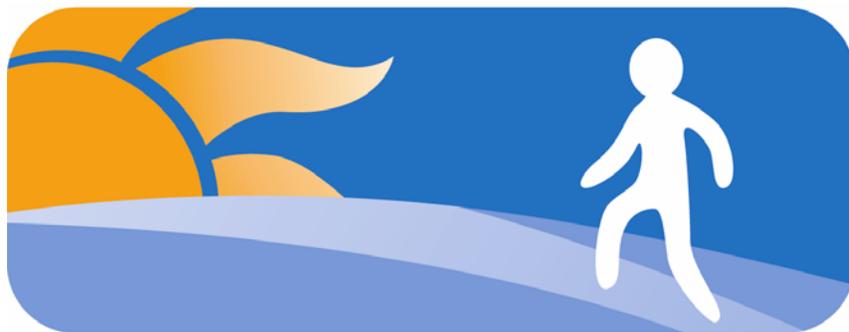


November 2003



NATIONAL LONGITUDINAL  
**TRANSITION STUDY 2**

# **THE ACHIEVEMENTS OF YOUTH WITH DISABILITIES DURING SECONDARY SCHOOL**

**A Report from the National Longitudinal Transition Study-2  
(NLTS2)**

## **Executive Summary**

Prepared for:

Office of Special Education Programs  
U.S. Department of Education

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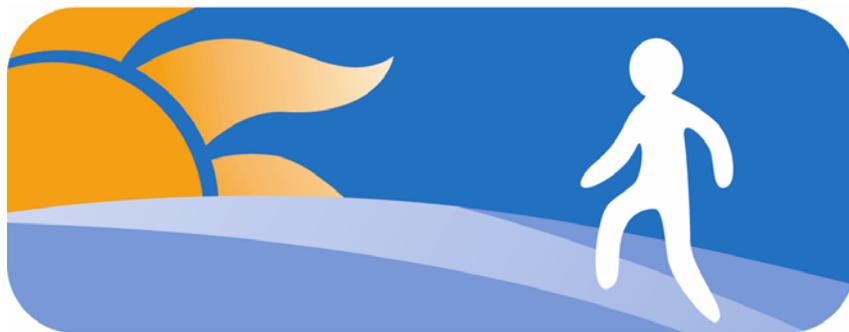


**SRI International**  
333 Ravenswood Avenue Menlo Park, CA 94025



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Education Programs

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### Executive Summary

Prepared for:

Office of Special Education Programs  
U.S. Department of Education

Prepared by:

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## EXECUTIVE SUMMARY

Recent reforms in the American education system, codified in the *No Child Left Behind Act of 2001* (NCLB, P. L. 107-110), emphasize the accountability of schools, school districts, and states for the academic performance of all students. This emphasis on improved academic performance is consistent with the intention of federal legislation that guides the provision of special education services for children and youth with disabilities—the Individuals with Disabilities Education Act Amendments of 1997 (IDEA '97). That act states: “Improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities” [Sec. 601(c)(1)]. Yet academic performance is not the ultimate outcome by which the education of youth with disabilities is to be assessed. The intention of the free appropriate public education guaranteed by IDEA to children and youth with disabilities is to “prepare them for employment and independent living” [Sec. 601(d)(1)(A)].

This purpose suggests the multidimensional nature of the achievements or outcomes desired for children and youth with disabilities. Yet specifying desired outcomes is only a first step toward an effective accountability system; only when data are available on how youth with disabilities fare across multiple outcome domains can America’s education system actually be accountable for the academic performance and postschool preparation of its students.

The Office of Special Education Programs (OSEP) of the U.S. Department of Education has commissioned a 10-year study that is generating the information needed to assess the achievements of youth with disabilities in their secondary school years in multiple domains. The National Longitudinal Transition Study-2 (NLTS2) is documenting the characteristics, experiences, and outcomes of a nationally representative sample of more than 11,000 youth who were ages 13 through 16 and were receiving special education services in grade 7 or higher on December 1, 2000. NLTS2 findings generalize to youth with disabilities nationally and to youth in each of the 12 federal special education disability categories in use for students in the NLTS2 age range.

This rich source of information will support a series of reports that will emerge over the life of NLTS2. This report considers the following questions for secondary-school-age youth with disabilities:

- What are the achievements of youth with disabilities in key outcome domains?
- How do achievements vary for youth with different kinds of disabilities?
- What individual, household, and school factors are related to more positive outcomes for youth with disabilities?

## Youth Outcomes

NLTS2 is able to address these questions with measures of outcomes that span multiple domains, including:

- **School engagement**—attending school and being actively engaged in learning activities there.
- **Academic performance**—mastering academic skills.
- **Social adjustment**—exhibiting social skills, being socially integrated, and avoiding negative behavior.
- **Independence**—demonstrating skills that support independence and assuming responsibilities at home and in the community.

Several sources of information have been used to measure outcomes in these domains and factors related to them. In telephone interviews, parents reported on such topics as the activities of youth outside of school, youth's functioning, household characteristics, and their expectations for the youth's future. Three mail surveys conducted in the 2001-02 school year generated information on students' overall school programs; on their activities and performance in general, special, and vocational education classes; and on the characteristics of the schools they attend.

Data from these sources are used in descriptive analyses that identify outcomes for youth with disabilities as a whole and those who differ in their primary disability classification. Multivariate explanatory analyses estimate the magnitude and direction of relationships<sup>1</sup> for numerous explanatory factors, statistically holding constant the other factors in the analysis. The factors included in these multivariate analyses are drawn from the NLTS2 conceptual framework and include youth, household, and school factors.

## How Are Youth with Disabilities Doing?

### School Engagement

NLTS2 analyses have addressed both the subjective dimension of engagement (e.g., the extent to which students enjoy school) and its behavioral dimension (e.g., absence from school, behaviors that suggest engagement in classroom activities). The results suggest that:

- Although most students with disabilities reportedly enjoy school, they are nevertheless somewhat less likely to enjoy school than their counterparts in the general population.
- On average, students with disabilities are absent about as frequently as those in the general population, but they are less likely to have perfect attendance.

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<sup>1</sup> Multivariate analyses identify relationships between a variety of factors and student outcomes, but findings do not imply that the factors cause the outcomes. For example, taking more courses in general education classes is positively associated with some measures of academic performance and social adjustment, independent of other differences between youth. However, this does not imply that general education settings cause better academic performance or social adjustment; rather, students may be in such settings in part because their academic abilities and behavior are appropriate for a general education classroom.

- When they are at school, students' levels of engagement are related to class setting (i.e., general, special, or vocational education classroom). Specifically, students with disabilities are more likely to be rated "less engaged" and to be described as "rarely" participating in classroom discussions, completing homework on time, and staying focused on classwork in general education academic classes than in other settings. Furthermore, students with disabilities who spend time in all three settings are the least engaged when they are in general education academic classes.

### **Academic Performance**

The national look at academic performance of secondary school students with disabilities that NLTS2 provides suggests that different indicators of performance offer divergent perspectives on the progress that some students are making.

- Most students with disabilities receive passing or even exemplary grades from their teachers, which could indicate successful accomplishment of curriculum goals.
- However, almost one-fourth of students with disabilities who take academic courses in general education classrooms are perceived by teachers as not keeping up with expectations in those classes.
- Further, significant numbers of students in all disability categories function sufficiently below grade level in reading and math so as to raise the question of their ability to complete high school work successfully.
- The correlation between grades and academic functioning is nearly zero, indicating that the two are largely unrelated. This finding is consistent with the perspective that teacher-given grades address more than content mastery and performance in the curriculum; they also reflect engagement and social factors.

### **Social Adjustment**

Findings in this chapter present a mixed picture of the social adjustment of youth with disabilities.

Many youth with disabilities are reported to be socially quite well adjusted.

- Between one-third and one-half are reported by parents "always" to exhibit a variety of social skills, and most other youth are reported to do so at least some of the time.
- The vast majority of youth also behave well in the classroom, reportedly getting along well with their teachers and other students and controlling their behavior well. Approximately three-quarters are reported to follow directions in the classroom well.
- Teachers report that approximately three-fourths of youth who have social integration goals or behavior management goals in their transition plans are making good progress toward meeting them.
- Most youth with disabilities also are socially integrated outside the classroom; approximately two-thirds belong to some type of organized group, and a similar percentage see friends at least once a week outside of school and organized group activities.

However, social adjustment challenges clearly remain for some youth.

- According to parents, approximately one in six youth with disabilities never seem confident in social situations. In addition, approximately 1 in 10 are reported never to make friends easily, start conversations, control their temper when arguing with peers, or avoid situations that are likely to result in trouble. One in six reportedly never end disagreements with their parents calmly, and one in five never join group activities without being told to do so.
- Approximately one in eight do not get along well with other students, and one in six do not control their behavior in the classroom well.
- According to school staff, one in four youth with disabilities who have transition goals related to improved social adjustment are not making much progress toward them.
- Overall, 16% of youth are reported by parents to have bullied other students in school, and 35% are reported to have been subject to some type of disciplinary action in school.
- Outside of school, one in six appear to be somewhat socially isolated, in that they do not belong to any type of organized group and see friends less than once a week.
- Approximately 13% of youth with disabilities have been arrested.

### **Independence**

NLTS2 has investigated a variety of factors affecting the emerging independence of youth with disabilities, including skills that support and strengthen self-determination, and responsibilities that accompany an independent lifestyle.

- Virtually all youth with disabilities have high self-care skills.
- About half of youth with disabilities have high functional cognitive skills, and only a small percentage do poorly in regard to these skills.
- About three-fourths of youth are reported to get around their neighborhoods “very well.”
- The self-determination skills involving persistence and asking for what one needs are demonstrated by more than half of youth with disabilities.
- About half of youth with disabilities usually prepare their own breakfasts and lunches, and a similar percentage shop on their own. Similar percentages are performing these tasks at least occasionally in the process of acquiring greater independence at home.
- Most youth have some experience managing their own money, but few have acquired the financial management skills required to manage checking accounts or credit cards.
- About one-third of age-eligible youth have acquired a driver’s license or permit.
- More than half of youth have been employed at some time during a 1-year period.

Clearly, many youth with disabilities are making progress toward achieving independence. This conclusion is confirmed by school personnel who report that youth have made the greatest progress on independent-living goals; their achievements toward goals of employment and self-advocacy are less notable.

## Summing Up

So what can be made of this diversity of experience? The answer depends in part on the yardstick by which outcomes are measured. The experiences of youth in the general population are one standard against which to assess those of youth with disabilities, yet using this standard does not give an unequivocal view of whether youth with disabilities are doing well or poorly. In the independence domain, for example, youth with disabilities have a 1-year employment rate that is essentially equivalent to that of youth in the general population. On the other hand, youth with disabilities have lower social skills than youth in the general population, which is a cause for concern. Poorer social skills may help explain why youth with disabilities have less active friendships than the general population of youth. Youth with disabilities also tend to like school less than their nondisabled peers, although the two groups are about equally likely to be absent from school frequently.

Another standard against which one could assess the diversity of achievements of youth with disabilities is the experiences of a similar group in the past. The predecessor to NLTS2, the National Longitudinal Transition Study (NLTS), conducted from 1984 through 1993, provides an opportunity to compare outcomes reported for youth with disabilities now with outcomes for a similar cohort of youth at that time, a comparison that reveals both positive and cautionary results.

- In the independence domain, comparisons reveal modest, though statistically significant, declines in the ability to manage self-care needs and in functional cognitive skills. Yet the frequency with which youth with disabilities take on household responsibilities has not changed markedly over time, and there has been an increase in the rate at which youth with disabilities have their own money about which they can make decisions. Some of this increased responsibility for managing personal finances may result from a significantly higher rate of regular paid employment among youth with disabilities represented in NLTS2 than among those represented in NLTS. The clear advancement by youth with disabilities in holding regular paid jobs has closed the employment gap between youth with disabilities and the general population that existed in the past.
- At school, although absenteeism has increased significantly over time, grades also have increased, despite the fact that many more youth with disabilities spend more of their time in general education classrooms, with their typically higher grading standards relative to special education settings. However, the average gap of more than three grade levels between students' tested reading and math abilities and their actual grade levels has not declined over time.
- On the social adjustment front, the rate at which youth with disabilities belong to organized groups has remained stable over time. However, the frequency with which they experience negative consequences for their behavior, in terms of disciplinary actions at school, arrests, or being fired from a job, has increased.

## What Makes a Difference?

As depicted by a variety of outcome measures across multiple outcome domains, youth with disabilities experience the full range of possible experiences, from high achievement to significant struggles. What accounts for that variation in experience? Multivariate analyses suggest that characteristics of youth themselves and those of their households and their school programs and experiences all come into play in understanding the diversity of experiences of youth with disabilities.

### Disability and Functioning

**Disability characteristics.** Youth who are similar in other respects have the following kinds of differences in outcomes associated with the nature of their disability:

- Relative to youth with learning disabilities,<sup>2</sup> those with visual impairments experience lower absenteeism at school and higher reading and math abilities, but more negative independence outcomes in terms of employment. Having a visual impairment does not have an independent relationship to social involvement with groups or friends.
- Like youth with visual impairments, those with orthopedic impairments generally succeed at school, but they have less involvement with extracurricular groups and friends and less independence in terms of assuming household responsibilities and holding a job.
- Youth with emotional disturbances tend to be better readers than youth with learning disabilities, other factors held constant, and are equally likely to have active friendships and group memberships. However, they are much more likely to experience disciplinary actions at school and arrests in the community.
- The cognitive limitations of youth with mental retardation show up in their reading and mathematics skills, which are significantly farther behind grade level than those of others. However, grades are higher for youth mental retardation than those with learning disabilities, independent of other differences in functioning between youth, suggesting that differences in grading standards in general and special education settings may be inadequately controlled for in the analyses.
- Apart from other differences between youth in their disability, functioning, or other characteristics, having attention deficit or attention deficit/hyperactivity disorder (ADD/ADHD) as a primary or secondary disability is associated with poorer classroom engagement behaviors in special education settings, poorer grades, and a higher likelihood of disciplinary actions. However, youth whose parents report that they have ADD/ADHD are no more or less behind in reading or mathematics than youth with disabilities who do not, and they are more likely than others to belong to extracurricular groups and hold regular paid jobs.

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<sup>2</sup> Multivariate analyses require that for categorical variables, such as disability category, each category be compared with another specified category. Learning disabilities was chosen as the category against which to compare the relationships for other disabilities because it is the largest disability category and, therefore, most closely resembles the characteristics of students with disabilities as a whole.

- Dealing with the consequences of disability from an early age, rather than having it identified when youth are older, is related to better classroom engagement behaviors, better grades, and a lower likelihood of being subject to disciplinary actions.
- Having functional limitations in more areas (e.g., mobility, vision, communication) is associated with less absenteeism, better classroom engagement behaviors, more group memberships, and a lower likelihood of arrest. However, it also is associated with being significantly more behind in reading, having less active friendships, and being less independent both at home and in the pursuit of employment.

**Functioning.** NLTS2 analyses show that different kinds of skills relate differently across the outcome domains.

- Higher functional cognitive skills are strongly and positively related to better classroom engagement, higher academic achievement in both reading and math, having more active friendships, and greater independence in taking on household responsibilities. Yet youth with higher functional cognitive skills also are more likely to get into trouble, both at school and in the community, independent of other differences among youth.
- Although poor self-care skills are associated with higher absenteeism and less engagement in group activities, household responsibilities, and employment, they have no relationship to academic achievement, independent of other differences between youth. In fact, youth with lower self-care skills tend to have better grades than youth who are more fully functioning in managing their self-care needs, even controlling for such differences as the percentage of classes taken in general education settings.
- Youth with higher social skills are significantly more likely to belong to groups, see friends regularly, and avoid arrest than youth with lower social skills, other factors held constant. They also are more likely to take on household responsibilities and hold regular paid jobs. At school they tend to have higher grades and more positive classroom engagement behaviors. However, they also are significantly farther behind grade level in reading than their socially less-skilled peers, reinforcing the notion that teacher-given grades reflect more than academic ability.
- Those rated as more persistent by parents also exhibit more engagement in classroom activities in all settings, receive better grades, and are less likely to experience disciplinary actions at school than less persistent peers, other things being equal. Persistent youth are more likely to take on household responsibilities, but they are less likely to see friends regularly. This trait does not relate to academic abilities in reading and math, apart from other differences between youth.
- Youth's general health is included in analyses of absenteeism, and it demonstrates the strongest relationship to that indicator of engagement of any factor, underscoring the fact that absenteeism from school can be both voluntary and involuntary.

### **Individual Demographic Characteristics**

**Age.** Older youth are more likely than younger peers to take on household responsibilities and work outside the home, independent of other differences between them. Older youth tend to

be farther behind in their reading and math abilities. Further, older youth also are less likely to experience disciplinary actions than younger students with disabilities, other things being equal.

**Gender.** Independent of other differences, boys with disabilities have poorer classroom engagement behaviors and lower grades than girls, both factors that reflect teachers' judgments. Boys with disabilities also are farther behind grade level in reading, although they are less likely than girls to be behind in math. And boys are much more likely to be subject to disciplinary actions at school and to arrest in the community. They are less involved with household chores at home, which may reflect or contribute to the fact that boys also are more likely than girls with disabilities to see friends regularly outside of school or in organized group activities. Finally, the employment advantage once experienced by boys with disabilities relative to girls has disappeared.

**Race/ethnicity.** Compared with white youth with disabilities, both African-American and Hispanic youth are significantly farther behind grade level in both reading and math and are much less likely to have regular paid jobs. However, the outcome patterns of these two groups diverge in other areas. Relative to white youth with disabilities, African Americans demonstrate lower classroom engagement, receive lower grades, and are more likely to be subject to disciplinary actions at school. In contrast, Hispanic youth with disabilities tend to get in trouble less at school and have classroom behaviors and grades that are not different from those of white youth. However, they do tend to be less likely to participate in organized group activities than white youth, independent of income and other differences between them.

**Primary language.** Independent of racial/ethnic differences among youth with disabilities, using a language other than English at home does not appear to relate to youth outcomes, with the exception that youth with disabilities who primarily use a language other than English at home are significantly farther behind grade level in reading than their peers—a skill that fundamentally involves language comprehension.

### **Household Characteristics**

The household context in which youth with disabilities live can be expected to help shape their experiences across outcome domains.

**Household income.** Youth with disabilities from lower-income households are more likely to be absent from school and less likely to demonstrate behaviors that indicate engagement in classroom activities than more affluent peers. Their academic performance also is poorer; they are farther behind grade level in reading and math, and are more likely to receive poor grades. Although they are more likely than wealthier peers to see friends regularly, youth from lower-income households are less likely to take part in organized group activities and are more subject to disciplinary actions at school and arrest in the community. Lower-income youth are more likely to be involved with household chores than wealthier youth, but do not differ from them in their likelihood of participating in the workforce.

**Family support for education.** Youth with disabilities whose families are more involved in their schools, as demonstrated by such activities as attending school meetings or classroom events or volunteering at school, are less far behind grade level in reading than youth with less family involvement at school. They also tend to have better grades and more active involvement

in organized groups (many of which are at school) and with individual friendships. In the independence domain, they are more likely than youth from less involved families to have regular paid jobs. One exception is that greater support for education at home is negatively associated with grades, possibly because parents are more likely to provide homework help to students who are doing poorly in school.

**Family expectations for the future.** Other things being equal, youth with disabilities whose parents expect them to go on to postsecondary education after high school have more positive classroom engagement behaviors, get better grades, and are significantly closer to grade level in their reading and math abilities than youth who are not expected to further their educations after high school. They also are more likely to affiliate with organized groups, many of which may be sponsored by or meet at school. Similarly, in the independence domain, youth with disabilities whose parents have high expectations that they will live independently in the future are more likely to assume household responsibilities while in high school. No relationship is found between expectations for future employment and youth's employment during high school.

### **School Programs**

Although individual and household factors are strongly related to outcomes of youth with disabilities, schools can make a difference for youth, particularly in the areas in which they are the most active partners: school engagement and academic performance.

**Enrollment in general education courses.** Students with disabilities who take a wider range of their courses in general education classes tend to miss fewer days of school, are closer to grade level in their reading and math abilities, and are less likely to be subject to disciplinary actions, irrespective of other differences between them and students who take fewer general education courses. However, these positive findings must be balanced against indications that the general education classroom experience challenges the ability of many students with disabilities to succeed there, as reflected in the generally lower grades given by their teachers. Outside of class, however, students appear to accrue benefits in terms of a higher likelihood of engaging in extracurricular group activities at school or in the community and seeing friends regularly.

**Class size.** Youth with disabilities in larger classes tend to be closer to grade level in their reading and math abilities than students who are in smaller classes, irrespective of other differences between them, including the percentage of classes taken in general education settings.

**Vocational education, services, and experiences.** A variety of measures of vocational education, services, and experiences in high school generally are unrelated to outcomes across domains. Exceptions are that taking vocational education is related to lower absenteeism among students with disabilities, other differences between them held constant. In contrast, youth with disabilities who take part in a work experience program are less likely than others to hold a regular paid job outside of school, probably because of the time constraints posed by the work experience program.

**Other services, accommodations, and supports.** Results of NLTS2 multivariate analyses illustrate the difficulty of identifying benefits that may accrue from services, accommodations, or supports while youth are receiving them. Students with disabilities are provided services, accommodations, or supports because they are deemed unable to perform up to their potential without them. These limitations can be exhibited as negative outcomes, such as poor behavior or poor grades at school. Thus, when receipt of services or accommodations is measured at the same time as the outcomes that are the basis on which they qualify for them, a negative relationship between interventions and outcomes can occur. Some of these negative relationships are found in NLTS2 analyses. However, not all interventions are found to relate negatively to outcomes. For example, receiving help from a tutor is unrelated to grades or reading or math abilities, compared with students with disabilities who do not receive tutoring support. This finding suggests that tutors are helping students with disabilities keep up with peers who do not receive (and presumably do not need) tutoring.

### **School-Related Experiences**

NLTS2 analyses demonstrate that school experiences beyond courses, programs, and services are associated with students' outcomes both in and out of school.

**Absenteeism.** High absenteeism from school is related to teachers' perceptions of poor classroom behaviors in all classroom settings. Students who miss a good deal of school also are farther behind in both reading and math and receive poorer grades than students whose attendance is better. Increased involvement in disciplinary actions at school and with the criminal justice system also is associated with high absenteeism.

**School mobility.** Other factors held constant, youth with disabilities who have changed schools often, other than for natural grade progression, exhibit higher absenteeism than students whose school affiliations have been more stable. Although NLTS2 analyses show no direct relationship between high school mobility and indicators of academic performance, mobility is associated with a higher likelihood of both disciplinary actions and arrest.

**Declassification from special education.** Analyses of the relationships between students with disabilities being declassified from special education services and academic outcomes indicate that only students' grades are significantly associated with that experience.

**Grades and grade retention.** Youth with disabilities who have been held back one or more grades in their school careers are not less engaged in their school activities than other students, independent of other factors in the analyses. Neither does being retained relate independently to students' social adjustment. However, students who have been held back because of poor academic performance in the past continue to receive lower grades, other factors held constant. In turn, students who receive lower grades also are in trouble more, both in school and with the criminal justice system. They also are less likely to experience the socializing effects of group memberships but are more likely to see friends often outside of school or organized groups.

## Clusters of Factors That Make a Difference

This summary of multivariate analyses related to achievements of youth with disabilities suggests their independent relationships to many aspects of youth, their households, and their school programs and experiences, holding constant other factors. However, in real life, many of the factors discussed here are not independent; they cluster together for many youth, resulting in additive effects that distinguish youth to a greater extent than is revealed by looking at factors independently. For example, youth with emotional disturbances are more likely than youth in many other categories to be male, African American, and from lower-income households where they tend to receive less family support for education than many other youth. They also are likely to have had their disabilities identified well into elementary school, have relatively poor social skills, spend much of their school day in general education classes, and receive a variety of social adjustment supports. In contrast, youth with visual impairments as a group are comprised of a higher proportion of girls, students who are white, and those from higher-income households with positive expectations for the future. Like students with emotional disturbances, they also spend a high percentage of their school day in general education classes and receive accommodations and supports appropriate to their disability.

NLTS2 findings suggest that students with these two profiles have dramatically different prognoses for the future. For example, the probability of the boy with an emotional disturbance described above being subject to disciplinary action at school is 59 percentage points higher than for the girl with a visual impairment, and his likelihood of criminal justice system involvement is 42 percentage points higher. The boy with an emotional disturbance also is likely to miss 18 more days of school than the girl with a visual impairment, and there is a 12-percentage-point difference in the likelihood of these two hypothetical youth being employed in high school, favoring the boy with an emotional disturbance. These findings reinforce the importance of considering the entirety of a youth's characteristics, background, and experiences in developing the relationships, instructional methods, services, and supports that will best help them succeed.