of youth with limited English proficiency in special education may indicate that neither of these referral problems dominates, that they both exist but offset each other, or that other factors may be involved.

Figure 6. Percentages of youth who are limited English proficient, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: This administrative measure from the district at the time of sampling indicates whether or not youth are limited English proficient.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix B, table B-15.

¹⁶ The U.S. Department of Education's Office of Elementary and Secondary Education refers to these students as *English learners*, although this report retains the term *limited English proficiency*, which is used in federal law.

- **Five percent of youth with an IEP are over 18, compared with hardly any of their peers** (table 3; see table B-16 for more detail). In addition, youth with an IEP are more likely than youth without an IEP to be ages 15 to 18 (59 versus 53 percent). In contrast, youth with an IEP are less likely than those without an IEP to be 14 years old or younger (35 versus 47 percent). The age profile of youth with a 504 plan is similar to that of other youth without an IEP.

Table 3. Percentages of youth in three age groups, by IEP status

Age group	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
14 years old or younger	35	47* ✓	51* ✓	47* ✓
15 to 18 years old	59	53* ✓	48* ✓	53* ✓
19 years old or older	5	#*	#!*	#*

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate; #=rounds to zero.

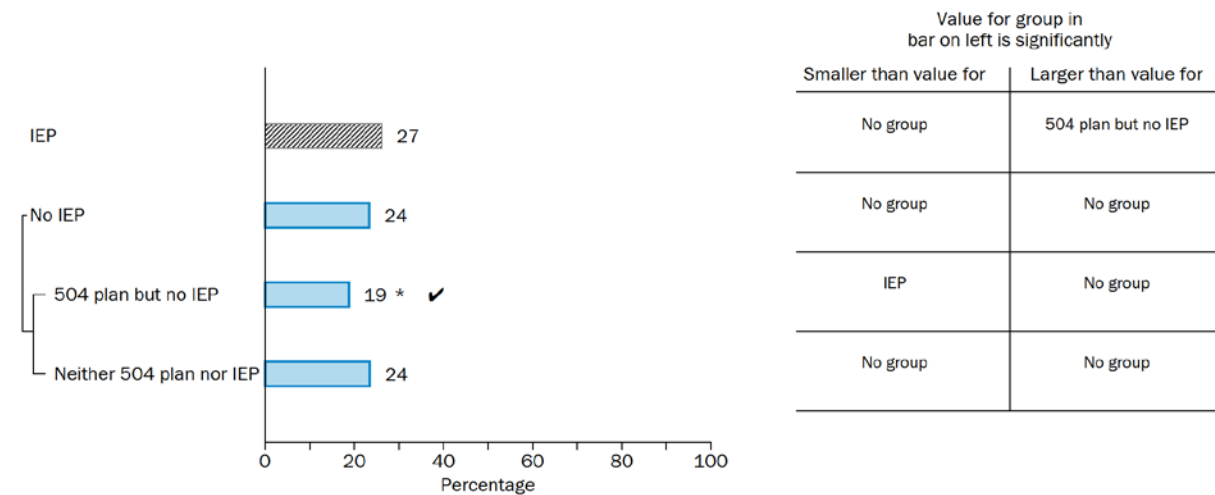
Note: Parent survey respondents were asked to indicate youth's date of birth. Sample information was used if parent-reported data were not available.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix B, table B-16.

Youth with an IEP are not more concentrated than other youth in either lower-performing schools or schools in urban areas

Household resources can affect where youth live and attend school (Fryer & Katz, 2013; Sanbonmatsu, Kling, Duncan, & Brooks-Gunn, 2006). Given that youth with an IEP are more socioeconomically disadvantaged than their peers, they may also attend schools with different characteristics than the schools their peers attend, on average. For example, they may be more or less clustered in schools that are lower-performing, urban or rural, or where large shares of students are in special education. Given prior research, having a lower socioeconomic status and attending certain types of schools could put youth with an IEP at a disadvantage (Currie & Thomas, 2012). For instance, a relatively high concentration of youth with an IEP in lower-performing schools could negatively affect their academic achievement overall. (A *lower-performing school* is defined here as having a state-reported math and reading academic proficiency rate in the bottom quarter among the schools in the same state).

- **Despite their more disadvantaged socioeconomic backgrounds, youth with an IEP are no more likely than youth without an IEP to attend a lower-performing school** (figure 7; see table B-17 for more detail). Overall, 27 percent of youth with an IEP and 24 percent of their peers attend a lower-performing school (based on the percentage of students who are proficient in math and reading). In contrast, youth with a 504 plan (19 percent) are less likely than youth with an IEP to attend such a school.

Figure 7. Percentages of youth who attend a lower-performing school, by IEP status

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: A lower-performing school refers to a school with an average math and reading proficiency rate in the lowest 25 percent of schools in the same state. Math and reading proficiency rates are standardized within each state and then averaged within each school.

Source: National Longitudinal Transition Study 2012 and ED Facts data. The universe is all youth. More information is provided in appendix B, table B-17.

- Similar proportions of youth with and without an IEP attend urban, suburban, and rural schools, respectively (table 4; see table B-18 for more detail). About 28 percent of youth with and without an IEP attend school in a city, 34 percent attend school in a suburb, and 38 percent attend school in a town or rural area.¹⁷ The proportions for youth with a 504 plan do not differ by a statistically significant margin from those of either youth with an IEP or other youth without an IEP.

Table 4. Percentages of youth who attend a school in a city, suburb, or town or rural area, by IEP status

School locale	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
City	28	27	24	27
Suburb	34	34	35	34
Town or rural area	38	39	41	39

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

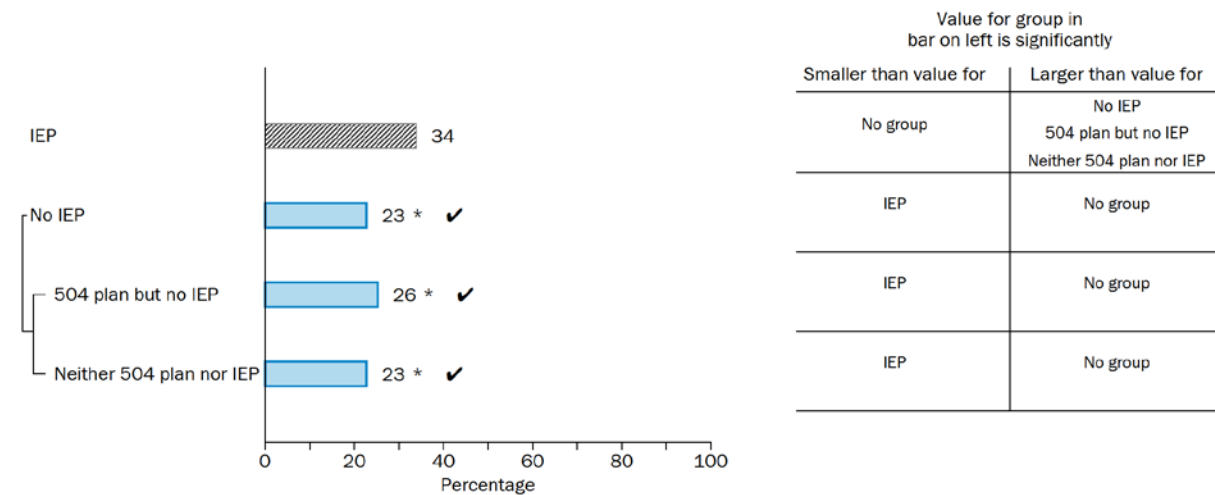
Note: City, suburb, and town or rural area refer to the school address's proximity to an urbanized area.

Source: National Longitudinal Transition Study 2012 and Common Core of Data. The universe is all youth. More information is provided in appendix B, table B-18.

¹⁷ These proportions pertain to youth with an IEP, but the proportions for youth without an IEP are nearly the same. Specifically, 27 percent of youth without an IEP attend a school in a city (1 percentage point less) and 39 percent attend a school in a town or rural area (1 percentage point more).

- **Youth with an IEP are more likely than their peers to attend a school serving a large share of special education students** (figure 8; see table B-19 for more detail). Specifically, 34 percent of youth with an IEP and 23 percent of youth without an IEP attend a school where the share of special education students is in the top quarter among schools in the United States. Youth who attend special education-only schools account for 4 percentage points of this 11 percentage point difference (table B-20). Special education-only schools are designed to serve youth whose educational needs are severe or specialized enough that they cannot be met in the regular educational environment. The vast majority of youth with an IEP (96 percent) do not attend such schools. Instead, they attend either their local public school or one of several other types of educational settings, such as a magnet school, a vocational/technical school, a charter school, an alternative school, home schooling, a health facility, or a correctional facility. The proportion of youth with a 504 plan who attend a school serving a large share of special education students (26 percent) is similar to that of other youth without an IEP.

Figure 8. Percentages of youth who attend a school in the highest national quarter of students with an IEP, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: The highest national quarter is in the top 25 percent among schools in the United States.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix B, table B-19.

Chapter 3. What challenges do youth face relating to health, functional abilities, and independence?

Limitations in students' health and other capacities can have important implications for their development and future success (Carter, Austin, & Trainor, 2012; Currie, Stabile, Manivong, & Roos, 2010; Wagner, Newman, Cameto, Garza, & Levine, 2005). In recognition of this, an update to the Individuals with Disabilities Education Act (IDEA) in 2004 requires that individualized education programs (IEPs) consider and support students' functional performance as well as their academic achievement. Functional performance generally refers to abilities to perform activities relevant to everyday life. In addition, IEPs under IDEA 2004 must include a set of postsecondary goals that reflect not only students' preferences and interests, but also their strengths. These requirements reflect the concept of self-determination. Self-determination pertains broadly to youths' beliefs that they can control and improve the quality of their own lives. Disability experts have shown that self-determination, which combines the ability to act independently with a sense of self-direction, is important for youth development and students' post-high school outcomes (Berry, Ward, & Caplan, 2012; Shogren & Shaw, 2016). Understanding how health, functional abilities, and independence may be related to disability status can help identify areas of need.

Key findings in chapter 3

- **Most youth with an IEP are healthy and have few functional limitations, but they are three times more likely than their peers to experience challenges with health, communication, and understanding.** According to parents, 30 percent of youth with an IEP do not have very good or excellent general health, compared with 14 percent of youth without an IEP. Chronic physical or mental health conditions and use of prescription behavioral medicine are three times more common among youth with an IEP than among their peers. In addition, parents indicate that 29 percent of youth with an IEP have difficulty communicating and 44 percent have difficulty understanding others, proportions that are at least five times greater than among youth without an IEP (4 and 8 percent). Youth with a 504 plan are more likely than youth with an IEP to have chronic health conditions and use prescription behavioral medicine. The proportions of youth with a 504 plan who have difficulty communicating and understanding others are smaller than for youth with an IEP, but larger than for other youth without an IEP.
 - **Youth with an IEP engage in fewer activities independently than do other youth, but they are as likely to have one aspect of self-determination—a strong sense of self-direction.** Youth with an IEP are less likely than their peers to perform several activities of daily living without help, such as using an automated teller machine (ATM) (37 versus 55 percent) and getting to places outside the home (85 versus 95 percent), according to parents. Youth with an IEP are less likely than those without an IEP to exhibit autonomy, a key component of self-determination, such as with choosing what to do with friends (56 versus 66 percent) and making plans for the weekend (51 versus 61 percent). However, both youth with and without an IEP appear to have a positive sense of self-direction: for example, about 9 in 10 report knowing how to make good choices and being confident in their abilities. Youth with a 504 plan are at least as likely as youth with an IEP to complete activities of daily living and other activities demonstrating autonomy.
 - **Youth with an IEP face greater challenges with health and independence than their peers regardless of their background.** Youth with an IEP are more likely than their peers to have worse health and difficulty with activities of daily living, even within groups defined by household income, race-ethnicity, gender, age, functional abilities, and school characteristics. Among youth with an IEP, those with more functional limitations are more likely to have worse health and demonstrate less independence.
-

The sources of the key information in this chapter are as follows:

- *Health conditions and use of behavioral medicines*: parent survey
- *Communication, sensory, and motor abilities*: parent survey
- *Activities indicative of living independently*: parent and youth surveys
- *Activities demonstrating autonomy and perceptions of self-direction*: youth survey
- *Subgroup differences in health and performance on activities of daily living*: parent survey

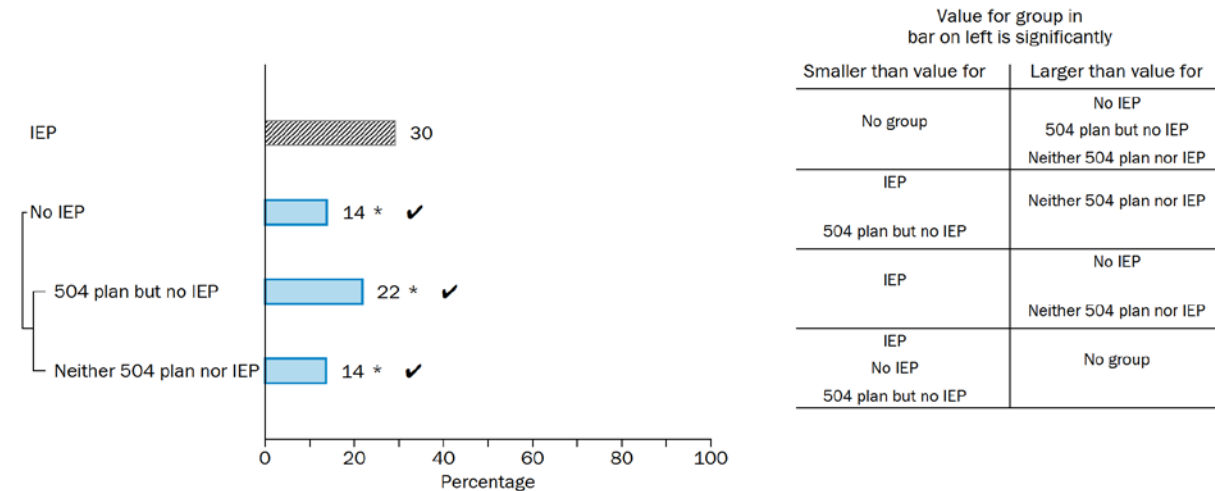
Detailed tables supporting the findings presented in this chapter are available in [appendix C](#).

Most youth with an IEP are healthy, but they are more likely than other youth to have poor health and chronic conditions

Health and medical conditions can undermine academic progress and post-high school transitions in a variety of ways. When these conditions become chronic, they can have serious implications for youth such as extended school absences and fewer chances to develop social relationships (Forrest, Bevans, Riley, Crespo, & Louis, 2011). Health status is also an important predictor of success in college and the labor market (Currie et al., 2010; Smith, 2009). In addition, policymakers and educators have been interested in the growing use of prescription behavioral medicines—typically among those with emotional, behavioral, and attention deficit disorders—and what happens when youth either do not take or rely excessively on them (Mattison, Rundberg-Rivera, & Michel, 2014; Setlick, Bond, & Ho, 2009; Wilens et al., 2008).

- Although most youth with an IEP have very good or excellent health, the proportion that does not is more than twice that of their peers (figure 9; see table C-1 for more detail). Thirty percent of parents of youth with an IEP describe their children's general health as poor, fair, or good, rather than very good or excellent, compared with 14 percent of parents of youth without an IEP. Youth with a 504 plan (22 percent) are less likely than youth with an IEP not to have very good or excellent general health, but more likely than other youth without an IEP.

Figure 9. Percentages of youth who do not have very good or excellent general health, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

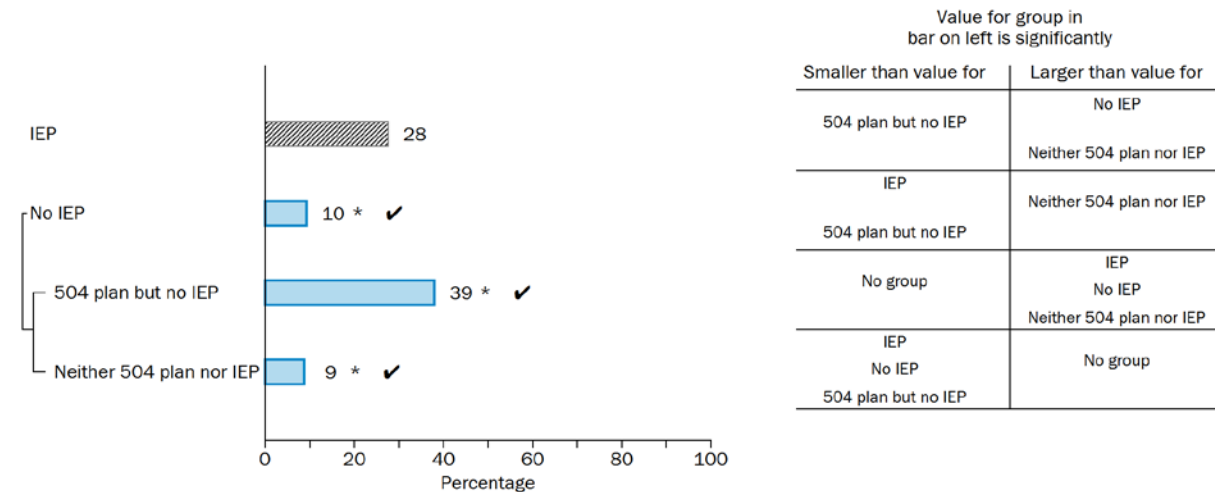
Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents were asked to rate youth's general health as excellent, very good, good, fair, or poor.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, table C-1.

- **Chronic health conditions are nearly three times more common among youth with an IEP than among those without an IEP** (figure 10; see table C-2 for more detail). Twenty-eight percent of youth with an IEP have a chronic physical or mental health condition that requires regular treatment or medical care according to parents, compared with 10 percent of their peers. Youth with a 504 plan (39 percent) are even more likely than youth with an IEP to have a chronic condition.

Figure 10. Percentages of youth who have a chronic physical or mental health condition, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

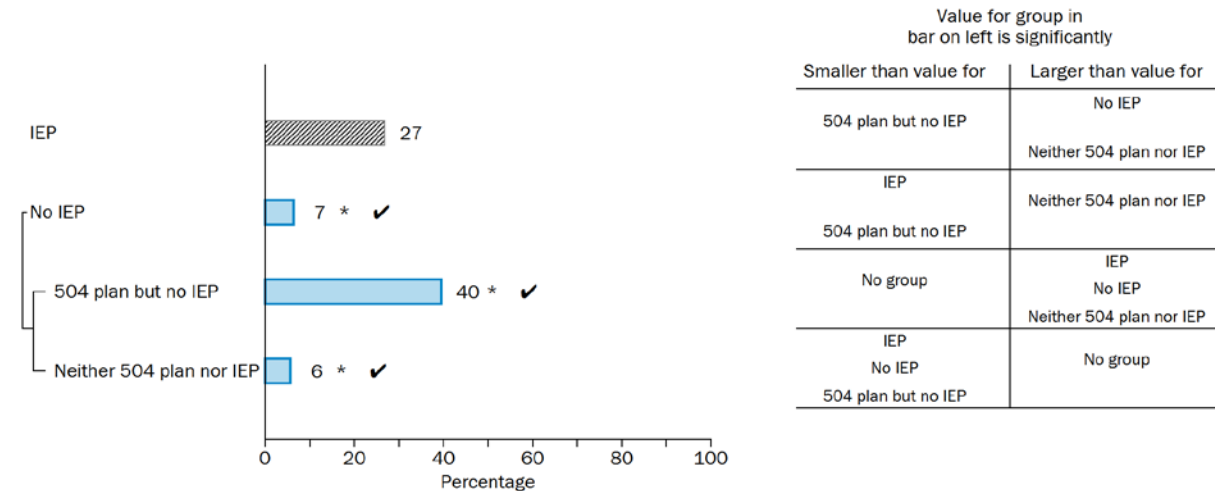
Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents were asked whether youth have a chronic physical or mental health condition requiring regular treatment or medical care.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, table C-2.

- **Youth with an IEP are nearly four times more likely than their peers to use prescription behavioral medicine** (figure 11; see table C-3 for more detail). In particular, parents indicate that 27 percent of youth with an IEP take prescription medicine to control their attention, behavior, activity level, or changes in mood, compared with 7 percent of youth without an IEP. An even larger proportion (40 percent) of youth with a 504 plan than youth with an IEP are taking prescription behavioral medicine, potentially reflecting the large proportion of them who have been diagnosed with an attention deficit disorder.¹⁸

Figure 11. Percentages of youth who use prescription behavioral medicine, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents were asked whether youth are taking any prescription medicine to control their attention, behavior, activity level, or changes in mood, such as Ritalin or an antidepressant.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, table C-3.

¹⁸ Specifically, 44 percent of parents of youth with a 504 plan report that their child has received a diagnosis of attention deficit disorder or attention deficit hyperactivity disorder.

Difficulty communicating and with motor and sensory abilities is more common among youth with an IEP

Functional limitations can have a profound impact on youths' ability to engage in educational activities and obtain employment (Wagner et al., 2005). These difficulties can span a range of communication, sensory, and motor abilities. For instance, research on youth with severe disabilities from the past decade found that the ability to communicate and understand others was related to their likelihood of obtaining jobs after high school (Carter et al., 2012).¹⁹

- **Youth with an IEP are at least five times more likely than their peers to have difficulty communicating and understanding others** (table 5; see tables C-4 and C-5 for more detail). Parents indicate that 29 percent of youth with an IEP have trouble communicating through any means, including sign language, manual communication, lip reading, cued speech, oral speech, and a communication board or book, compared with 4 percent of youth without an IEP. In addition, 44 percent have trouble understanding others, versus just 8 percent of their peers. The ability to understand others relates to communication, but understanding involves making cognitive connections to absorb what other people say. The same general patterns hold true for differences between youth with and without an IEP in terms of difficulty speaking clearly and carrying on an oral conversation (tables C-6 and C-7). Youth with a 504 plan are less likely than youth with an IEP to have trouble communicating and understanding others, but more likely than other youth without an IEP.

Table 5. Percentages of youth who have trouble communicating and understanding what other people say to them, by IEP status

Communication and understanding ability	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Trouble communicating by any means	29	4*✓	10*✓	4*✓
Trouble understanding what other people say to him or her	44	8*✓	22*✓	7*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents were asked how well youth communicate by any means and how well youth understand what other people say to them. Means of communication include sign language, manual communication, lip reading, cued speech, oral speech, and a communication board or book. Trouble refers to parents' responses of a little trouble, a lot of trouble, or no ability, versus a response of no trouble.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, tables C-4 and C-5.

¹⁹ The correlation between these measures and post-high school employment was statistically significant only when other measures such as paid work experience in high school were not also included in the analysis.

- **Youth with an IEP are more likely than those without an IEP to have difficulty with sensory or motor abilities, although these limitations affect only a minority of youth in both groups** (table 6; see tables C-8 to C-11 for more detail). Parents report that 22 percent of youth with an IEP have trouble seeing with glasses or contacts, compared with 15 percent of their peers. Trouble hearing with a hearing aid is rarer, but five times more common for youth with an IEP than for youth without an IEP (5 versus 1 percent). Fewer than 1 in 10 youth with and without an IEP have trouble with motor functions. Youth with a 504 plan are about as likely as other youth without an IEP to have trouble with these abilities.

Table 6. Percentages of youth who have trouble seeing, hearing, using arms and hands, and using legs and feet, by IEP status

Sensory or motor ability	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Trouble seeing (with glasses or contacts)	22	15*✓	18*	15*✓
Trouble hearing (with a hearing aid)	5	1*	3*	1*
Trouble using arms and hands	10	6*	6*	6*
Trouble using legs and feet	9	5*	5*	5*

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents were asked how well youth see, hear, use their arms and hands, and use their legs and feet. Trouble seeing refers to parents' responses of a little trouble, a lot of trouble, or no ability to see, versus a response of no trouble. Trouble hearing refers to parents' responses of a little trouble or mild hearing loss, a lot of trouble or moderate hearing loss, or no ability to hear, versus a response of hears normally. Trouble using arms and hands, or legs and feet, refers to parents' responses that their children do not have normal use or have no use at all of these appendages, versus a response of normal use.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, tables C-8, C-9, C-10, and C-11.

- **Considering communication, sensory, and motor abilities together, youth with an IEP face more extensive functional challenges than their peers** (table C-12). Youth with an IEP have a lower average score on a functional abilities index that measures the prevalence and degree of functional limitations across eight parent-reported measures discussed above (communicating by any means, speaking clearly, carrying on an oral conversation, understanding what others say, seeing with glasses or contacts, hearing with a hearing aid, using arms and hands, and using legs and feet). In particular, the average index score for youth with an IEP is lower than 91 percent of all youth without an IEP. The average index score for youth with a 504 plan is lower than 83 percent of all youth without an IEP.²⁰

²⁰ The functional abilities index is an average of ratings of 0, 1, 2, or 3 on each parent-reported measure, with 0 indicating no ability and 3 indicating normal ability (see appendix A). Youth with an IEP have an average score of 2.70 and youth with a 504 plan have an average score of 2.87, compared with 2.92 for youth without an IEP overall.

Youth with an IEP are less likely than their peers to perform activities indicative of living independently

The ability to function independently at home and in the community may signal the extent to which youth are likely to depend on others for help carrying out basic tasks in the future. Typical teenage “activities of daily living” can include using an ATM, making appointments, getting to nearby places, fixing meals, doing laundry, straightening up living areas, and shopping. Many factors can affect the ability to perform these activities without assistance, such as the ability to understand others and cognitive capacities (Bal, Kim, Cheong, & Lord, 2015). Helping youth with an IEP develop the capacity to live as independently as possible is a key goal of IDEA 2004.

- **Youth with an IEP are less likely than those without an IEP to perform activities of daily living without help, sometimes by 10 or more percentage points** (table 7; see tables C-13 to C-19 for more detail). Smaller proportions of youth with an IEP than their peers perform seven activities of daily living measured in this study according to parents. For example, 37 percent of youth with an IEP use an ATM without help pretty well (or very well) according to parents, compared with 55 percent of youth without an IEP. For six other activities, the gaps range from 7 to 20 percentage points. Youth with a 504 plan perform these activities independently at rates similar to, or larger than, youth with an IEP. An index that considers all of these activities together indicates that youth with an IEP have more extensive difficulties completing them independently (table C-20).²¹

Table 7. Percentages of youth who complete activities of daily living without help at least pretty well or usually, by IEP status

Activity of daily living	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Using an ATM	37	55*✓	48*✓	55*✓
Making appointments	30	50*✓	34	50*✓
Getting to places outside the home	85	95*✓	92*✓	95*✓
Fixing own breakfast or lunch	52	60*✓	61*✓	60*✓
Doing laundry	30	37*✓	25	37*✓
Straightening up own room or living area	48	61*✓	49	61*✓
Buying a few things at the store that they need	40	47*✓	42	47*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents were asked to indicate youth’s ability to perform the activity without help. For the first three measures, the table focuses on ratings of very well or pretty well, versus not very well, not at all well, or not allowed. For the next four measures, the table focuses on ratings of always or usually, versus sometimes or never.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, tables C-13, C-14, C-15, C-16, C-17, C-18, and C-19.

²¹ The activities of daily living index is an average of ratings of 0, 1, 2, or 3 on each activity in table 7, with 0 indicating no ability and 3 indicating normal ability (see appendix A). Youth with an IEP have an average score of 1.46 and youth with a 504 plan have an average score of 1.57, compared with 1.79 for youth without an IEP overall. Scores of 1.46 and 1.57 are both lower than 65 percent of all youth without an IEP.

- **Youth with an IEP are less likely than their peers to be gaining experience managing money and learning to drive** (table 8 and figure 12; see tables C-21 to C-23 for more detail). For example, they are less likely by 12 percentage points to report having a checking or saving account (45 versus 57 percent) and by 6 percentage points to have money they can spend from a job or allowance (61 versus 67 percent). Lack of opportunities to develop personal finance skills may make it harder for youth to become financially proficient after high school (Bernheim, Garrett, & Maki, 2001). In addition, youth with an IEP who are age 15 or older (and not visually impaired) are about half as likely as youth without an IEP to report they are learning to drive (28 versus 51 percent).²² For many youth, the opportunity to get a driver's license is an important indicator of their growing independence.²³ These markers for youth with a 504 plan are closer to other youth without an IEP than to youth with an IEP.

Table 8. Percentages of youth who are gaining experience managing money, by IEP status

Personal finance indicator	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Has a checking or savings account	45	57*✓	60*✓	57*✓
Has money they can decide how to spend, such as from an allowance or job	61	67*✓	66	67*✓

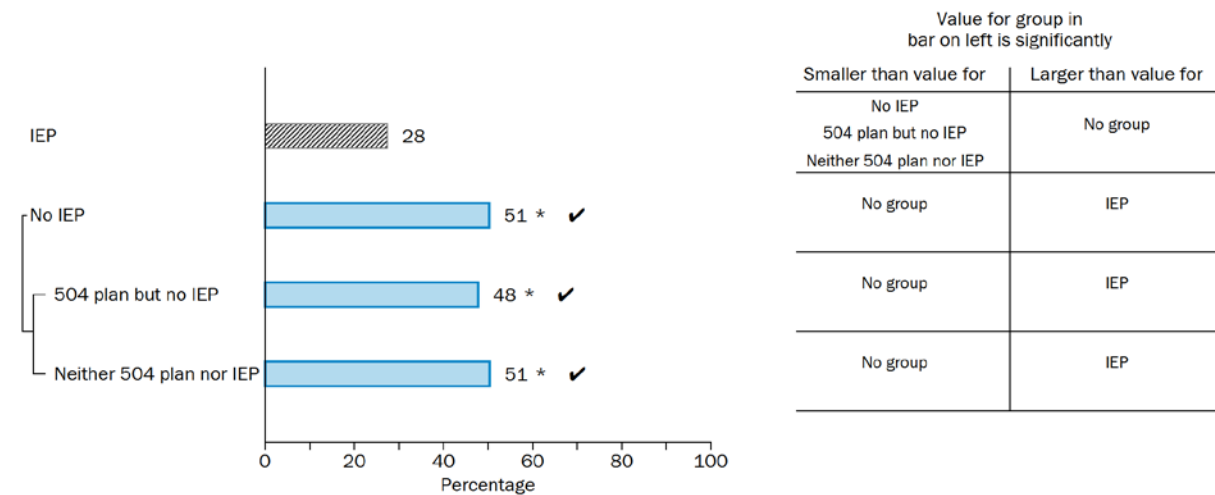
*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents were asked whether they have a savings or checking account, and whether they have an allowance or other money they can decide how to spend, such as money earned from a job.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, tables C-21 and C-22.

²² Youth were not asked about whether they have a driver's license or learner's permit if their parent indicated that they have a visual impairment or deaf-blindness.

²³ The opportunity to register to vote is another such marker during adolescence, and is an important indicator of civic engagement. Among both youth with and without an IEP who are at least 18 years old, 44 percent report being registered to vote (table C-24).

Figure 12. Percentages of youth who have a driver's license or learner's permit, by IEP status

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Youth survey respondents were asked whether they have a driver's license or learner's permit.

Source: National Longitudinal Transition Study 2012. The universe is youth who are at least 15 years old and have not been identified by a professional as having a blindness, deafness and blindness, or visual impairment. More information is provided in appendix C, table C-23.

Youth with an IEP demonstrate less of one aspect of self-determination—autonomy—but their sense of another aspect—self-direction—is similar to that of other youth

Many disability experts view youths' sense of self-determination as important for their success in adulthood (Canha, Simoes, Owens, & Gaspar de Matos, 2016; Shogren & Shaw, 2016; Shogren, Wehmeyer, Palmer, Rifenburg, & Little, 2015). Some special education policies and services are designed to enhance self-determination; for example, the emphasis that IDEA 2004 places on helping youth to define and pursue specific postsecondary goals is grounded in part on expert opinion that this process contributes to their ability to shape their own futures. Measures of self-determination include at least two key dimensions: (1) personal autonomy and (2) self-direction. Autonomy refers to acting according to one's preferences, interests, and abilities, free of undue external interference. Self-direction combines concepts known as self-realization and psychological empowerment. It refers to having a good understanding of strengths and needs, while believing one's actions are related to outcomes (Wehmeyer, 2003; Shogren & Shaw, 2016).²⁴

²⁴ The measures used here come from a scale called the Arc Self-Determination Scale (SDS), and include questions pertaining to autonomy, psychological empowerment, and self-realization. The SDS developer recommended the term self-direction to define the combined concepts of psychological empowerment and self-realization.

- Youth with an IEP are less likely than their peers to engage in several activities that demonstrate their autonomy, with some gaps as large as 10 percentage points (table 9; see tables C-25 to C-31 for more detail). For example, 56 percent of youth with an IEP report choosing with their friends the activities they want to do at least most of the time, compared with 66 percent of youth without an IEP. Gaps between youth with and without an IEP range from 6 to 10 percentage points for three other activities: corresponding with friends and family, choosing gifts for friends and family, and planning weekend activities. On three other activities—going to restaurants; going to movies, concerts, and dances; and volunteering—the gaps between youth with and without an IEP were smaller than five percentage points. On nearly all of these seven activities, youth with a 504 plan do not differ by statistically significant amounts from either youth with an IEP or other youth without an IEP. An index that considers all of these self-reported activities together indicates that youth with an IEP have more extensive difficulties with demonstrating their autonomy (table C-32).²⁵

Table 9. Percentages of youth who report pursuing activities that demonstrate personal autonomy at least most of the time, by IEP status

Type of activity that demonstrates personal autonomy	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Choosing activities to do with friends	56	66*✓	61	66*✓
Writing letters, texts, or talking on the phone to friends and family	62	71*✓	67	71*✓
Choosing gifts to give to friends and family	49	55*✓	51	55*✓
Planning weekend activities that they like to do	51	61*✓	65*✓	61*✓
Going to restaurants that they like	49	51	49	51
Going to movies, concerts, and dances	39	43*	44	43*
Volunteering in things that interest them	41	44	45	44

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, were asked how they act in each situation. The response categories were that they pursue the activities every time they have the chance; most of the time when they have the chance; sometimes when they have the chance; and never, not even when there is a chance. The table reports the proportions of youth indicating that they pursue the activities at least most of the time.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, tables C-25, C-26, C-27, C-28, C-29, C-30, and C-31.

²⁵ The personal autonomy index is an average of ratings of 0, 1, 2, or 3 on each activity, with 0 indicating never, even when there is a chance, and 3 indicating always (see appendix A). Youth with an IEP have an average score of 1.63 and youth with a 504 plan have an average score of 1.74, compared with 1.75 for youth without an IEP overall. A score of 1.63 is lower than 54 percent of all youth without an IEP.

- Nearly all youth with and without an IEP report a positive sense of self-direction, such as knowing how to make good choices and being confident in their abilities (table 10; see tables C-33 to C-34 for more detail). Across 14 measures of self-direction in the study²⁶, youth with and without an IEP differed by less than 5 percentage points on each one, and typically at least 90 percent in both groups reported positive views. For example, 94 percent of youth with an IEP and 97 percent of youth without an IEP report knowing how to make good choices. Ninety-two percent of youth with an IEP and 93 percent of their peers report being confident in their own abilities. Youth with a 504 plan have similarly favorable views about their self-direction.

Table 10. Percentages of youth who report a positive sense of self-direction according to two indicators, by IEP status

Perception about self-direction	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Knows how to make good choices	94	97*	95	97*
Confident in own abilities	92	93	93	93

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, were asked whether they agree with each statement.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, tables C-33 and C-34.

The health and independence of youth with an IEP lag that of their peers, regardless of their backgrounds or the schools they attend

One possible reason that youth with an IEP have worse health and less independence than their peers could be related to differences in the two groups' backgrounds or to the types of schools they attend. For example, youth with an IEP are more likely than their peers to be socioeconomically disadvantaged (see chapter 2) and some studies have suggested a link between socioeconomic disadvantage and poorer health and related outcomes (Spencer, Thanh, & Louise, 2013). Comparing parent reports on the general health and task performance of youth with and without an IEP within groups defined by background and school characteristics helps to diminish the potential influence each characteristic can have on differences between youth with an IEP and their peers. However, even with this approach, any gaps between youth with and without an IEP could also be due to other demographic or school factors, including factors not examined here.²⁷

²⁶ Self-direction is measured by 14 perceptions that youth may have about themselves (tables C-33 to C-46). These perceptions are whether trying hard in school will lead to a good job; they are persistent even when getting something wrong; they know how to make friends; they can make good choices; they can make choices that are important to them; they can make friends in new situations; they tell people when they think they can do something; they know what they do best; they like themselves; they are confident in their own abilities; they perceive that other people like them; they perceive it is better to be themselves than popular; they know how to make up for their limitations; and they perceive they are loved because they give love.

²⁷ This report focuses on describing differences and similarities rather than on identifying their causes. A statistical approach, regression analysis, is beyond the scope of this report but would be needed to take multiple characteristics into account. However, even regression analysis cannot definitively determine whether demographic and school factors are partially responsible for gaps between youth with an IEP and their peers.

- Youth with an IEP are more likely than youth without an IEP to have worse health and difficulty completing activities of daily living across demographic groups (table 11; see tables C-47 to C-50 for more detail). Differences in general health and performance on typical teenage tasks remain, regardless of whether youth are from households with lower or higher incomes; female or male; Black, Hispanic, or neither; younger or older; or have lower or higher functional abilities (24 of 24 differences measured). For example, among youth in low-income households, 37 percent of youth with an IEP do not have very good (or excellent) health according to parents, compared with 23 percent of their peers, a gap of 14 percentage points.

Table 11. Percentages of youth who do not have at least very good general health and who have higher performance levels on daily living activities, by IEP status and individual/household characteristics

Characteristic	Does not have very good or excellent general health (parent reported)		Higher performance on activities of daily living (parent reported)	
	IEP	No IEP	IEP	No IEP
Household income				
1. Low income	37	23*	46	68*
2. Higher income	20	7*	45	62*
Statistically significant differences:	1-2	1-2	ns	1-2
Race-ethnicity				
1. Black (not Hispanic)	34	17*	51	71*
2. Hispanic	40	25*	53	73*
3. White, Asian, or other race (not Hispanic)	24	9*	41	60*
Statistically significant differences:	1-2; 1-3; 2-3	1-2; 1-3; 2-3	1-3; 2-3	1-3; 2-3
Gender				
1. Female	33	15*	49	69*
2. Male	28	14*	44	60*
Statistically significant differences:	1-2	ns	1-2	1-2
Age				
1. 14 years old or younger	30	14*	33	55*
2. 15 to 18 years old	29	15*	53	73*
3. 19 years old or older	39	16!*	40	85*
Statistically significant differences:	1-3; 2-3	ns	1-2; 1-3; 2-3	1-2; 1-3
Functional abilities index				
1. Lower	42	21*	29	55*
2. Higher	22	14*	56	66*
Statistically significant differences:	1-2	1-2	1-2	1-2
All youth	30	14*	46	65*

*= $p < .05$ for comparison between IEP and No IEP estimates

1-2, 1-3, and 2-3 indicate statistically significant differences at $p < .05$ between subgroup pairs (1 versus 2, 1 versus 3, and 2 versus 3, respectively) using Wald tests; ns=no significant difference; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate.

Note: See appendix A for definitions of the individual/household characteristics. A higher activities of daily living index score is a score that is at or above the average score for youth with an IEP.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, tables C-47, C-48, C-49, and C-50.

- **Gaps in health and independence also exist between youth with an IEP and their peers across types of schools** (table 12; see tables C-49 and C-50 for more detail). The gaps between youth with and without an IEP are apparent in both higher-performing and lower-performing schools; schools in cities, suburbs, and towns and rural areas; and schools with a larger or smaller proportions of students with an IEP (14 of 14 differences measured). These gaps range from 11 to 26 percentage points.

Table 12. Percentages of youth who do not have at least very good general health and who have higher performance levels on activities of daily living, by IEP status and school characteristics

Characteristic	Does not have very good or excellent general health (parent reported)		Higher performance on activities of daily living (parent reported)	
	IEP	No IEP	IEP	No IEP
School academic proficiency				
1. Bottom quarter in state	35	21*	47	73*
2. Top three quarters in state	27	12*	46	62*
Statistically significant differences:	1-2	1-2	ns	1-2
School locale				
1. City	35	18*	49	68*
2. Suburb	25	14*	45	68*
3. Town or rural	30	12*	44	59*
Statistically significant differences:	1-2; 1-3; 2-3	1-3	ns	1-3; 2-3
School share of youth with an IEP				
1. Bottom three quarters in U.S.	28	15*	47	65*
2. Highest quarter in U.S.	32	13*	43	63*
Statistically significant differences:	1-2	ns	ns	ns
All youth	30	14*	46	65*

*= $p < .05$ for comparison between IEP and No IEP estimates

1-2, 1-3, and 2-3 indicate statistically significant differences at $p < .05$ between subgroup pairs (1 versus 2, 1 versus 3, and 2 versus 3, respectively) using Wald tests; ns=no significant difference.

Note: See appendix A for definitions of the school characteristics. A higher activities of daily living index score is a score that is at or above the average score for youth with an IEP.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix C, tables C-49 and C-50.

Except for those with more functional limitations, the groups of youth with an IEP who have worse health are different from those who demonstrate less independence

Focusing only on youth with an IEP, it is possible that they vary in their health and ability to do typical teenage tasks on their own. This variation may be related to the demographic or school characteristics examined above and signal which groups of students in special education face particular challenges.²⁸ Selected key points include:

- **Youth with lower functional abilities have both worse health and show less independence than those with higher functional abilities** (table 11; see tables C-47 to C-50 for more detail). The differences in having very good or excellent general health and performing activities of daily living without help between these two groups of youth with an IEP are at least 20 percentage points.
- **In addition, poorer health is more common among youth with an IEP who are low-income, Hispanic, female, older, and from lower-performing, urban schools** (tables 11 and 12; see tables C-47 to C-50 for more detail). For example, 37 percent of youth from low-income households do not have very good or excellent general health, compared with 20 percent of youth from higher-income households, a difference of 17 percentage points.
- **In contrast, less independence in performing daily living tasks is more common among youth with an IEP who are male, neither Black nor Hispanic, and younger** (table 11; see tables C-47 to C-50 for more detail). Males, for instance, are 5 percentage points less likely to score above average on an index that assesses youths' completion of daily living activities on their own. Youth from low-income and higher-income households perform about the same on typical teenage tasks like using an ATM or making appointments. Similarly, no differences exist among youth with an IEP according to the type of school they attend.

²⁸ This variation might also be related to their disability or to some combination of disability and demographic and school characteristics (see Volume 2).

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Chapter 4. How engaged are youth in school and with friends?

School engagement and positive peer relationships are crucial components of youth development that may have important academic and social benefits (Anderson, Christenson, Sinclair, & Lehr, 2004; Juvonen, Espinoza, & Knifsend, 2012; Wang & Eccles, 2012). Yet research starting a decade ago found that some youth with an individualized education program (IEP) were at greater risk of being disengaged in school and of experiencing negative events like being picked on and suspended (Sullivan, Van Norman, & Klingbeil, 2014; Wagner et al., 2003).

The Individuals with Disabilities Education Act (IDEA) of 2004 promotes efforts to help youth with an IEP stay engaged and avoid negative outcomes. For example, the law's regulations require schools to determine whether youth need supplementary aids or services to help them participate in extracurricular activities. The statute also requires states to monitor suspensions and expulsions among youth with an IEP, out of concern that these actions might not always be appropriate and can lead youth to remain out of school for substantial periods of time. Recently, the U.S. Department of Education has focused on the threat bullying can pose to youth with disabilities; when bullying prevents youth from accessing school services and other opportunities, it constitutes a denial of their rights as defined by IDEA 2004 and section 504 of the Rehabilitation Act (U.S. Department of Education, 2014). Understanding the distinctive features of the experiences youth with an IEP have with friends and in school may help to target services or policies.

Key findings in chapter 4

- **Most youth with and without an IEP feel positive about school, but those with an IEP are more likely to struggle academically and be bullied, suspended, expelled, or arrested.** At least 80 percent of youth with and without an IEP report feeling happy to be at school. But half of youth with an IEP find coursework difficult and have trouble keeping up with homework, about 15 percentage points more than their peers. They are also more likely to be teased at school (37 versus 28 percent) and, according to parents, more than twice as likely as their peers to repeat grades or be suspended, expelled, or arrested. Youth with a 504 plan have similar perceptions about school as youth with an IEP, but they are less likely to repeat grades and be suspended (though still more likely than other youth without an IEP).
 - **Youth with an IEP are less likely than their peers to participate in extracurricular sports and clubs and to get together with friends.** Nearly two-thirds of youth with an IEP report participating in a school sport or club activity, compared with more than three-quarters of youth without an IEP. About half of youth with an IEP report taking part in activities organized outside of school and getting together with friends weekly, versus two-thirds of their peers. Youth with a 504 plan are similar to other youth without an IEP in terms of participation in nonschool activities and social involvement. Their participation rate in school activities is between that of youth with an IEP and other youth without an IEP.
 - **Youth with an IEP are more likely than those without an IEP to struggle with engaging in school and socially regardless of their background.** Gaps in engagement exist between youth with and without an IEP even within groups defined by household income, race and ethnicity, gender, age, functional abilities, and school characteristics. Among youth with an IEP, they are less likely to be engaged in school or with friends if they or their schools are economically disadvantaged.
-

The sources of the key information in this chapter are as follows:

- *Perceptions about school and academic struggles*: youth and parent surveys
- *Participation in extracurricular sports and clubs*: youth survey
- *Getting together and communicating with friends*: youth survey
- *Negative events such as bullying, suspensions, expulsions, and arrests*: youth and parent surveys
- *Subgroup differences in engagement experiences*: youth and parent surveys

Detailed tables supporting the findings presented in this chapter are available in [appendix D](#).

Most youth with and without an IEP feel positive about school, although many youth with an IEP struggle academically

How youth feel about school and their ability to keep up with coursework are important indicators of how they experience the educational process. Feeling good about school may promote academic performance, stronger ties to classmates, and positive behaviors (Bond et al., 2007; Chapman, Buckley, Sheehan, & Shochet, 2013). Conversely, youth who struggle academically may find it harder to enjoy school, potentially reducing their level of engagement. Findings from several studies suggested that youth with an IEP in the past may have had a heightened risk for low engagement, because they had lower academic achievement and higher dropout rates than their peers (American Institutes for Research, 2013; Wagner, Newman, Cameto, & Levine, 2006).

- **The vast majority of youth with and without an IEP feel good about school and school staff** (table 13; see tables D-1 to D-8 for more detail). At least 80 percent of youth in each group report feeling happy to be at school, part of their school, close to people at school, and safe at school. Youth with and without an IEP are even more likely to have positive views about school staff; more than 90 percent in each group agree that staff encourage students to do their best, recognize when they do a good job, listen to them, and believe they will be successful.²⁹ The findings are similar in terms of several related impressions about school staff, such as whether they treat students fairly, care about them, notice when they are not there, and want them to do their best (tables D-9 to D-12). Youth with a 504 plan have similar positive views about school as both youth with an IEP and other youth without an IEP.

²⁹ Table 13 pertains to the percentage of survey respondents who “agree a lot” and “agree a little”. The size of differences in perceptions between youth with an IEP and their peers is similar when positive views are defined by youth responses that they “agree a lot” (tables D-1 to D-8).

Table 13. Percentages of youth who have positive views about their school environment, by IEP status

Views about school experience	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Feel part of the school	84	88*	84	88*
Feel close to people at school	80	84*	81	84*
Feel happy to be at school	83	86	83	86
Feel safe at school	89	92*	89	92*
Teachers encourage students to do their best	92	92	93	91
An adult at school listens to me when I have something to say	92	93	94	93
An adult at school believes I will be successful	94	96*	94	96*
An adult at school tells me when I do a good job	94	95	96*	95

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, were asked how strongly they agree with statements about their school. The response categories were agree a lot, agree a little, disagree a little, and disagree a lot. Positive views are responses of agree a lot or agree a little.

Source: National Longitudinal Transition Study 2012. The universe is youth who were not homeschooled. More information is provided in appendix D, tables D-1, D-2, D-3, D-4, D-5, D-6, D-7, and D-8.

- About half of youth with an IEP struggle academically in various ways, compared with one-third of their peers (table 14; see tables D-13 to D-15 for more detail). Despite their positive views about school, 54 percent of youth with an IEP find class work hard to learn, compared with 38 percent of youth without an IEP. Similar gaps of nearly 15 percentage points exist between youth with and without an IEP in terms of having trouble keeping up with homework and needing more help from teachers. However, youth with and without an IEP spend roughly similar amounts of time on homework—about an hour a day (table D-16). Youth with a 504 plan are as likely as youth with an IEP to find class work hard to learn and to have trouble keeping up with homework, although they are less likely to report needing more help from teachers (43 versus 50 percent).

Table 14. Percentages of youth who are having trouble with coursework, by IEP status

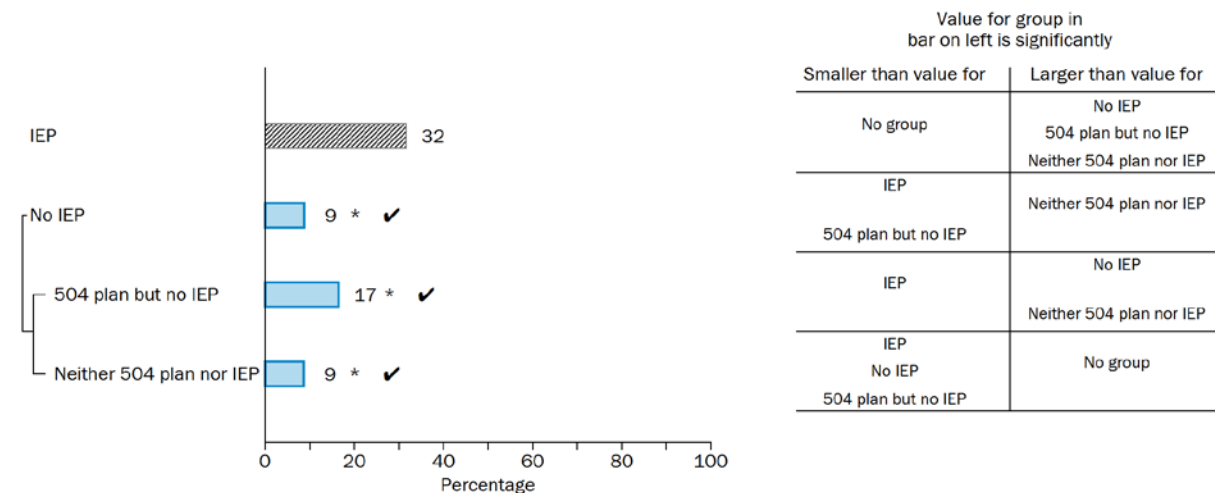
Views about their classes	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Class work is hard to learn	54	38*✓	52	38*✓
Has trouble keeping up with homework	47	33*✓	44	32*✓
Needs more help from teachers	50	37*✓	43*✓	37*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, were asked how strongly they agree or disagree with several statements about their classes overall. The response categories were agree a lot, agree a little, disagree a little, and disagree a lot. The percentages are for responses of agree a lot or agree a little.

Source: National Longitudinal Transition Study 2012. The universe is youth who were not homeschooled. More information is provided in appendix D, tables D-13, D-14, and D-15.

- **Youth with an IEP are three times more likely than those without an IEP to repeat a grade** (figure 13; see table D-17 for more detail). Reflecting their greater tendency to struggle academically, 32 percent of youth with an IEP have repeated a grade since kindergarten according to parents, compared with 9 percent of youth without an IEP. Youth with a 504 plan (17 percent) are less likely than youth with an IEP to have repeated a grade, but more likely than other youth without an IEP to have done so. Grade repetition is commonly viewed an important marker of youth who have had low academic performance, although some retentions in elementary grades occur to allow children time to develop their social/emotional and behavioral skills.

Figure 13. Percentages of youth who have repeated a grade, by IEP status

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents were asked whether their child has ever been held back a grade in school since entering kindergarten.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix D, table D-17.

Youth with an IEP are less likely than other youth to participate in extracurricular sports and clubs

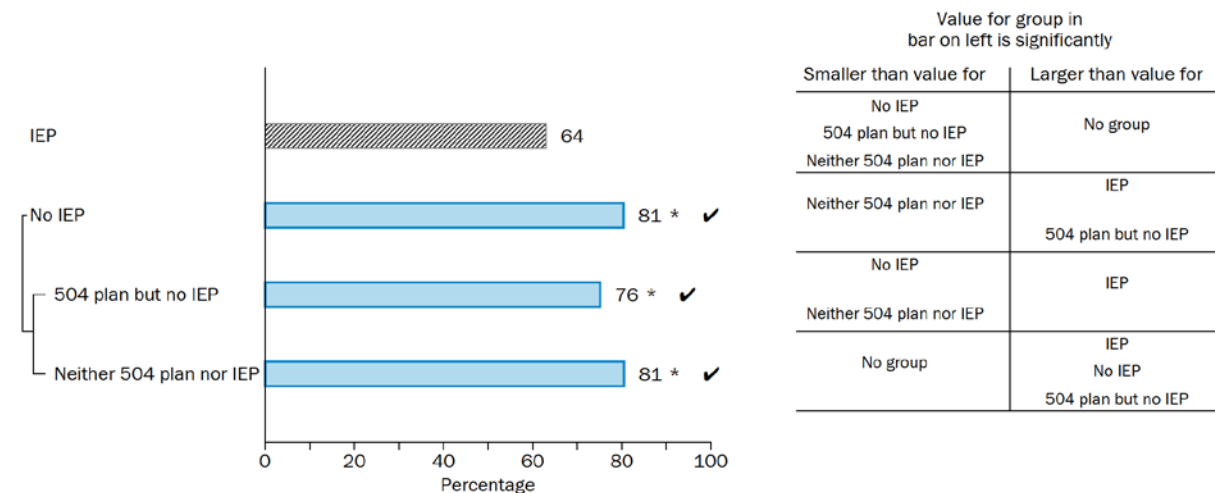
Participating in organized extracurricular activities is considered a way to enrich students' lives, and help them build esteem and social connections (Eime, Young, Harvey, Charity, & Payne, 2013). Many schools and community organizations offer youth opportunities to play sports and join clubs to help them build their college résumés and develop their physical abilities, social relationships, and teamwork and leadership skills.³⁰ Studies have linked involvement in extracurricular activities with improved academic performance, educational attainment, and labor market outcomes (Barron, Ewing, & Waddell, 2000; Lipscomb, 2007; Stevenson, 2010; Weinberger, 2014). Given these benefits, policymakers have sought to ensure youth with an IEP can participate

³⁰ Examples of clubs include those focused on the arts, student government, academic subject matter, community service, or vocational training.

in these activities. Specifically, IDEA 2004's regulations require that those developing IEPs consider whether youth need supplementary aids or services to participate in school activities.

- **Nearly two-thirds of youth with an IEP participate in school extracurricular activities, but more than three-quarters of their peers do** (figure 14; see table D-18 for more detail). Specifically, 64 percent of youth with an IEP report participating in a school sport or club during the past year, compared with 81 percent of youth without an IEP.³¹ Just over three-quarters of youth with a 504 plan (76 percent) report participating in at least one of these activities, more than youth with an IEP but less than other youth without an IEP. Involvement in these activities may be an especially important way to keep vulnerable populations like youth in special education engaged in school because they tend to struggle more in the classroom.

Figure 14. Percentages of youth who participated in a school sport or club in the past year, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

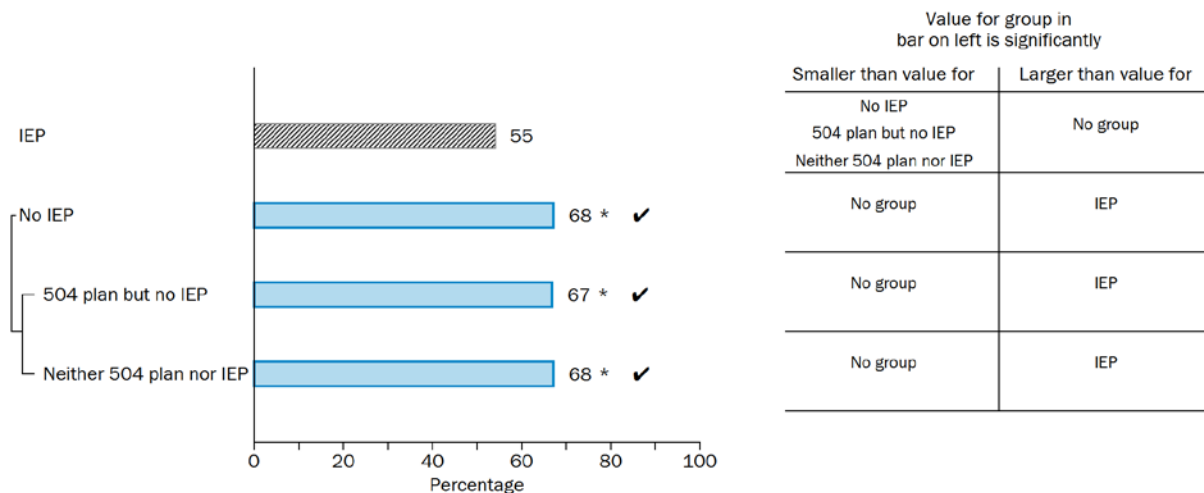
Note: Youth survey respondents were asked whether they participated in any of the following school activities outside of class in the past 12 months: school sports team; music, dance, art, or theater; student government; academic subject matter club; volunteer or community service group; vocational or career-focused student organization; or other school-sponsored clubs or activities.

Source: National Longitudinal Transition Study 2012. The universe is youth who were not home schooled. More information is provided in appendix D, table D-18.

³¹ Youth with an IEP have lower participation rates than their peers on most activities organized through school (tables D-19 to D-25). This includes activities such as sports, the arts, student government, academic subject matter clubs, and volunteer groups. One exception is that six percent of both youth with and without an IEP report participating in school vocational or career-focused clubs (table D-23).

- Youth with an IEP participate in extracurricular activities organized outside of school at lower rates than do youth without an IEP (figure 15; see table D-26 for more detail). More than half of youth with an IEP (55 percent) report having participated in a sport or club organized outside of school in the past year, compared with two-thirds of their peers (68 percent).³² Youth with a 504 plan have similar participation rates as other youth without an IEP in non-school activities (67 percent). Joining community sports leagues, theater groups, and activities such as scouting are other opportunities for youth to develop their skills, interests, and social networks outside the classroom.

Figure 15. Percentages of youth who participated in a sport or club organized outside of school in the past year, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Youth survey respondents were asked whether they had taken part in any of the following non-school activities in the past 12 months: organized sport supervised by an adult; music, dance, art, or theater lessons; a religious youth group or religious instruction; math, science or computer camps or lessons, volunteer or community service group; scouting or another group or club activity; or another camp or type of non-school activity.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix D, table D-26.

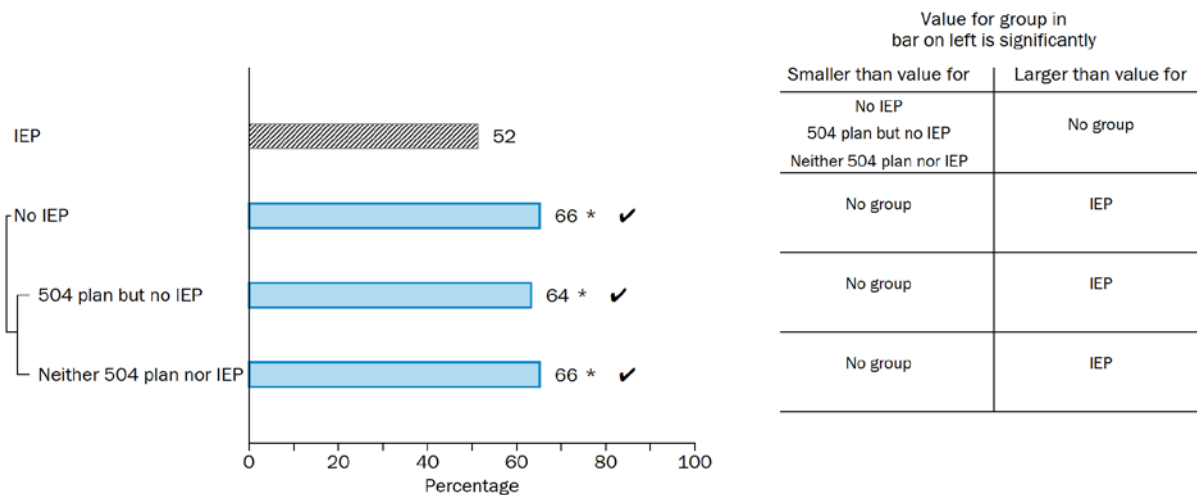
³² As with school activities, youth with an IEP have lower participation rates than their peers on most individual activities organized outside of school (tables D-27 to D-32). These activities include sports, the arts, religious groups, and volunteer groups. One exception is that about five percent of both youth with and without an IEP report participating in academic subject matter camps or lessons outside of school (table D-30).

Youth with an IEP are less socially engaged outside of school than their peers

Getting together and communicating with friends outside of school are considered important ways for youth to develop social connectedness, emotional maturity, and their sense of self. Along with schools and families, friends can be a key source of support as youth transition from high school to adult life. These relationships can produce valuable information about job opportunities and enhance quality of life (Canha et al., 2016; Cotterell, 2013).

- Half of youth with an IEP get together with friends weekly, compared with two-thirds of youth without an IEP (figure 16; see table D-33 for more detail). Youth with an IEP are also less likely to report getting together with their friends at least weekly than youth with a 504 plan (52 versus 64 percent), who about are as likely as other youth without an IEP (66 percent) to do this.

Figure 16. Percentages of youth who usually got together with friends outside of school at least weekly in the past year, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Youth survey respondents were asked about how many days a week they usually got together with friends outside of school and organized activities in the past 12 months. The response categories were 6 or 7 days a week; 4 or 5 days a week; 2 or 3 days a week; 1 day a week; sometimes, but not every week; and never. The percentages are for responses of at least 1 day a week.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix D, table D-33.

- **Youth with an IEP are less likely than their peers by about 15 percentage points to communicate with friends at least daily through text messages and social media** (table 15; see tables D-34 and D-35 for more detail). In particular, 54 percent of youth with an IEP indicate texting their friends at least daily, compared with 67 percent of youth without an IEP. In addition, 43 percent use social media for communicating with their friends daily, compared with 50 percent of their peers. The frequency of these electronic communications is another indicator of social connectedness, particularly because they are the most common means of communication that youth report. Daily communication with friends by instant messaging, email, and telephone is less common for both youth with and without an IEP, and the proportions of youth who use these methods do not vary between the two groups (tables D-36 to D-38). Youth with a 504 plan are more likely than youth with an IEP to text their friends daily, but they are as likely to use social media.

Table 15. Percentages of youth who communicate daily with friends through texting and social media, by IEP status

Mode of communication with friends	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Texting	54	67*✓	64*✓	67*✓
Facebook, twitter, and other social media	43	50*✓	39	50*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, were asked how often they use each communication method to communicate with friends. The response categories were several times a day, once a day, several times a week, once a week or less, and never. The percentages are for responses of at least once a day.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix D, tables D-34 and D-35.

Youth with an IEP are more likely than other youth to be bullied, tardy, suspended, expelled, and arrested

Youth who feel disrespected or less connected to school might have more difficulty seizing opportunities to develop their skills and interests. They may also exhibit more problem behaviors. For example, studies have linked teasing and bullying in high school with lower academic performance and higher dropout rates (Cornell, Gregory, Huang, & Xitao, 2013; Lacey & Cornell, 2013). Policymakers and educators have long been concerned that youth with an IEP may be at greater risk for experiencing bullying and other negative events like being suspended, expelled, or even arrested and, as noted earlier, sought to address these concerns through IDEA 2004 provisions and recent federal guidelines.

- **Several types of bullying experiences are more common for youth with an IEP than their peers** (table 16; see tables D-39 to D-44 for more detail). Bullying here refers to several types of negative experiences that include teasing, being the subject of rumors, being attacked, being told to do things to be friends with someone, being threatened over the Internet or by other electronic methods, or having possessions stolen. For example, 37 percent of youth with an IEP report being teased or called names at school during the school year, compared with 28 percent of those without an IEP. More than one-quarter (27 percent) of youth with an IEP report students making up rumors about them and 14 percent report being physically attacked or in

fights, with a gap of 6 percentage points versus their peers on both measures.³³ Youth with a 504 plan report a similar prevalence of bullying experiences as those with an IEP. Understanding the prevalence of bullying experiences matters because bullying can have lasting effects on students as noted above, lowering their academic achievement and engagement in school.

Table 16. Percentages of youth who report types of bullying experiences during the school year, by IEP status

Type of bullying experience	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Teased or called names at school	37	28*✓	35	28*✓
Students made up something about me to make others not like me	27	21*✓	25	21*✓
Physically attacked or in fights at school or on way to/from school	14	8*✓	11	8*✓
Students said I would not be their friend unless I did something for them	12	7*	11	7*
Teased or threatened through email, texts, or other electronic methods	12	9*	12	9*
Had things stolen from my locker, desk, or other place at school	22	23	19	23

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, were asked whether any of the types of bullying experiences happened in this school year.

Source: National Longitudinal Transition Study 2012. The universe is youth who were not homeschooled. More information is provided in appendix D, tables D-39, D-40, D-41, D-42, D-43, and D-44.

- Youth with an IEP are more likely than youth without an IEP to be late for class weekly, but the vast majority of both groups are not tardy and do not skip classes this frequently (table 17; see tables D-45 to D-47 for more detail). Twenty percent of youth with an IEP report going to class late at least weekly during the school year, compared with 13 percent of their peers. In contrast, fewer than 10 percent of youth with and without an IEP cut or skipped class at least weekly or were late for school at least weekly. The proportions for youth with a 504 plan on the three measures are similar to those of youth with an IEP.

Table 17. Percentages of youth who were tardy or skipped class at least weekly during the school year, by IEP status

Types of experience	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Late for class	20	13*✓	20	13*✓
Cut or skipped class	4	2*	3!	2*
Late for school	9	8	11	8

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents more than 30 percent of the estimate.

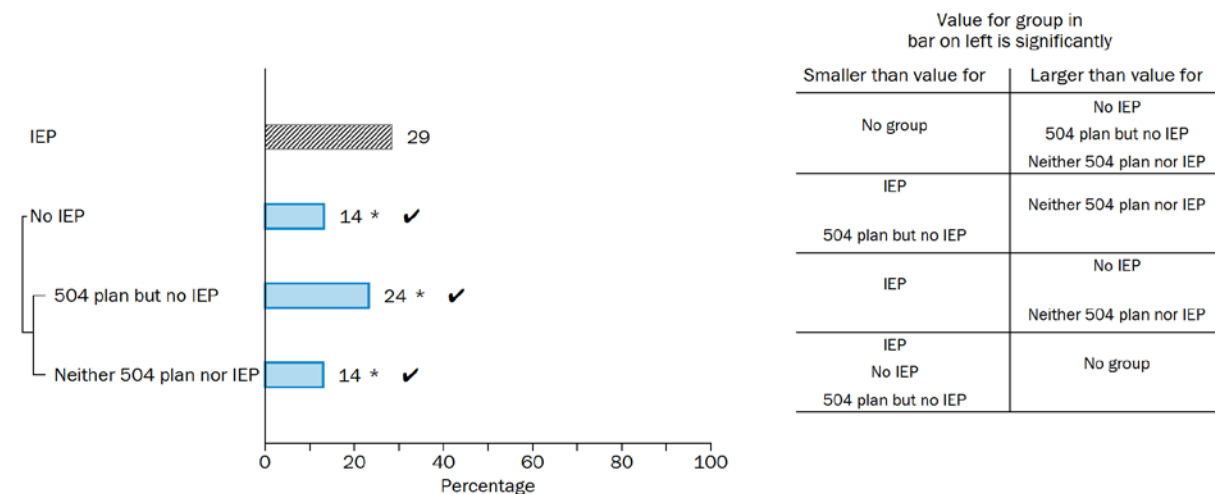
Note: Youth survey respondents, excluding proxies, were asked how often they went to class late, skipped class, and went to school late in this school year. The response categories were every day, almost every day, once a week, a few times, and never. The percentages are for responses of at least once a week.

Source: National Longitudinal Transition Study 2012. The universe is youth who were not homeschooled. More information is provided in appendix D, tables D-45, D-46, and D-47.

³³ Youth were asked in the survey about “being attacked or getting into fights.” As a result, it is not possible to determine whether those responding affirmatively were the victim or the aggressor.

- **Youth with an IEP are more than twice as likely as other youth to get in trouble or be suspended and expelled from school** (figures 17 and 18; see tables D-49 and D-50 for more detail). Specifically, parents report that 29 percent of youth with an IEP have received an out-of-school suspension and 8 percent have been expelled, compared with 14 percent of youth without an IEP ever having been suspended and 3 percent ever having been expelled. In addition, 9 percent of youth with an IEP report getting in trouble for acting out in class at least once a week, compared with 4 percent of those without an IEP (table D-48). Youth with a 504 plan are less likely to be suspended and expelled than youth with an IEP, but more likely than other youth without an IEP. Regardless of the reasons for these patterns, the level of concern about disciplinary actions is reflected in the IDEA 2004 performance indicator that requires states to closely monitor how often and why youth with an IEP are suspended and expelled.

Figure 17. Percentages of youth who have received an out-of-school suspension, by IEP status

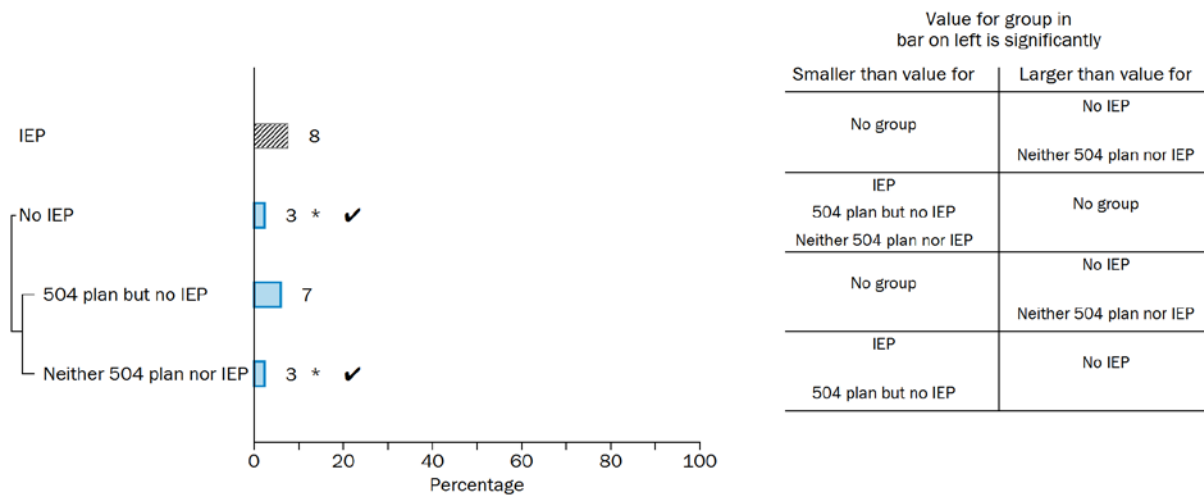


*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents were asked whether youth has ever had an out-of-school suspension.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix D, table D-49.

Figure 18. Percentages of youth who have been expelled from school, by IEP status

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

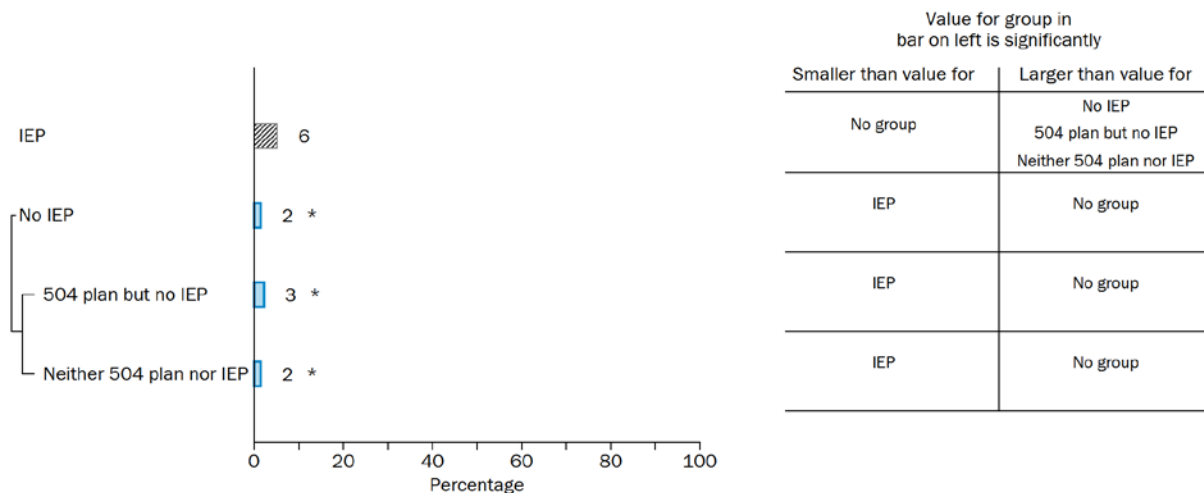
Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents were asked whether youth has ever been expelled from school.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix D, table D-50.

- Youth with an IEP are nearly three times more likely than youth without an IEP to have been arrested in the past two years (figure 19; see table D-51 for more detail). Although just 6 percent of youth with an IEP were arrested in the two years prior to the survey according to parents, the proportion for youth without an IEP is much lower (2 percent). Youth with an IEP also are twice as likely to be arrested as youth with a 504 plan (6 versus 3 percent). Arrests, especially those that lead to convictions and a permanent criminal record, are significant negative events for youth. Among other negative consequences, arrests can make it more difficult for youth to obtain jobs after leaving high school.

Figure 19. Percentages of youth who have been arrested in the past two years, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents were asked whether youth has been arrested in the past two years. An arrest is any time someone is taken into custody by police or a legal authority.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix D, table D-51.

Regardless of their backgrounds, youth with an IEP appear to be less engaged than their peers

It is possible that one reason youth with an IEP have different educational and social experiences than their peers relates to differences in the two groups' backgrounds or to the types of schools they attend. Selected key findings include the following:

- **Youth with an IEP appear less engaged in school and with friends than youth without an IEP, across most demographic groups** (table 18; see tables D-52 to D-59 for more detail). Differences in engagement exist within most groups defined by household income, race and ethnicity, gender, age, and functional abilities (40 of 48 differences measured). For example, among Black, Hispanic, and other youth, the suspension rates of youth with an IEP exceed those of their peers by 11 to 15 percentage points.

Table 18. Percentages of youth on four key engagement measures, by IEP status and individual/household characteristics

Characteristic	Has been suspended (parent reported)		Teased or called names (youth reported)		Participated in school sports and clubs (youth reported)		Got together weekly with friends (youth reported)	
	IEP	No IEP	IEP	No IEP	IEP	No IEP	IEP	No IEP
Household income								
1. Low income	33	19*	35	27*	60	76*	51	60*
2. Higher income	24	9*	39	29*	69	85*	53	70*
Statistically significant differences:	1-2	1-2	ns	ns	1-2	1-2	ns	1-2
Race-ethnicity								
1. Black (not Hispanic)	47	32*	34	25*	66	78*	54	61
2. Hispanic	24	13*	30	19*	60	78*	50	62*
3. White, Asian, or other race (not Hispanic)	25	10*	41	32*	64	83*	52	68*
Statistically significant differences:	1-2; 1-3	1-2; 1-3	1-3; 2-3	2-3	1-2	ns	ns	2-3
Gender								
1. Female	16	10*	43	27*	64	81*	46	59*
2. Male	35	18*	34	29	63	81*	55	72*
Statistically significant differences:	1-2	1-2	1-2	ns	ns	ns	1-2	1-2
Age								
1. 14 years old or younger	26	12*	46	34*	66	82*	47	63*
2. 15 to 18 years old	32	15*	32	23*	63	81*	55	68*
3. 19 years old or older	24	13!	26	‡	54	43	44	63
Statistically significant differences:	1-2; 2-3	ns	1-2; 1-3	1-2; 1-3; 2-3	1-3; 2-3	1-3; 2-3	1-2; 2-3	ns
Functional abilities index								
1. Lower	27	28	38	33	58	76*	43	62*
2. Higher	30	12*	36	28*	66	81*	57	66*
Statistically significant differences:	1-2	1-2	ns	ns	1-2	ns	1-2	ns
All youth	29	14*	37	28*	64	81*	52	66*

*= $p < .05$ for comparison between IEP and No IEP estimates

1-2, 1-3, and 2-3 indicate statistically significant differences at $p < .05$ between subgroup pairs (1 versus 2, 1 versus 3, and 2 versus 3, respectively) using Wald tests; ns=no significant difference; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate; ‡=reporting standards not met. The standard error represents more than 50 percent of the estimate.

Note: See appendix A for definition of the individual/household characteristics.

Source: National Longitudinal Transition Study 2012. The universe for measures 1 and 4 is all youth. The universe for measures 2 and 3 is youth who were not home schooled. More information is provided in appendix D, tables D-52, D-53, D-54, D-55, D-56, D-57, D-58, and D-59.

- **Youth with an IEP are also less engaged than their peers across types of schools** (table 19 see tables D-56 to D-59 for more detail). Regardless of whether they attend a lower-performing or higher-performing school, one located in a city, suburb, or small town, or where students in special education represent a smaller or larger share of the student body, youth with an IEP are more likely than youth without an IEP to experience negative outcomes such as suspensions or bullying, and less likely to be involved in school activities or socialize with friends (26 of 28 differences measured).

Table 19. Percentages of youth on four key engagement measures, by IEP status and school characteristics

Characteristic	Has been suspended (parent reported)		Teased or called names (youth reported)		Participated in school sports and clubs (youth reported)		Got together weekly with friends (youth reported)	
	IEP	No IEP	IEP	No IEP	IEP	No IEP	IEP	No IEP
School academic proficiency								
1. Bottom quarter in state	36	21*	35	24*	59	80*	50	62*
2. Top three quarters in state	25	11*	38	30*	65	81*	53	67*
Statistically significant differences:	1-2	1-2	ns	ns	1-2	ns	ns	ns
School locale								
1. City	35	18*	32	26*	63	79*	51	62*
2. Suburb	26	12*	37	21*	65	80*	55	66*
3. Town or rural	26	12*	41	36	64	83*	50	68*
Statistically significant differences:	1-2; 1-3	1-2; 1-3	1-2; 1-3	1-3; 2-3	ns	ns	ns	ns
School share of youth with an IEP								
1. Bottom three quarters in U.S.	26	13*	36	27*	63	80*	52	66*
2. Highest quarter in U.S.	33	16*	39	33	64	83*	52	67*
Statistically significant differences:	1-2	ns	ns	ns	ns	ns	ns	ns
All youth	29	14*	37	28*	64	81*	52	66*

*= $p < .05$ for comparison between IEP and No IEP estimates

1-2, 1-3, and 2-3 indicate statistically significant differences at $p < .05$ between subgroup pairs (1 versus 2, 1 versus 3, and 2 versus 3, respectively) using Wald tests; ns=no significant difference.

Note: See appendix A for definitions of the school characteristics.

Source: National Longitudinal Transition Study 2012. The universe for measures 1 and 4 is all youth. The universe for measures 2 and 3 is youth who were not home schooled. More information is provided in appendix D, tables D-56, D-57, D-58, and D-59.

Youth with an IEP, themselves, appear less likely to be engaged in school or with friends if they or their schools are disadvantaged

Irrespective of their peers, certain groups of students with an IEP are less likely to participate in school or social activities, and more likely to experience negative behaviors. Selected key findings include:

- **Youth with an IEP from low-income households have higher suspension rates and are less likely to participate in school extracurricular activities than those from higher-income households** (table 18; see tables D-52 to D-59 for more detail). For example, among youth with an IEP, 33 percent from low-income households have been suspended, compared with 24 percent from higher-income households. The proportion of youth with an IEP from low-income households who are involved in school sports and clubs is 9 percentage points less than the proportion from higher-income household (60 versus 69 percent).

- **Among youth with an IEP, Black students are more likely to be suspended but students who are White, Asian, or another race are more likely to be bullied** (table 18; see tables D-52 to D-59 for more detail). The suspension rate of Black youth with an IEP (47 percent) is more than 20 percentage points higher than the rate for both Hispanic youth and the combined rate for those who are White, Asian, or another race (24 and 25 percent, respectively). In contrast, youth with an IEP who are White, Asian, or another race are more likely to be teased or called names (41 percent) than are Black or Hispanic youth (34 and 30 percent, respectively). Another difference among racial and ethnic groups is that a larger proportion of Black youth with an IEP participate in school sports and clubs (66 percent) than do Hispanic youth with an IEP (60 percent).
- **Youth with an IEP with lower functional abilities are less likely than those with higher functional abilities to participate in school extracurricular activities and to socialize with friends** (table 18; see tables D-52 to D-59 for more detail). Specifically, 58 percent of those with lower functional abilities participate in school sports and clubs, compared with 66 percent of those with higher functional abilities. The gap in the shares getting together with friends weekly is 14 percentage points (43 versus 57 percent).
- **Male and female youth with an IEP are engaged in different ways** (table 18; see tables D-52 to D-59 for more detail). Among youth in special education, boys are more than twice as likely as girls to be suspended (35 versus 16 percent). However, by about 10 percentage points, girls are more likely to be teased or called names (43 versus 34 percent) and less likely to be involved in extracurricular activities (46 versus 55 percent).
- **Engagement also varies by age group** (table 18; see tables D-52 to D-59 for more detail). In some but not all ways youth who are 15 to 18 years of age may be less engaged than both older and younger youth. For example, this age group has a higher suspensions rate (32 percent) than both younger (14 years old or younger) and older (19 years old or older) youth with an IEP (26 and 24 percent, respectively). At the same time, the middle age group is also more likely to socialize with friends (55 versus 47 and 44 percent).
- **Suspension rates are highest for youth with an IEP in schools that are lower-performing, urban, and have larger shares of students in special education** (table 19; see tables D-56 to D-59 for more detail). For example, more than one-third of youth with an IEP in lower-performing schools (36 percent) has been suspended, compared with one-quarter of those in higher-performing schools. In urban (city) schools, 35 percent have been suspended, versus 26 percent in suburban or town and rural schools. However, youth with an IEP in urban schools are least likely to experience bullying and harassment (32 versus 37 and 41 percent for schools in suburbs and towns and rural areas, respectively).

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Chapter 5. What academic supports do youth receive?

Schools and families play important roles in supporting students' educational needs, and this support may be particularly important for preparing youth in special education for their futures (Mazzotti et al., 2016; Test et al., 2009). As discussed in chapter 4, youth with an individualized education program (IEP) are more likely than their peers to report that they struggle academically, consistent with findings that youth with an IEP in the past had lower test scores (Wagner et al., 2006). Schools can support student achievement using strategies such as offering academic help outside school hours, academic counseling and guidance, and catch-up courses designed to help students recover from falling behind. Parent-teacher conferences are opportunities for school staff and parents to coordinate their efforts to support students' academic development in school and at home, where parents can help their children with homework and discuss with them the issues they are facing at school. Prior studies focusing on youth more than a decade ago linked parental involvement with greater student engagement in IEP and transition planning (Wagner, Newman, Cameto, Javitz, & Valdes, 2012) and postsecondary education outcomes for youth with disabilities (Wagner et al., 2014). Understanding the extent to which groups of youth with and without an IEP receive academic support through school and their parents can inform efforts to better meet their educational needs.³⁴

Key findings in chapter 5

- **Youth with an IEP in high school are less likely than their peers to receive academic help from schools outside of the regular school day, but just as likely to take catch-up courses.** More than two-thirds (72 percent) of youth with an IEP reported that their high schools provide them academic help outside school hours, compared with 78 percent of youth without an IEP. However, youth with and without an IEP are equally likely (14 percent) to take catch-up academic classes during school hours according to parents. Youth with a 504 plan are more likely than other youth without an IEP to receive school-based academic help outside school hours (84 percent), and they are as likely as both youth with an IEP and other youth without an IEP to take catch-up courses.
 - **Parents of youth with an IEP are more likely than other parents to attend parent-teacher conferences and help their children with homework, but less likely to attend school events or volunteer at school.** Eighty-four percent of parents of youth with an IEP reported attending a parent-teacher conference during the school year, compared with 65 percent of other parents. In addition, 62 percent of them indicated helping their children with homework at least once a week, compared with 54 percent of other parents. However, they less commonly reported attending school events (58 versus 71 percent) or volunteering at school (22 versus 28 percent). Parents of youth with a 504 plan (79 percent) are less likely than those of youth with an IEP to attend a parent-teacher conference, but more likely to do so than parents of other youth without an IEP.
 - **Across most demographic groups and types of schools, youth with an IEP are less likely than their peers to receive academic help outside school hours from school staff but more likely to receive help from parents.** Black and Hispanic youth are exceptions; among these youth, similar proportions of those with and without an IEP get academic help from school staff outside of regular school hours. Among youth with an IEP, those who are White, Asian, or another race are less likely to receive academic help from both school and parents than those of other racial and ethnic groups.
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³⁴ This chapter focuses on academic supports that may be available to both youth with and without an IEP. Volume 2 describes academic and special education supports that are generally available only to youth with disabilities.

The sources of the key information in this chapter are as follows:

- *Receipt of supplemental academic instruction and course guidance*: parent and youth surveys
- *Parental participation in school meetings and events, and provision of homework help*: parent survey
- *Subgroup differences in the receipt of academic supports*: parent and youth surveys

Detailed tables supporting the findings presented in this chapter are available in [appendix E](#).

High school youth with an IEP are less likely than their peers to receive academic help from schools outside of the regular school day, but just as likely to take catch-up courses

Both the 1997 and 2004 updates to IDEA increased the emphasis on improving the academic achievement of youth in special education. Schools provide many forms of academic support to students with and without disabilities who have low levels of academic achievement, including supplemental instruction outside of the regular school day and extra catch-up courses during school hours. Some prior studies linked supplementary academic help with academic achievement gains in math and reading (Black, Doolittle, Zhu, Unterman, & Grossman, 2008; Somers et al., 2010) and suggested larger benefits for students with disabilities than for other students (Springer, Pepper, & Ghosh-Dastidar, 2014). School staff can also provide advice on courses to take during high school, guidance that can benefit any student, regardless of his or her level of academic achievement.

- **Youth with an IEP are six percentage points less likely than those without an IEP to receive academic help outside school hours and course guidance from schools** (table 20; see tables E-1 and E-2 for more detail). Specifically, 72 percent of youth with an IEP in high school indicate that school staff gave them extra academic help before or after school or on weekends during the school year, compared with 78 percent of their peers.^{35,36} In addition, 73 percent of youth with an IEP report that school staff guided them on the classes they should take, compared with 82 percent of their non-IEP peers. Youth with a 504 plan are most likely to report getting extra help from schools outside regular hours (84 percent), but are no more or less likely than either youth with an IEP or other youth without an IEP to receive course guidance (78 percent). It is unclear whether lower utilization of these supports among youth with an IEP is related to limited availability in their school, families' decisions to not make use of these services, or some other factor including unmet academic needs.

³⁵ Parents may be less informed than their child about the extra help that schools are providing because they were much less likely to report their children receiving supplementary academic help from schools. Specifically, 27 percent of parents of youth with an IEP and 30 percent of parents of youth without an IEP reported that their children received this help from schools outside regular hours (table E-3).

³⁶ Schools also provide academic help to some students over the summer. Parents of 16 percent of high school youth with an IEP and 12 percent of youth without an IEP reported their children attending summer school during the summer prior to being interviewed (table E-4).

Table 20. Percentages of youth who received types of school-based academic support during the school year, by IEP status

Types of school-based academic support received	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Academic help outside regular school hours	72	78*✓	84*✓	78*✓
Guidance on courses to take in high school	73	82*✓	78	82*✓
Took catch-up or double-dosed courses during regular school hours	14	14	14	14

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, were asked whether school staff provided them with extra help before or after school or on weekends in academic subjects in this school year. Youth were also asked whether school staff provided guidance on the classes they should take to prepare for what they plan to do after high school. Parent survey respondents were asked whether, during the school year, youth took catch-up or double-dosed courses during school hours.

Source: National Longitudinal Transition Study 2012. The universe is youth who either received instruction in grades 9 through 13 or are both in an ungraded grade and at least 15 years old. More information is provided in appendix E, tables E-1, E-2, and E-5.

- Youth with and without an IEP are just as likely to take catch-up courses in high school (table 20; see table E-5 for more detail). In particular, 14 percent of high school youth with and without an IEP take either catch-up courses or double-dosing of classes during school hours, according to parents.³⁷ The same is true for youth with a 504 plan. Some research suggests that this type of more intensive instruction during school hours may be associated with high school credit accumulation and graduation, and college enrollment (Cortes, Goodman, & Nomi, 2013; Kemple, Herlihy, & Smith, 2005).

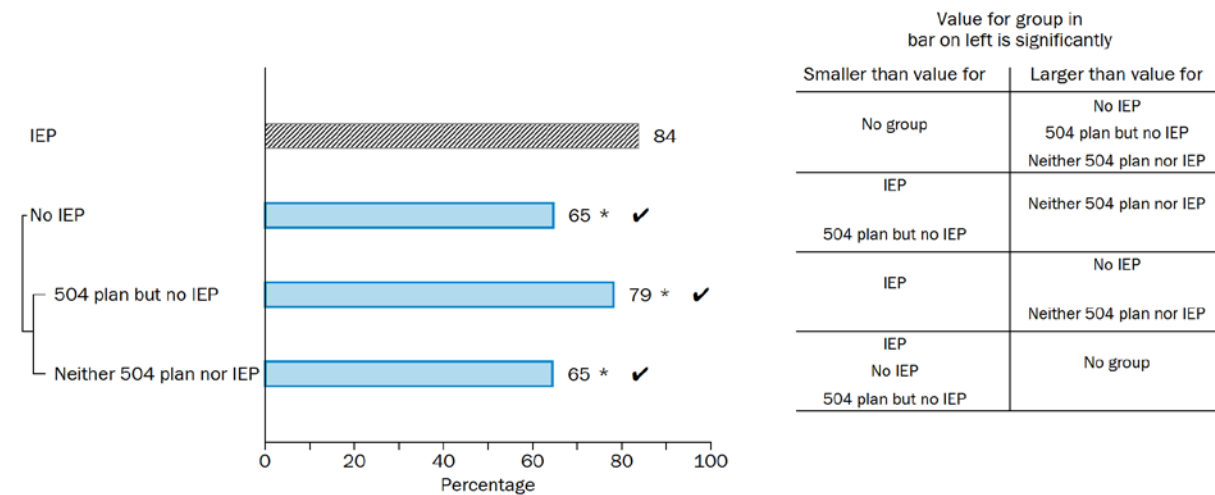
Parents of youth with an IEP are more likely than other parents to attend parent-teacher conferences and help their children with homework

The need to get parents involved in their child's schooling has been a focus of both the No Child Left Behind Act of 2001 and IDEA since 1997. For instance, a performance indicator under IDEA 2004 requires states to report annually on the degree to which parents indicate schools are facilitating parent involvement to improve services and results for their children. Parents can support their children's educational development in ways that include: meeting with school staff to discuss their children's educational progress and needs, helping with homework, discussing with their children the issues they are facing at school, and participating in school functions. In the past decade parents of youth in special education were at least as likely as parents in the general population to be involved in these ways (Newman, 2005). Research generally supports a positive link between parental involvement at home and in school and their child's academic engagement and achievement (Kraft & Dougherty, 2013; Hill & Tyson, 2009; Jeynes, 2007; Nye, Turner, & Schwartz, 2006; Wang & Eccles, 2012).

³⁷ The parent survey did not provide an explicit definition of the term *catch-up courses*. The term might have been interpreted as including remedial courses. However, parents may have interpreted the term in other ways.

- **Parents of youth with an IEP are more likely to attend a parent-teacher conference than are the parents of their peers** (figure 20; see table E-6 for more detail). In particular, parents of 84 percent of youth with an IEP indicated that they or another adult in the household attended at least one parent-teacher conference during the school year, nearly 20 percentage points higher than other parents (65 percent). This difference may be due in part to the IEP process, which requires school staff to communicate with parents at least annually. Specifically, it is possible that some parents considered the survey question on their participation in parent-teacher conferences as including IEP meetings at which teachers were present. However, many parents of youth with an IEP meet with teachers more frequently than is required by the IEP process: 35 percent of parents of youth with an IEP attended at least three conferences during the school year, compared with 20 percent of other parents (table E-6). Parents of youth with a 504 plan (79 percent) are more likely than parents of other youth without an IEP (65 percent) to attend at least one parent-teacher conference, but are less likely to do so than parents of youth with an IEP.

Figure 20. Percentages of youth whose parent or another adult in the household attended a parent-teacher conference during the school year, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

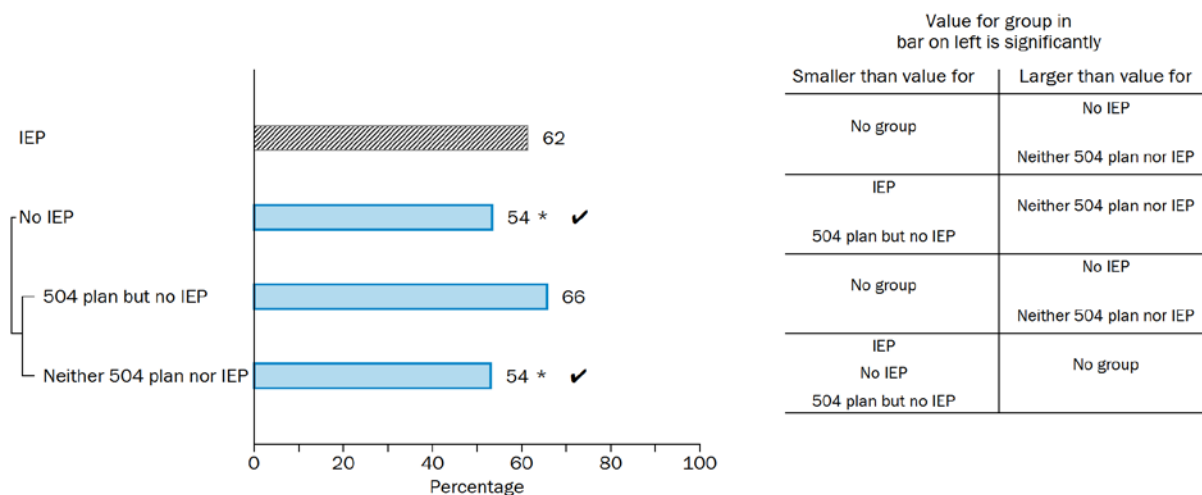
Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents, excluding proxies, were asked whether they or another adult in the household had gone to a parent-teacher conference since the beginning of the school year.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix E, table E-6.

- **Parents of youth with an IEP are more likely than parents of youth without an IEP to help their children with homework, and just as likely to discuss school experiences regularly with them** (figure 21; see table E-7 for more detail). Parents of 62 percent of youth with an IEP report that they or another adult in the household usually helped their children with homework weekly during the school year, compared with 54 percent of other parents. Parents of youth with and without an IEP are equally likely (84 percent for each group) to report that an adult in the household regularly talked with their child about their school experiences (table E-8). The parents of youth with a 504 plan are about as likely as parents of youth with an IEP to help their children with homework weekly (66 and 62 percent), although they are more likely to talk regularly with them about school experiences (91 versus 84 percent). Help with homework, as well as broader discussions about how school is going, may be particularly important for youth with an IEP given the challenges that some have with communicating and staying engaged in school (see chapters 3 and 4).

Figure 21. Percentages of youth whose parent or another adult in the household helped them with homework at least once a week during the school year, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents, excluding proxies, were asked how often they or another adult in the household helped youth with homework during the school year. The response categories were five or more times a week, three to four times a week, one to two times a week, less than once a week, and never. The percentages are for responses of at least once a week.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix E, table E-7.

- However, parents of youth with an IEP are less likely than parents of youth without an IEP to be involved in school or class activities or to volunteer at school (table 21; see tables E-9 to E-11 for more detail). Although in other ways parents of youth with an IEP are more involved in their children's education, they are more than 10 percentage points less likely than parents of youth without an IEP to report that they or another household adult attend school or class events (58 versus 71 percent). In addition, 22 percent of youth with an IEP have parents who report that they or another household adult volunteer at school, compared with 28 percent of their peers. These findings may partly reflect the lower participation rates of youth with an IEP in school extracurricular activities (see chapter 4), many of which involve competitions, performances, or other events. Parents of youth with a 504 plan are more likely than other parents with and without an IEP to be involved in school activities. For example, a larger proportion of them (or another household adult) attend school or class events (73 percent), compared with parents of youth with an IEP. In addition, they are more likely than parents of other youth without an IEP to attend general school meetings and volunteer at school.

Table 21. Percentages of youth whose parent or another adult in the household who were involved in school or class activities during the school year, by IEP status

Form of parental involvement in school	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Attended a school or class event in the school year	58	71*✓	73*✓	71*✓
Attended a general school meeting in the school year	75	75	82*✓	74
Volunteered at school in the school year	22	28*✓	34*✓	28*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents, excluding proxies, were asked about the frequency they or another adult in the household attended a school or class event, attended a general school meeting, or volunteered at school since the beginning of the school year. The percentages are for responses indicating they did the activities in the table at least once during the school year.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix E, tables E-9, E-10, and E-11.

Across most demographic groups and types of schools, youth with an IEP are less likely than their peers to receive academic help outside school hours from school staff, but more likely to receive such help from parents

The differences between youth with and without an IEP in their receipt of academic support, including the extent to which school staff or parents provide it, might relate to differences in their backgrounds or the schools they attend.³⁸ The key findings include the following:

- Regardless of household income and gender, youth with an IEP are less likely than those without an IEP to receive academic help outside regular school hours from school staff, and more likely to receive it from parents (table 22; see tables E-12 to E-15 for more detail). The gaps between youth with and without an IEP in their receipt of academic support from school staff and parents are between 5 and 11 percentage points for both types of academic support, among both low-income and higher-income youth and boys and girls.

³⁸ Students' backgrounds may affect their receipt of academic support in a variety of ways, and some of the patterns might offset one another. For example, disadvantaged students often tend to struggle more in the classroom, so they might have greater need for support. On the other hand, more advantaged parents might encourage their children to make use of supplemental academic instruction and help them get to and from school to make use of it.

- For the most part, youth with an IEP from different racial and ethnic, age, or functional ability groups are as likely as their peers to receive supplementary academic from school staff (table 22; see tables E-12 to E-15 for more detail). Among Black and Hispanic youth, similar proportions of those with and without an IEP reported receiving school-based academic help outside of regular school hours. The exceptions are for the combined group of students who are White, Asian, or another race and those who are 15 to 18 years old, where youth with an IEP are less likely than their peers to report receiving this type of assistance (by 6 to 8 percentage points). However, among these demographic groups, youth with an IEP are more likely than their peers to receive homework help at home according to parents.

Table 22. Percentages of youth who received school-based academic help outside regular school hours and weekly parental help on homework during the school year, by IEP status and individual/household characteristics

Characteristic	Academic help outside regular school hours (youth reported)		Parent or another adult in the household helped with homework at least weekly (parent reported)	
	IEP	No IEP	IEP	No IEP
Household income				
1. Low income	70	76*	62	54*
2. Higher income	75	80*	62	54*
Statistically significant differences:	1-2	ns	ns	ns
Race-ethnicity				
1. Black (not Hispanic)	75	82	71	65
2. Hispanic	76	78	63	57
3. White, Asian, or other race (not Hispanic)	69	77*	59	50*
Statistically significant differences:	1-3; 2-3	ns	1-2; 1-3	1-3; 2-3
Gender				
1. Female	72	79*	66	55*
2. Male	72	77*	60	53*
Statistically significant differences:	ns	ns	1-2	ns
Age				
1. 14 years old or younger	72	72	75	66*
2. 15 to 18 years old	73	79*	56	43*
3. 19 years old or older	62	64	45	38
Statistically significant differences:	1-3; 2-3	ns	1-2; 1-3; 2-3	1-2; 1-3
Functional abilities index				
1. Lower	67	77	63	58
2. Higher	75	78	61	53*
Statistically significant differences:	1-2	ns	ns	ns
All youth	72	78*	62	54*

*= $p < .05$ for comparison between IEP and No IEP estimates

1-2, 1-3, and 2-3 indicate statistically significant differences at $p < .05$ between subgroup pairs (1 versus 2, 1 versus 3, and 2 versus 3, respectively) using Wald tests; ns=no significant difference.

Note: See appendix A for definitions of the individual/household characteristics.

Source: National Longitudinal Transition Study 2012. The universe for measure 1 is youth who either received instruction in grades 9 through 13 or are both in an ungraded grade and at least 15 years old. The universe for measure 2 is all youth. More information is provided in appendix E, tables E-12, E-13, E-14, and E-15.

- Youth with an IEP in most types of schools are less likely than those without an IEP to receive academic help from school staff and more likely to get it from parents (table 23; see tables E-14 and E-15 for more detail). Across nearly all of the various types of schools examined here, the gap between the proportions of youth with and without an IEP who report that they receive academic help from school staff outside of regular hours ranges from 5 to 8 percentage points and the gap in parent-reported provision of weekly homework help ranges from 6 to 10 percentage points. The exceptions are for youth attending schools in towns and rural areas and schools with large shares of students in special education, where similar proportions of youth with and without an IEP report receiving supplemental academic help through schools.

Table 23. Percentages of youth who receive school-based academic help outside regular school hours and weekly parental help on homework during the school year, by IEP status and school characteristics

Characteristic	Academic help outside regular school hours (parent reported)		Parent or another adult helped with homework at least weekly (youth reported)	
	IEP	No IEP	IEP	No IEP
School academic proficiency				
1. Bottom quarter in state	73	81*	65	56*
2. Top three quarters in state	72	77*	62	53*
Statistically significant differences:	ns	ns	ns	ns
School locale				
1. City	75	83*	65	55*
2. Suburb	74	81*	63	53*
3. Town or rural	69	72	59	53*
Statistically significant differences:	1-3; 2-3	1-3; 2-3	1-3	ns
School share of youth with an IEP				
1. Bottom three quarters in U.S.	73	78*	62	53*
2. Highest quarter in U.S.	72	76	63	56*
Statistically significant differences:	ns	ns	ns	ns
All youth	72	78*	62	54*

*= $p < .05$ for comparison between IEP and No IEP estimates

1-2, 1-3, and 2-3 indicate statistically significant differences at $p < .05$ between subgroup pairs (1 versus 2, 1 versus 3, and 2 versus 3, respectively) using Wald tests; ns=no significant difference.

Note: See appendix A for definitions of the school characteristics.

Source: National Longitudinal Transition Study 2012. The universe for measure 1 is youth who either received instruction in grades 9 through 13 or are both in an ungraded grade and at least 15 years old. The universe for measure 2 is all youth. More information is provided in appendix E, tables E-14 and E-15.

Some groups of youth with an IEP are less likely than others to have help from either school or their parents, or both

Regardless of their peers who do not have an IEP, particular groups of students in special education may receive less extra academic support. This variation could reflect less need for such help for these groups, or suggest that better targeting of services is warranted. The key findings include the following:

- **Among youth with an IEP, those who are neither Black nor Hispanic and older are less likely to receive academic help from both school staff and parents than those of other racial-ethnic and age groups** (table 22; see tables E-12 to E-15 for more detail). For example, 69 percent of youth with an IEP who are neither Black nor Hispanic (that is, White, Asian, or another race) indicate receiving school-based academic support outside regular school hours, compared with 75 and 76 percent for those who are Black and Hispanic, respectively. Smaller proportions of youth who are neither Black nor Hispanic than those from the other racial-ethnic groups have a parent help with homework weekly (59 percent, versus 71 and 63 percent). Older youth (19 to 22 years old) are also less likely to have help from a parent than are youth with an IEP in younger age groups.
- **In addition, school-based academic assistance outside of regular hours is less common for youth with an IEP who are low-income, have lower functional abilities, and attend rural schools** (tables 22 and 23; see tables E-12 to E-15 for more detail). In each case, the proportion of these youth receiving extra school-based help is lower than that of the other income, functional ability, or locale groups, with the differences ranging from 5 to 8 percentage points.
- **Youth with an IEP from lower-performing schools are about as likely to receive academic help from schools and parents as those who attend higher-performing schools** (table 23; see tables E-14 and E-15 for more detail). Schools with high concentrations of lower-performing students are often viewed as greater needs of students.

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Chapter 6. How are youth preparing for life after high school?

High school is a time for students to gain experience and knowledge, and to take steps that lay the foundation for their transition to adulthood. The Individuals with Disabilities Education Act (IDEA) of 2004 increased the emphasis on helping youth with an individualized education program (IEP) prepare for the future through thoughtful, goals-oriented planning. For instance, Congress added a requirement that when school staff help youth with an IEP define postsecondary goals, they make sure these goals are measurable and thus well-defined. In addition, transition planning must reflect not only students' preferences and interests, but also their strengths. The stakes for these plans and for students' preparation may be higher now than in the past, based on the growing premium in the U.S. economy for postsecondary education and evidence that graduating during a recession can have long-term implications for labor market success (Avery & Turner, 2012; Oreopoulos & Petronijevic, 2013; Oreopoulos et al., 2012).

Schools can help facilitate students' transitions to adult life in several ways, such as through assistance with college applications and help with finding opportunities for work experience. This help may be invaluable for all youth and youth with disabilities in particular. For example, a large body of research finds that paid work experience while in high school is an important predictor of whether youth with disabilities are employed as adults (Mazzotti et al., 2016; Test et al., 2009).

Key findings in chapter 6

- **Youth with an IEP are less likely than youth without an IEP to have plans and take steps to obtain postsecondary education.** Although 76 percent of youth with an IEP expect to obtain some postsecondary education, 94 percent of their peers have this expectation, a gap of nearly 20 percentage points. The gap in planning to attend a four-year college is nearly 30 percentage points (51 versus 80 percent). Differences in the extent to which youth in the two groups are preparing to apply to college also reflect these gaps; only 42 percent of high school youth with an IEP report having taken college entrance or placement tests, compared with 70 percent of those without an IEP. Youth with a 504 plan hold similar expectations as other youth without an IEP about obtaining postsecondary education, and are as likely to take college entrance tests.
 - **Paid jobs during school, and parents' expectations that youth will live independently, are less common for those with an IEP than for other youth.** Forty percent of youth with an IEP report having had a paid job in the past year, compared with half of their peers. Schools appear to be filling part of the gap; youth with an IEP are more likely than youth without an IEP to have paid or unpaid school-sponsored work experiences (12 versus 7 percent). Nonetheless, schools play only a modest role in finding jobs for both youth with and without an IEP, because most paid jobs are not school sponsored. Consistent with their lower rates of work experience and performing daily living tasks on their own, youth with an IEP are nearly 20 percentage points less likely to have parents anticipate that they will be living independently by age 30 (78 versus 96 percent). Youth with 504 plans have similar employment rates as other youth without an IEP, and their parents are as confident in their children's ability to live independently as other parents of youth without an IEP.
 - **The gaps in the way youth with and without an IEP are preparing for life after high school are fairly consistent across most demographic groups and types of schools.** Regardless of their background or type of school, youth with an IEP are less likely than their peers to expect to obtain postsecondary education, take college entrance tests, and have work experience. Their parents are also less optimistic that they will live independently. Among youth with an IEP, those who are low-income, older, and have lower functional abilities are at highest risk in terms of their transition expectations and preparation.
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The sources of the key information in this chapter are as follows:

- *Educational expectations and perceived challenges with pursuing postsecondary education*: parent and youth surveys
- *Steps youth are taking to prepare for postsecondary education*: parent and youth surveys
- *Work experience, perceived challenges securing jobs, expectations for living independently*: parent and youth surveys
- *Subgroup differences in expectations, postsecondary plans, and employment experiences*: parent and youth surveys

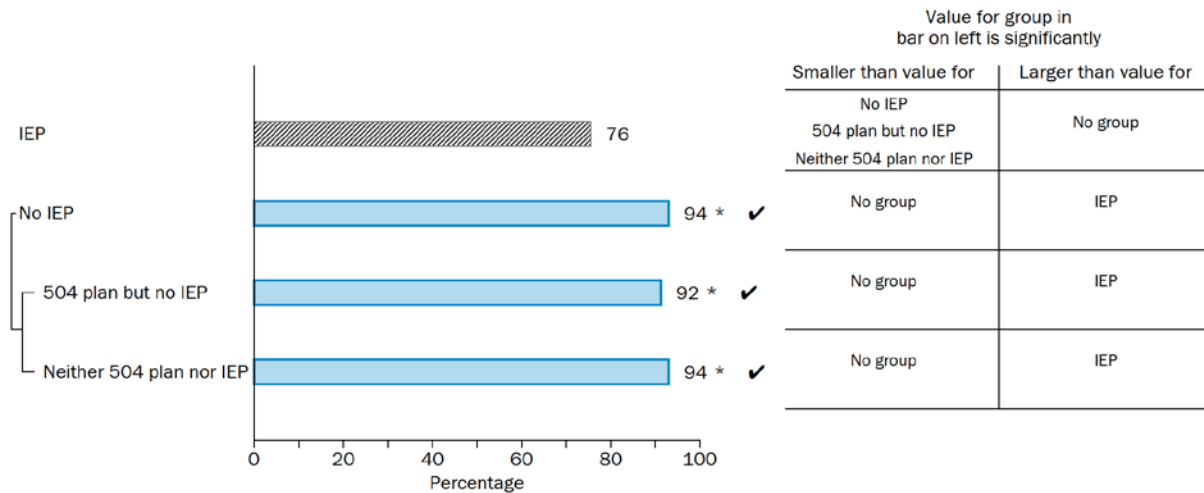
Detailed tables supporting the findings presented in this chapter are available in [appendix F](#).

Most youth with an IEP expect to obtain some postsecondary education, but they have lower educational expectations than their peers and their parents are more inclined to think they will face challenges

Educational expectations indicate the extent to which youth and their parents view postsecondary education as a likely youth outcome. Examining parents' expectations is useful not only to gauge whether they are aligned with their children's perspectives, but also because parents may be aware of challenges their children will face after leaving high school. For youth with an IEP in particular, parents' educational expectations are considered a predictor of their children's postsecondary education attainment (Mazzotti et al., 2016). Fostering high expectations for youth with disabilities may be particularly important in light of some evidence that parents and teachers held lower expectations for students with learning disabilities than for similarly achieving and behaving youth without disabilities (Shifrer, 2013).

- **Three-quarters of youth with an IEP expect to obtain postsecondary education, but nearly all of their peers without an IEP have this expectation** (figure 22; see table F-1 for more detail). In particular, 76 percent of youth with an IEP believe they will continue their education after high school at a four-year college, two-year college, or technical or trade school. In contrast, 94 percent of youth without an IEP, (including 92 percent of those with a 504 plan), expect to do so. This gap in expectations suggests that youth in special education might be less likely to obtain a postsecondary credential, which is an increasingly important factor in employment and earnings (Baum, Kurose, & McPherson, 2013; Oreopoulos & Petronijevic, 2013).

Figure 22. Percentages of youth who expect to obtain postsecondary education, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Youth survey respondents, excluding proxies, were asked how far they think they will get in school. Response categories included less than high school, high school diploma or generalized education development (GED) certificate, technical or trade school, two-year college, four-year college, or an advanced degree. Postsecondary education includes the last four response categories.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix F, table F-1.

- Youth with an IEP are much less likely than their peers to believe they will obtain a four-year college degree, but more likely to expect to obtain a two-year or technical degree (table 24; see tables F-2 to F-5 for more detail). Just over half (51 percent) of youth with an IEP believe they will graduate from a four-year college, compared with 80 percent of youth without an IEP. Youth with an IEP are more than 10 percentage points more likely than their peers to expect that their highest level of education will be a two-year college or a technical/trade school program (25 versus 13 percent). The proportions of youth with a 504 plan expecting to obtain a four-year degree (72 percent) or a degree from either a two-year college or a technical/trade school (20 percent) are between those of youth with an IEP and other youth without an IEP.

Table 24. Percentages of youth who expect to obtain various levels of postsecondary education, by IEP status

Level of education expected by youth	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Four-year college degree or higher	51	80*✓	72*✓	81*✓
Two-year college or a technical or trade school	25	13*✓	20	13*✓
High school diploma or GED	22	5*✓	8*✓	5*✓
Will not get a high school diploma or GED	2	1!	‡	1!

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate; ‡=reporting standards not met. The standard error represents more than 50 percent of the estimate.

Note: Youth survey respondents, excluding proxies, were asked how far they think they will get in school. Response categories included less than high school, high school diploma or generalized education development (GED) certificate, technical or trade school, two-year college, four-year college, or an advanced degree.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix F, tables F-2, F-3, F-4, and F-5.

- **Parents are less optimistic about whether their children will continue their education after high school, and this is especially true for parents of youth with an IEP** (table 25; see tables F-6 to F-8 for more detail). Sixty-one percent of parents of youth with an IEP expect that their child will obtain some postsecondary education, compared with 76 percent of their children, a 15 percentage point gap (see figure 22). In contrast, the size of this gap between youth without an IEP and their parents is only four percentage points (90 versus 94 percent). In addition to the gap between the expectations of parents and their children, sizeable gaps exist between the parents of youth with and without an IEP in how much education they expect their children will obtain. The largest gap, exceeding 40 percentage points, is for expectations about obtaining a four-year degree (34 percent for parents of youth with an IEP versus 76 percent for other parents). Parents of youth with an IEP are nearly twice as likely as parents of youth without an IEP to believe their children will pursue postsecondary education at either a two-year college or a technical/trade school (27 versus 14 percent). Parents of youth with a 504 plan have educational expectations for their children that are higher than those of parents of youth with an IEP, but lower than those of parents of other youth without an IEP.

Table 25. Percentages of parents who expect their children to obtain postsecondary education, by IEP status

Level of postsecondary education expected by parents	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Some postsecondary education	61	90*✓	85*✓	90*✓
Four-year college degree or higher	34	76*✓	60*✓	76*✓
Two-year college or a technical or trade school	27	14*✓	25	14*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents, excluding proxies, were asked how far they think their child will get in school. Response categories included less than high school, high school diploma or generalized education development (GED) certificate, technical or trade school, two-year college, four-year college, or an advanced degree. Some postsecondary education includes at least technical or trade school.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix F, tables F-6, F-7, and F-8.

- **Parents of youth with an IEP are more likely than other parents to report challenges to their childrens' obtaining postsecondary education, particularly with academic and social readiness** (table 26; see tables F-9 to F-12 for more detail). In particular, 43 percent of parents of youth with an IEP ages 15 and above report that their children may not be academically or socially ready to continue their educations after high school, more than twice the proportion among parents of youth without an IEP (18 percent). Parents of youth with an IEP are also more likely to report that obtaining postsecondary education could be financially difficult because their child needs to work (60 versus 51 percent), and does not know how to secure financial aid (36 versus 30 percent). Finally, these parents are also more likely to suggest that getting enough information about education and training options is challenging (42 versus 29 percent). Parents of youth with a 504 plan are less likely than parents of youth with an IEP to be concerned about each of these challenges. Although they are more likely than parents of other youth without an IEP to be concerned about academic and social challenges, on the other issues their responses are similar.

Table 26. Percentages of youth whose parents perceive challenges for their children with obtaining postsecondary education, by IEP status

Issue with obtaining postsecondary education	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Youth is not academically or socially ready	43	18*✓	32*✓	18*✓
Youth needs to work after high school	60	51*✓	53*✓	51*✓
Not sure how to get financial aid or help paying for school	36	30*✓	27*✓	30*✓
Does not have enough information about education and training options	42	29*✓	33*✓	29*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Parent survey respondents, excluding proxies, were asked whether they think each item is likely to be an issue youth are likely to face in furthering their education and training after high school.

Source: National Longitudinal Transition Study 2012. The universe is youth who are at least 15 years old. More information is provided in appendix F, tables F-9, F-10, F-11, and F-12.

- **Youth with an IEP are no more likely than their peers to perceive challenges identifying appropriate postsecondary education options and financial aid sources** (table 27; see tables F-13 through F-15 for more detail). Specifically, similar proportions of youth with and without an IEP who are at least 15 years old report not knowing what further education they would need for jobs they might want (13 and 14 percent) and where to get help paying for postsecondary education (35 percent for each group). Youth with an IEP are less likely to report not getting enough information from school staff about schools they might like to attend (31 versus 38 percent). When combined with the parent survey findings reported above, it appears youth with an IEP may be less concerned than their parents about how to obtain postsecondary education in the future. Youth with a 504 plan provided similar responses to youth with an IEP.

Table 27. Percentages of youth who perceive challenges with obtaining postsecondary education, by IEP status

Issue with obtaining postsecondary education	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Does not know what further education is needed for jobs might want	13	14	13	14
Does not know where to get help paying for college or other types of schools	35	35	32	35
Is not getting enough help from school staff about schools might want to attend	31	38*✓	33	38*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, were asked if they agreed that each item will be a challenge for deciding what to do after high school.

Source: National Longitudinal Transition Study 2012. The universe is youth who are at least 15 years old. More information is provided in appendix F, tables F-13, F-14, and F-15.

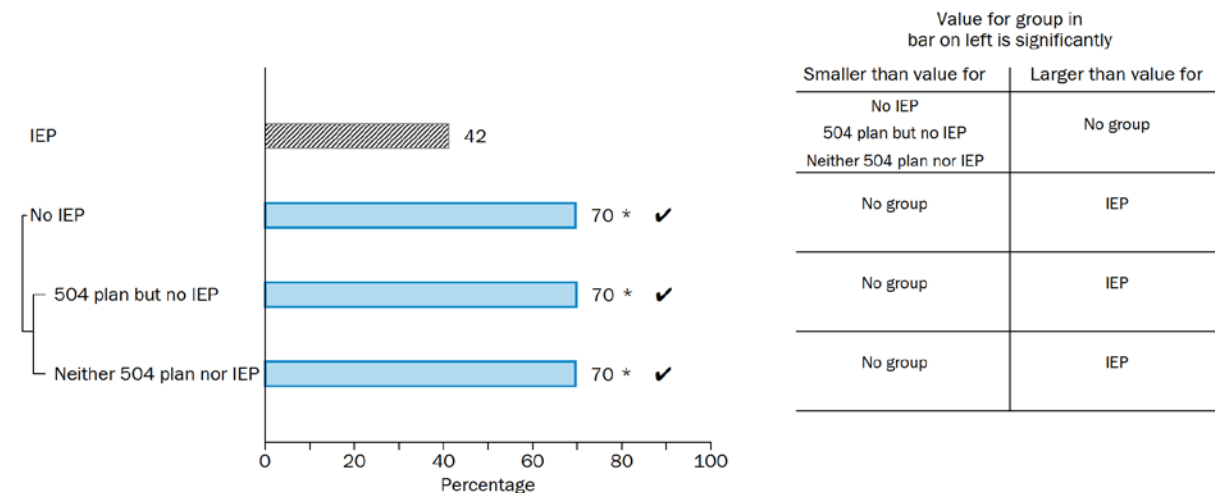
Youth with an IEP appear less likely to be taking steps to prepare for college

IDEA 2004 increased the law's emphasis on helping youth with an IEP prepare for education after high school in several ways. For example, it added preparation for further education as one of the law's purposes, and requires that transition plans include appropriate measurable postsecondary training and education goals, as well as services to assist in reaching those goals. The updates reflect awareness about both the growing value of postsecondary education in the labor market and growing rates of college attendance among youth with disabilities that began in previous decades. In particular, the percentage of youth with an IEP who enrolled in postsecondary education within four years of leaving high school grew from 26 to 46 percent between 1990 and 2005 (Newman et al., 2010).

Many youth who are planning to attend college begin preparing well in advance. Preparation comes not only in terms of a focus on schoolwork and participating in extracurricular activities, but also preparing for college entrance and placement tests, and completing an application and personal essay.

- **Youth with an IEP are almost half as likely as those without an IEP to take college entrance and placement tests** (figure 23; see table F-16 for more detail). Forty-two percent of youth with an IEP ages 16 or older report taking a college entrance or placement test, compared with 70 percent of their same-age peers. These tests include the PSAT, SAT, or ACT, or a placement test for a two-year college. Youth with a 504 plan (70 percent) are as likely as other youth without an IEP to take a college entrance or placement test.

Figure 23. Percentages of youth who have taken a college entrance or placement test, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

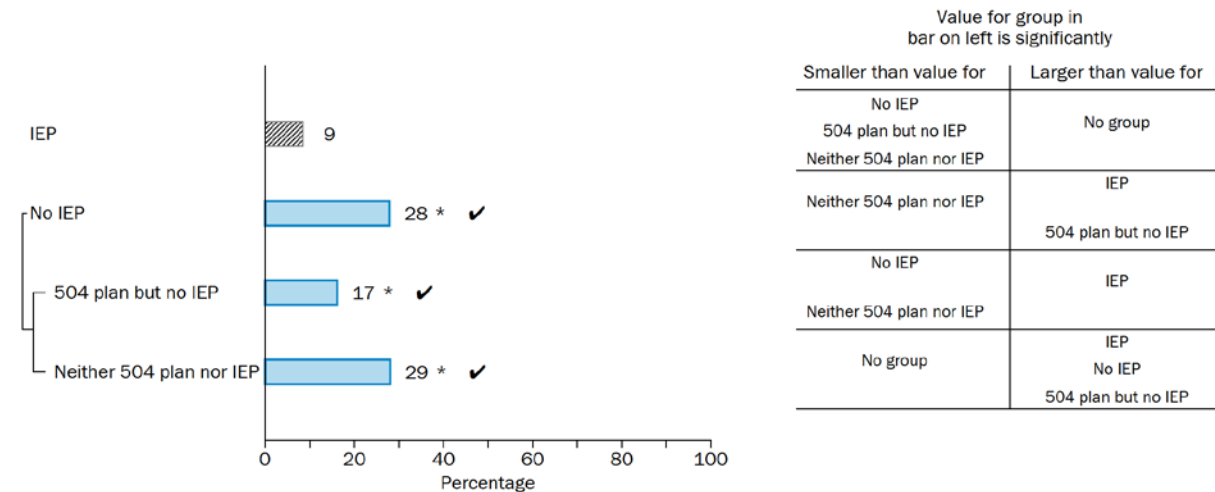
Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Youth survey respondents were asked whether they have taken any of the following college placement tests: the PSAT; the ACT; the SAT; or the placement test for a local college, such as Accuplacer or other tests used by community colleges.

Source: National Longitudinal Transition Study 2012. The universe is youth who are at least 16 years old. More information is provided in appendix F, table F-16.

- Youth with an IEP are one-third as likely as their peers to participate in “dual enrollment” – to have taken a high school course that provides college credit (figure 24; table F-17 for more detail). In particular, 9 percent of high school youth with an IEP have taken a course at their school for which they earned college credit at either a two-year or four-year college, according to parents, compared with 28 percent of youth without an IEP. Many high schools offer these types of courses to help students understand the rigor and expectations of college-level work and to gain a head start on earning credit. The proportion of youth with a 504 plan who have done so (17 percent), is between that of youth with an IEP and other youth without an IEP.

Figure 24. Percentages of youth who have taken a high school course for college credit, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

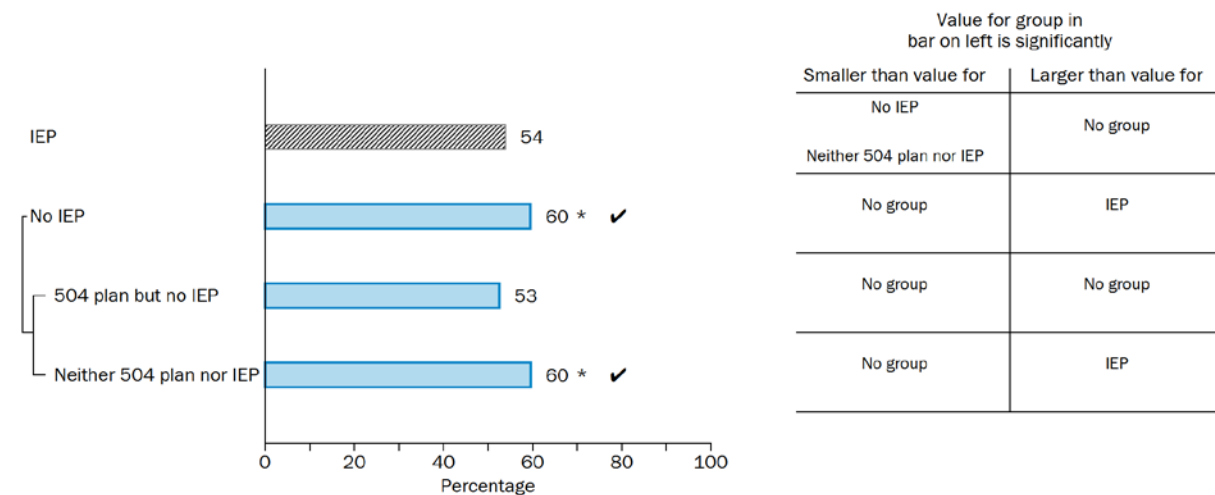
Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, “504 plan but no IEP” will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, “No group” will appear in the right-hand column.

Note: Parent survey respondents, excluding proxies, were asked whether youth have taken any high school courses for which they earned college credit at either a two or four year college.

Source: National Longitudinal Transition Study 2012. The universe is youth who either received instruction in grades 9 through 13 or are both in an ungraded grade and at least 16 years old. More information is provided in appendix F, table F-17.

- **More than half of youth with an IEP report receiving assistance from high school staff with the college application process, but the proportion among their peers is larger** (figure 25; see table F-18 for more detail). Fifty-four percent of youth with an IEP in high school report receiving at least one of the following types of assistance from schools: help filling out applications, help reviewing entrance test scores and deciding whether to retake tests, or help arranging a college visit or tour. In contrast, 60 percent of youth without an IEP report receiving one of these kinds of help. The proportion of youth with a 504 plan who received this assistance (53 percent) is similar to that of youth with an IEP, even though youth with a 504 plan are more likely to take college entrance and placement tests. Differences in postsecondary education expectations between youth with and without an IEP may contribute to differences in receipt of postsecondary assistance from school staff; however, lack of assistance may also dampen youths' expectations.

Figure 25. Percentages of youth who received help from school staff with the college application process during the school year, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Youth survey respondents, excluding proxies, were asked whether school staff provided help with at least one of the following: completing college application forms, reviewing college entry test scores, or arranging college visits during the school year.

Source: National Longitudinal Transition Study 2012. The universe is youth who either received instruction in grades 9 through 13 or are both in an ungraded grade and at least 15 years old. More information is provided in appendix F, table F-18.

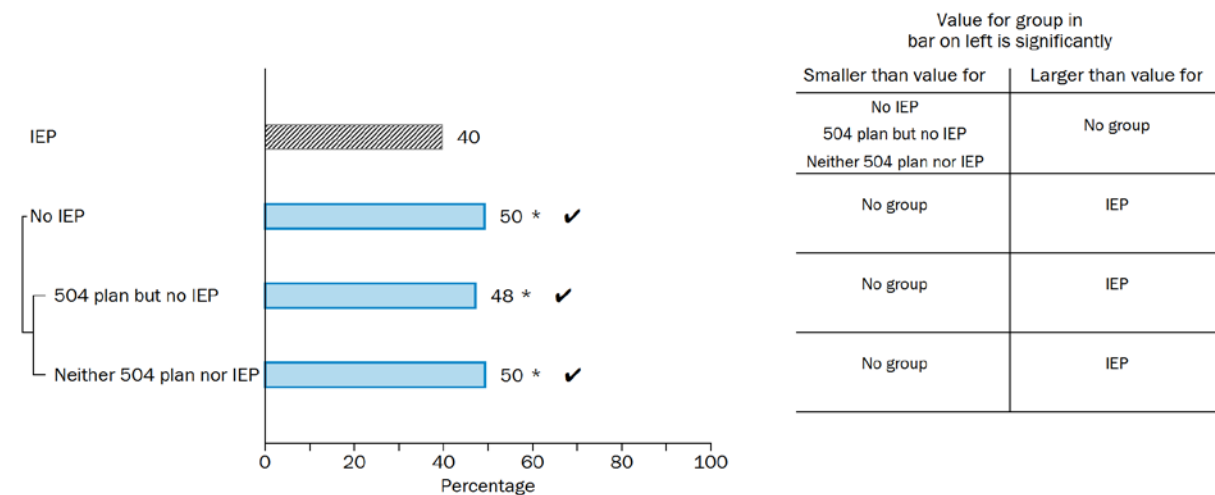
Youth with an IEP are less likely than other youth to have paid jobs and their parents are more likely than other parents to think their children will not live independently

Since the inception of IDEA in 1975, helping youth secure a job after high school and live independently have been and remain key goals on the path towards their living fulfilling lives. Schools have long helped youth get paid and unpaid work experience through cooperative programs (co-ops), internships, school-based enterprises, and supported work (Johnson, 2012). In fact, prior studies suggested that by working during high school, youth receiving special education services may increase their chances of getting a job after they graduate (Test et al.,

2009; Mazzotti et al., 2016).³⁹ Yet, youth with disabilities in earlier decades have had lower employment rates and wages in early adulthood than those without disabilities (Mann & Wittenburg, 2015). Schools can also assist in the development of students' self-determination and abilities to perform daily living tasks indicative of being able to live alone after high school or after postsecondary education and training (see chapter 3).

- **Youth with an IEP are 10 percentage points less likely than youth without an IEP to have recent paid work experiences** (figure 26; see table F-20 for more detail). Forty percent of youth with an IEP report having had some paid work experience during the past year, compared with 50 percent of their peers. A similar gap between youth with and without an IEP in paid work experience exists when focusing just on those ages 15 to 18 (45 versus 54 percent, see table 31). Youth with a 504 plan are just as likely as other youth without an IEP to have recent paid jobs during school (48 versus 50 percent).

Figure 26. Percentages of youth who have had paid work experience in the past year, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Youth survey respondents were asked whether they had either a paid school-sponsored job or another type of paid job in the past 12 months.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix F, table F-20.

³⁹ Like other studies cited earlier, those examining the effects of high school work may not be able to adequately isolate the effects of work from the characteristics of those who do and do not choose to work.

- **Youth with an IEP are more likely than their peers to have a school-sponsored work activity, but schools appear to play little role in students' paid work experience** (table 28; see tables F-21 and F-22 for more detail). Twelve percent of youth with an IEP have had a school-sponsored job in the past year, compared with 7 percent of youth without an IEP. School-sponsored work activities include work-study or co-op jobs, internships, or work in a school-based business, and can be paid or unpaid. Thus, some of these experiences are also reported as paid employment above.⁴⁰ However, almost all of the paid work experiences that youth both with and without an IEP report are arranged without school assistance. In particular, 38 of the 40 percent of youth with an IEP who reported having recent paid work experience (see figure 26) indicated having a recent job that was not school sponsored. For youth without an IEP, nearly all of those reporting recent paid work experience indicated having non-school-sponsored jobs. Youth with a 504 plan are just as likely as other youth without an IEP to have school-sponsored jobs and other paid work.

Table 28. Percentages of youth who had a school-sponsored work activity and paid work experience that was not school sponsored in the past year, by IEP status

Type of work experience	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
School-sponsored work activity (paid and unpaid)	12	7*	6*✓	7*
Paid work experience that is not school sponsored	38	50*✓	47*✓	50*✓

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents were asked whether they took part in any school-sponsored work activities, such as a work-study or co-op job, an internship, or a school-based business in the past 12 months. Youth were also asked whether they did any work for pay, other than around the house or for a school-sponsored job in the past 12 months.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix F, tables F-21 and F-22.

- **Parents of youth with an IEP are more likely than other parents to perceive challenges for their children with getting a job after high school, including the risk of losing disability benefits** (table 29; see tables F-23 and F-24 for more detail). In particular, parents of 19 percent of youth with an IEP ages 15 and older said they were concerned about whether their children can maintain eligibility for federal disability benefits through the Supplemental Security Income program if they get a job. To continue receiving these benefits after age 18, recipients must document they are unable to work more than a minimal amount. Thus, recipients risk losing their eligibility for benefits by securing a job. In comparison, hardly any parents of same-aged youth without an IEP overall, and 5 percent of those whose children have a 504 plan, express this concern. Parents of youth with an IEP are also more likely than other parents to indicate that high school staff have not provided enough information about career planning and job opportunities (34 versus 24 percent). Parents of youth with a 504 plan are as likely as parents of youth with an IEP to believe that school staff are not providing enough information about careers and jobs.

⁴⁰ Three percent of youth with an IEP and one percent of youth without an IEP report having a paid school-sponsored work activity. A small proportion of youth in each group reported having both school-sponsored and non-school-sponsored paid jobs.

Table 29. Percentages of parents who perceive challenges for their children with getting a job after high school, by IEP status

Issue with getting a job after high school	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Potential loss of Supplemental Security Income or other benefits	19	#!*	5*	‡
Staff at the high school have not provided enough information about career planning and job opportunities	34	24*	34	24*

*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude; !=interpret data with caution. Estimate is unstable because the standard error represents 30 to 50 percent of the estimate; #=rounds to zero; ‡=reporting standards not met. The standard error represents more than 50 percent of the estimate.

Note: Parent survey respondents, excluding proxies, were asked whether they think each item will be an issue for youth with getting a job after high school.

Source: National Longitudinal Transition Study 2012. The universe is youth who are at least 15 years old. More information is provided in appendix F, tables F-23 and F-24.

- Youth with an IEP appear to be more satisfied than their peers with the career information provided by school staff (table 30; see tables F-25 and F-26 for more detail). Youth with an IEP ages 15 and older appear to have a different perspective than their parents about how much help high school staff are providing them about career planning and job opportunities. In particular, only 23 percent report that high school staff have not helped enough with learning about different careers, compared with 32 percent of youth without an IEP. Youth with an IEP are also nearly 5 percentage points less likely than their peers to report not knowing what kinds of jobs they would like or be good at doing (8 versus 12 percent). Youth with a 504 plan provided similar responses to youth with an IEP.

Table 30. Percentages of youth who perceive challenges with getting a job after high school, by IEP status

Issue with getting a job after high school	IEP	No IEP	504 plan but no IEP	Neither 504 plan nor IEP
Does not know what kinds of jobs would like or be good at doing	8	12*	10	12*
High school staff have not helped enough with learning about different careers	23	32*	29	32*

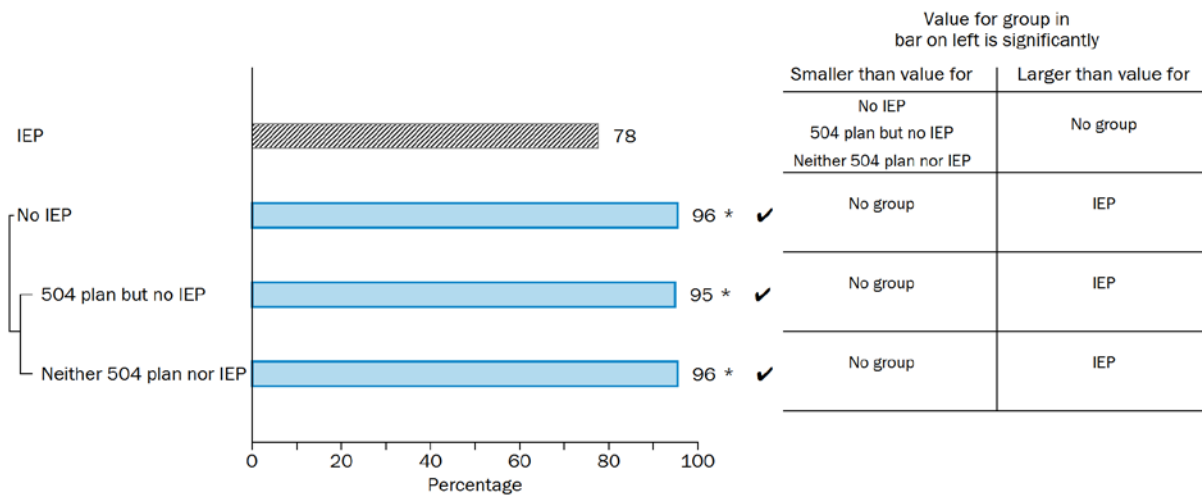
*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Note: Youth survey respondents, excluding proxies, were asked if they agreed that each item will be a challenge for deciding what to do after high school.

Source: National Longitudinal Transition Study 2012. The universe is youth who are at least 15 years old. More information is provided in appendix F, tables F-25 and F-26.

- Although three-quarters of parents of youth with an IEP expect their children to live independently, nearly all parents of youth without an IEP do (figure 27; see table F-27 for more detail). Specifically, 78 percent of parents of youth with an IEP expect their children to live independently by age 30, compared with 96 percent of other parents. Independent living refers to living on one's own, with friends, with a spouse or partner, or in military housing, versus living at home with parents, with a relative, in a group home, in an institution, or some other place. The proportion of parents of youth with a 504 plan with this expectation (95 percent) is nearly the same as for other youth without an IEP. As discussed previously, youth with an IEP are more likely to be economically disadvantaged, more likely to have difficulty performing various activities of daily living, less likely to have paid work experience during high school, and less likely to plan to obtain any postsecondary education. Each of these factors can negatively affect students' chances of earning enough to support themselves, thus posing challenges to policymakers and educators seeking to help youth become more independent.

Figure 27. Percentages of youth whose parent expects them to be living independently at age 30, by IEP status



*= $p < .05$ for comparison with IEP estimate; ✓=comparison is statistically significant and at least 5 percentage points in magnitude.

Exhibit reads: Readers interested in a particular student group can follow the group's bar in the figure to the corresponding line in the chart on the right. The chart indicates the statistically significant differences (at the .05 level) between the value of the group's bar and the values for the other groups' bars in the figure. For example, if the value for youth with an IEP is statistically smaller than for youth with a 504 plan but no IEP, "504 plan but no IEP" will appear in the left-hand column of the chart. If it is statistically larger than the value for youth with neither a 504 plan nor an IEP, that group will appear in the right-hand column. If it is not statistically larger than the value for any other group, "No group" will appear in the right-hand column.

Note: Parent survey respondents, excluding proxies, were asked where they think youth will be living at age 30. The response categories were on his or her own, at home with parents, with a relative, with friends, with a spouse or partner, in military housing, in a group home, in an institution, or some other place. Independent living refers to living in on his or her own, with friends, with a spouse or partner, or in military housing.

Source: National Longitudinal Transition Study 2012. The universe is all youth. More information is provided in appendix F, table F-27.

Regardless of backgrounds or types of schools, youth with an IEP take fewer steps than their peers to prepare for postsecondary education and employment, and parents are less optimistic that they will live independently

Youths' expectations and the steps they take to prepare for life after high school might be related to their backgrounds and the schools they attend. For example the fact that youth with an IEP tend to come from lower-income households might be related to their relatively low postsecondary expectations and the fact that they are

less likely than those without an IEP to take college entrance tests. Focusing on gaps between youth with and without an IEP in their expectations to obtain postsecondary education and live independently, and their participation in college entrance exams and work experience, the key findings include:

- **Youth with an IEP appear less likely than those without an IEP to be preparing for college or the labor market, and to live independently, across most demographic groups** (table 31; see tables F-28 to F-35 for more detail). Within groups of youth defined by household income, race, gender, age, and functional abilities, youth with an IEP are typically less oriented than their peers towards transition from high school (41 of 48 differences measured). In addition, within these demographic groups, parents of youth with an IEP are less optimistic than other parents that their child will live independently by age 30. Only a few exceptions to this pattern exist. For example, a similar proportion of youth with and without an IEP are working among youth ages 19 or older and among youth with higher functional abilities.

Table 31. Percentages of youth on key expectations and activities linked to post-high school success, by IEP status and individual/household characteristics

Characteristic	Youth expects to obtain postsecondary education (youth reported)		Youth has taken a college entrance or placement test (youth reported)		Had recent paid work experience (youth reported)		Parent expects youth to live independently by age 30 (parent reported)	
	IEP	No IEP	IEP	No IEP	IEP	No IEP	IEP	No IEP
Household income								
1. Low income	73	90*	42	68*	39	45*	75	93*
2. Higher income	81	97*	41	72*	42	53*	82	99*
Statistically significant differences:	1-2	1-2	ns	ns	1-2	1-2	1-2	1-2
Race-ethnicity								
1. Black (not Hispanic)	77	93*	48	63*	37	44	76	97*
2. Hispanic	77	91*	43	68*	34	40	75	91*
3. White, Asian, or other race (not Hispanic)	75	95*	39	73*	44	55*	80	98*
Statistically significant differences:	ns	ns	1-3	ns	1-3; 2-3	1-3; 2-3	2-3	1-2; 2-3
Gender								
1. Female	78	94*	38	73*	37	51*	78	96*
2. Male	75	93*	43	67*	42	49	78	96*
Statistically significant differences:	ns	ns	1-2	ns	1-2	ns	ns	ns
Age								
1. 14 years old or younger	77	94*	†	†	32	45*	80	94*
2. 15 to 18 years old	76	93*	43	70*	45	54*	79	98*
3. 19 years old or older	63	92*	31	64*	40	43	48	88*
Statistically significant differences:	1-3; 2-3	ns	1-2	ns	1-2; 1-3	1-2	1-3; 2-3	1-2
Functional abilities index								
1. Lower	69	†	32	67*	30	49*	60	91*
2. Higher	80	94*	47	71*	46	50	89	96*
Statistically significant differences:	1-2	†	1-2	ns	1-2	ns	1-2	ns
All youth	76	94*	42	70*	40	50*	78	96*

*= $p < .05$ for comparison between IEP and No IEP estimates

1-2, 1-3, and 2-3 indicate statistically significant differences at $p < .05$ between subgroup pairs (1 versus 2, 1 versus 3, and 2 versus 3, respectively) using Wald tests; ns=no significant difference; †=not applicable.

Note: See appendix A for definition of the individual/household characteristics.

Source: National Longitudinal Transition Study 2012. The universe for measures 1, 3 and 4 is all youth. The universe for measure 2 is youth who are at least 16 years old. More information is provided in appendix F, tables F-28, F-29, F-30, F-31, F-32, F-33, F-34, and F-35.

- Youth with an IEP also appear less likely than their peers to be preparing for post-high school life across types of schools (table 32; see tables F-31 to F-35 for more detail). Regardless of whether they attend a lower-performing or higher-performing school, one located in a city, suburb, or small town, or where students in special education represent a smaller or larger share of the student body, youth with an IEP are typically less oriented than those without an IEP towards transition from high school (28 of 28 differences measured).

Table 32. Percentages of youth on key expectations and activities linked to post-high school success, by IEP status and school characteristics

Characteristic	Youth expects to obtain postsecondary education (youth reported)		Youth has taken a college entrance or placement test (youth reported)		Had recent work experience (youth reported)		Parent expects youth to live independently by age 30 (parent reported)	
	IEP	No IEP	IEP	No IEP	IEP	No IEP	IEP	No IEP
School academic proficiency								
1. Bottom quarter in state	73	91*	43	72*	39	49*	74	93*
2. Top three quarters in state	77	95*	40	70*	41	50*	81	97*
Statistically significant differences:	1-2	1-2	ns	ns	ns	ns	1-2	1-2
School locale								
1. City	76	92*	43	67*	37	46*	76	93*
2. Suburb	79	95*	43	78*	39	52*	78	97*
3. Town or rural	73	94*	39	65*	43	51*	81	98*
Statistically significant differences:	2-3	ns	ns	1-2; 2-3	1-3; 2-3	ns	1-3	1-2; 1-3
School share of youth with an IEP								
1. Bottom three quarters in U.S.	77	94*	42	70*	41	48*	80	96*
2. Highest quarter in U.S.	74	92*	40	70*	38	55*	77	94*
Statistically significant differences:	ns	ns	ns	ns	ns	ns	ns	ns
All youth	76	94*	42	70*	40	50*	78	96*

*= $p < .05$ for comparison between IEP and No IEP estimates

1-2, 1-3, and 2-3 indicate statistically significant differences at $p < .05$ between subgroup pairs (1 versus 2, 1 versus 3, and 2 versus 3, respectively) using Wald tests; ns=no significant difference.

Note: See appendix A for definitions of the school characteristics.

Source: National Longitudinal Transition Study 2012. The universe for measures 1, 3 and 4 is all youth. The universe for measure 2 is youth who are at least 16 years old. More information is provided in appendix F, tables F-32, F-33, F-34, and F-35.

Among youth with an IEP, those who are low-income, older, and have more functional limitations are most at risk in their transition expectations and preparation

It is useful to identify which groups of students with an IEP have lower expectations for, and are taking fewer steps toward, successful post-high school transitions. This information can be used to target youth services or school technical assistance in order to improve the outcomes of at-risk students. Key findings include:

- **Proportionally fewer youth from low-income households or with lower functional abilities expect to attend college, are acquiring work experience, and have parents who expect them to live independently** (table 31; see tables F-28 to F-35 for more detail). Low-income youth with an IEP lag their higher-income counterparts on these transition measures by 5 to 8 percentage points. Youth with an IEP who have lower functional abilities lag their counterparts by at least 10 percentage points, and almost 30 points for parents' expectations that they will live on their own by age 30.
- **Lower expectations exist for and among youth with an IEP who are over age 18 while in high school, and these youth take college placement and entrance tests at lower rates than younger youth** (table 31; see tables F-28 to F-35 for more detail). Older students appear to be the least prepared for their transitions, with one exception: they are 18 percentage points more likely to have a paid work experience than youth with an IEP aged 14 or younger, a group that is typically ineligible for paid jobs except through informal arrangements like babysitting.⁴¹
- **While college expectations are similar for females and males with an IEP, females are less likely to be taking concrete actions** (table 31; see tables F-28 to F-35 for more detail). Although other surveys indicate that in the general student population, female students enroll in postsecondary education at higher rates than males (Freeman, 2004), a smaller share of females than males with an IEP are taking the SAT/ACT or other college placement tests (38 versus 43 percent).

⁴¹ The federal Fair Labor Standards Act sets the minimum age for non-agricultural employment at 14 and restricts the number of hours and days that 14 and 15 year olds can work. States can raise the minimum working age by enacting their own child labor laws.

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