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# OVERVIEW OF FINDINGS FROM WAVE 1 OF THE SPECIAL EDUCATION ELEMENTARY LONGITUDINAL STUDY (SEELS)

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# AN OVERVIEW OF FINDINGS FROM WAVE 1 OF THE SPECIAL EDUCATION ELEMENTARY LONGITUDINAL STUDY (SEELS)

*"In America, no child should be left behind. Every child should be educated to his or her full potential."*

President George W. Bush (2001)

With these words, President Bush encapsulated our national commitment to education and our education agenda, embodied in the *No Child Left Behind Act of 2001* (NCLB). NCLB continues and intensifies more than 20 years of efforts to improve American education. NCLB creates new accountability benchmarks for schools and school districts that mandate annual increases in the number of students performing at proficiency levels or higher by 2013. Of particular importance for students with disabilities is the fact that, for the first time, their performance is explicitly addressed in NCLB through their designation as one of the subgroups for whom schools are responsible.

Although "no child left behind" has only recently become the law of the land, the spirit behind it has been the foundation of federal special education legislation and policy for more than 25 years. Since 1975, when P.L. 94-142, the *Education of All Handicapped Children Act* (EHA), was passed, federal legislation and policy have been pivotal in moving children and students with disabilities into the mainstream of public education so that they are better able to achieve their full potential, the ultimate goal of our education system.

In the years since P.L. 94-142, federal special education legislation has reflected demographic, social, economic, and political changes in our country, as well as lessons learned from serving an increasingly diverse student population. By 1997, EHA had evolved into the *Individuals with Disabilities Education Act* (IDEA), and that year it underwent another significant reshaping in the process of congressional reauthorization. The ensuing IDEA '97 (P.L. 105-17) recognized the importance of having solid information on the experiences and achievements of students with disabilities as a foundation for improving practice and accountability within schools. The legislation authorized the "production of new knowledge" [Sec. 673(b)(1)] through a variety of federal activities, including "producing information on the long-term impact of early intervention and education on results for individuals with disabilities through large-scale longitudinal studies" [Sec. 673(b)(2)(H)].

In carrying out the responsibility for producing new information on long-term impacts of education for students with disabilities, the Office of

Special Education Programs (OSEP) of the U.S. Department of Education is implementing a portfolio of longitudinal studies that span the age range of children and students with disabilities. The Special Education Elementary Longitudinal Study (SEELS), a part of that portfolio, focuses on the characteristics, experiences, and outcomes of elementary and middle school students with disabilities nationally. Over a 6-year period, the study is collecting data in three waves in order to document multiple dimensions of the experiences and achievements of those students as they transition from elementary to middle and middle to high school. Information from SEELS represents students with disabilities as a group nationally and students in each of the 12 federal special education disability categories.

Findings from Wave 1 of SEELS address four broad research questions:

- What are the characteristics of elementary and middle school students with disabilities in terms of individual and household demographics[1] and their disabilities[2] and functioning?[3]
- What are the experiences of students with disabilities in their nonschool hours, in terms of after-school care, interactions with friends, and participation in extracurricular activities? [4]
- What are the characteristics of their school programs and language arts classroom experiences, and how do they differ between students whose instruction is in a general education class and those whose instruction is in a special education class?[5]

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[1] Reported in Wagner, Marder, & Blackorby, (with Cardoso.) (2002). *The children we serve: The demographic characteristics of elementary and middle school students with disabilities and their households*. Menlo Park, CA: SRI International. Available at http://www.seels.net/designdocs/SEELS_Children_We_Serve_Report.pdf

[2] Reported in Wagner, & Blackorby, (2002). *Disability profiles of elementary and middle school students with disabilities*. Menlo Park, CA: SRI International. Available at http://www.seels.net/designdocs/SEELS_disability_profile.pdf

[3] Reported in Blackorby, Wagner, Cadwallader, Cameto, Levine, & Marder, (with Giacalone) (2003). *Behind the label: The functional implications of disability.* Menlo Park, CA: SRI International. Available at http://www.seels.net/designdocs/SEELS_FunctionalSkills.pdf

[4] Reported in Wagner, M., Cadwallader, T. W., Newman, L., Garza, N., & Blackorby, J. (with Guzman, A.). (2002). *The other 80% of their time: The experiences of elementary and middle school students with disabilities in their nonschool hours*. Menlo Park, CA: SRI International. Available at http://www.seels.net/designdocs/Wave_1_components_1-7.pdf

[5] Reported in Blackorby, J., Wagner, M., Cameto, R., Marder, C., Levine, P., Chorost, M., & Guzman, A. (2004). *Inside the classroom: The language arts classroom experiences of elementary and middle school students with disabilities*. Menlo Park, CA: SRI International.

- How do students with disabilities fare in the domains of school engagement, academic performance, social adjustment, and independence, and what factors relate to more positive achievements in these domains? [6]
- How do these factors differ for students with different disabilities and demographic characteristics?

These questions are addressed by using data collected from the following sources:

- **Parents.** In telephone interviews conducted in 2000, parents reported on such topics as the activities of students outside of school (e.g., getting together with friends, after school care), students' functioning (e.g., social skills, self-care skills), household characteristics (e.g., income), and their expectations for their children's future.
- **Students.** In-person assessments were conducted with students during the 2000-01 school year. These assessments generated standardized test scores in reading and mathematics, phonemic awareness, and oral reading fluency and collected data on students' academic and social self-concept and their attitudes toward school.
- **School staff best able to describe students' overall school programs and performance.** A mail questionnaire conducted in the 2000-01 school year generated information on absenteeism; tested grade levels in reading and mathematics; suspensions, expulsions, and disciplinary actions; course-taking; grades; and accommodations and services provided students as part of their school programs.
- **Teachers of language arts classes.** A mail questionnaire administered in the 2000-01 school year and completed by students' primary language arts teacher collected information on instructional goals and methods, accommodations, and student performance and behavior in such classes.
- **School staff able to describe students' schools.** A mail questionnaire administered in the 2000-01 school year collected information on the characteristics of schools attended by students with disabilities, including their student bodies, resources, and policies.

Highlights of the information SEELS obtained from these sources are described below as they relate to the research questions addressed in Wave 1.

[6] Reported in Blackorby, Wagner, Cameto, Davies, Levine, Newman, Marder, & Sumi, (with Chorost, Garza, & Guzman.) (2004). *Engagement, academics, social development, and independence*: *The achievements of elementary and middle school students with disabilities.* Menlo Park, CA: SRI International.

## Characteristics of Students with Disabilities

Understanding the individual characteristics of students with disabilities is a crucial foundation for serving them well. Students approach their educational experiences from a complex history and background that is shaped by demographic characteristics, such as age, gender, and ethnicity, and by family background and circumstances, such as parents' education, expectations, and household economic status. These factors help structure the involvement of students at home, at school, and in the community. Thus, they are essential elements of the context for many of students' major life experiences.

### Individual and Household Characteristics

**Primary disability.** In the 1999-2000 school year, students who received special education services constituted 11% of all students between the ages of 6 and 13 who were enrolled in school. About three-fourths were classified as having either learning disabilities or speech/language impairments as their primary disabilities. An important implication of this distribution of disabilities is that findings for students with disabilities in this age group as a whole are heavily influenced by the experiences of students with these two types of disabilities. Another 9% of students were classified with mental retardation, 6% with emotional disturbances, and 5% with other health impairments. Students in every other disability classification accounted for fewer than 2% of all students with disabilities.

**Age.** Wave 1 parent-reported data represent children who were 6 through 13 years old when data were collected; however, most students for whom data were collected were in the 8- to 11-year-old age range. School-reported data represent students who were ages 7 through 14 in the 2000-01 school year. The younger age cohorts have large proportions of students with speech/language impairments. However, students in this category discontinue special education services at much higher rates than those in other categories so that they are a smaller proportion of each succeeding age cohort. At the same time, learning disabilities, emotional disturbances, and attention deficit or attention deficit/hyperactivity disorders (ADD/ADHD) are increasingly prominent among older students.

**Gender.** On the whole, two-thirds of elementary and middle school students with disabilities are boys; however, boys are little more than half of students with hearing impairments, mental retardation, or visual impairments, yet they are 80% or more of students with emotional disturbances or autism.

**Racial/ethnic background.** The representation of racial/ethnic groups among students receiving special education differs in some ways from the general population of students. White students represent similar proportions of students with disabilities (61%) and peers in the general

population (63%). African-American students are somewhat overrepresented among students with disabilities (19% vs. 17% in the general population) and Hispanic students are somewhat underrepresented (14% vs. 17% in the general population). African-Americans comprise comparatively large proportions of students with mental retardation (35%), emotional disturbances (27%), traumatic brain injuries (28%), and multiple disabilities (31%).

**Household characteristics.** The characteristics of the households in which elementary and middle school students with disabilities grow up are similar to those of the general population of students in several respects:

- The living arrangements of the large majority of students with disabilities closely resemble those of students in the general population, as does the average size of the households in which they live.
- Parents of students with disabilities do not differ from parents in general in their ages at the time of data collection or at the time of their child's birth. Neither do they differ in their rates of employment.

However, there are important differences between the two populations that can present significant challenges for students, apart from their disabilities.

- At 24%, the rate of poverty among the households of students with disabilities is higher than the 16% found in the general population. Despite the fact that parents are about equally likely to be employed, households of students with disabilities are much more likely to have low and very low incomes.
- The higher rate of poverty among students with disabilities, and factors that can accompany poverty and put children at risk, are particularly evident among children of color, especially African-American children with disabilities. They are significantly more likely to be poor and less likely to be living with two parents than other students with disabilities; their rate of foster care placement is more than three times that of white or Hispanic students with disabilities. Their households average fewer adults and more children. Mothers of African-American children with disabilities are significantly more likely than those of white children to have given birth as teens, to have not completed high school, and to be unemployed.
- An intermingling of poverty, race/ethnicity, and some kinds of disabilities is evident among children represented in SEELS. For example, students classified with mental retardation have a relatively high proportion of minority students, the highest proportion of low-income students, and the highest proportion of students with other risk factors, such as parents with low levels of education.

## Disability Profiles

**Additional disabilities.** According to parents, within each primary disability classification, there are students who also have one or more of virtually every other kind of disability. On average, parents report 1.5 disabilities for students.

**ADD/ADHD.** Parents of 27% of students with disabilities report their children have been diagnosed with attention deficit or attention deficit/hyperactivity disorders (ADD/ADHD). This disability is mentioned by parents of 70% of students in the other health impairment category, the category in which students whose primary disability is ADD/ADHD generally are included. The incidence of reported ADD/ADHD also is particularly high among students with emotional disturbances (65%). Parents of boys are significantly more likely to report that students had ADD/ADHD and, therefore, a health impairment, than parents of girls.

**Parents' views of their children's disabilities.** When parents report all of the disabilities or learning problems of their children who receive special education services, sometimes their views are incongruent with the primary disability category assigned by the school and used in SEELS to classify students. For example, only 65% of students who were assigned to the learning disability category have parents who report that their child has a learning disability and only 30% of those in the mental retardation category are reported by their parents as having mental retardation (parents are more likely to report that youth in the mental retardation category as having learning disabilities—45%). Several factors could account for this difference, including some disabilities being perceived by parents as more acceptable than others, a lack of familiarity by some parents with the precise meaning of various disability categories, misassignment to a category on the part of schools, changes over time in what is considered the primary disability, and differences between the family and school in which of students' disabilities are "primary" (i.e., have the greatest impact at home vs. at school).

**Age at identification of and first service for disability.** Parents of almost half of children with disabilities report that children's disabilities were diagnosed before age 5, but only half of those children received services before age 5. The majority of children with disabilities first were served when they reached school, even when their disabilities had been identified much earlier. Students of color are particularly likely to have had their disabilities first identified and treated when they were older.

**Early services for disabilities.** Thirty percent of children whose disabilities were diagnosed before age 3 received early intervention services for them; almost half of those whose disabilities were identified before age 6 participated in preschool special education.

## Students' Functioning

Health, physical functioning, vision, hearing, and communication all influence students' abilities to learn, interact with others, and participate successfully in the educational process.

- Parents report that significant minorities of students are not in good health (8%), have a hearing loss (11%), do not see normally even after visual correction (20%), and have some restriction in the use of their arms, hands, legs or feet (20%). Forty-three percent are reported not to speak as clearly as other students the same age.
- Functional limitations of some kinds are apparent for students in disability categories that are not directly related to those limitations. For example, 43% of students with mental retardation are reported to have limitations in the use of one or more limbs.
- African-American students are more likely to be reported by parents as in only fair or poor health and to have both hearing and visual problems than white students, even though they are no more likely to be reported as having a diagnosed hearing or visual impairment.
- Parents' reports of students' disabilities and functioning demonstrate clearly that the multiple dimensions of disability include, but go beyond, the designation for which students receive special education. For example, students within the primary disability classification of speech/language impairment all shared some limitation in that functional domain. However, their range of functioning was quite broad; 60% were reported to speak normally, whereas 7% had significant speech limitations or did not speak at all. And their speaking ability was not their only limitation; for example, 12% had some reported physical limitations and 9% were reported to have a hearing loss. Having additional functional limitations was characteristic of every other disability category as well.
- Virtually all students with disabilities have a reported aptitude in one or more areas; for example, about 60% are reported to have strong creative or artistic abilities, 80% reportedly have strong computer skills, and more than 90% are reported to have a good sense of humor. In fact, for many students, the total number of strengths is greater than the number of reported challenge areas, providing a foundation on which schools can build in helping students succeed.
- Some measures of functioning illustrate the developmental nature of many skills. Functional cognitive skills (e.g., telling time, counting change) and self-care abilities (i.e., dressing and feeding oneself independently) are higher among older students, as are responsibilities for household chores (e.g., fixing ones own breakfast or lunch, doing laundry).

Given the great range in students' functioning, educational programs will need to be flexible and carefully tailored if they are to meet the diverse learning needs it implies. Indeed, these findings reaffirm the original cornerstones of IDEA and special education values and practice generally—students are entitled to an individualized education program that is designed specifically to meet their needs. This principle of individualized education remains as powerful today as it was in 1975.

## Students' Activities in Their Nonschool Hours

A look at the activities of elementary and middle school students with disabilities in their nonschool hours, including family supports for education, friendship interactions, and extracurricular activities, reveals both active parents and active students.

### Parents' Expectations and Support for Education

Parents have high expectations for their children's educational attainment and are actively engaged in supporting their children's learning at home.

- The majority of students with disabilities are expected by their parents to graduate from high school with a regular diploma (93%) and to go on to postsecondary education (74%). Among students represented in SEELS, family expectations generally are lower for older than for younger students. Consistent with this, expectations are lower for secondary-school-age students with disabilities than for students in the SEELS age range.
- Parents are the most optimistic for students in the high-incidence categories of learning disabilities and speech/language impairments and for those with sensory impairments. In contrast, expectations are markedly lower for students with cognitive impairments that significantly challenge learning.
- More than 90% of students have parents who report talking to them regularly about school; providing a quiet, appropriate place for them to do homework; and having household rules about doing homework, limiting television, and having a specific bedtime.
- More than half of students have parents who help them with homework at least five times a week, a rate of frequent homework help that markedly exceeds that of the general student population (16%).
- A minority of children appears not to experience the positive supports and activities that are reported for most. About one in six students have generally low overall family support for learning, including almost one in ten who are never read to at home, 4% who have homework but who are helped with homework less than once a week,

3% with no appropriate place to do homework, and 2% whose parents rarely or never talk with them about school.

- Families more actively support the learning of younger students with disabilities in several ways, including reading with them and helping with homework. An exception is that older students are more likely than younger students to be provided with a computer at home. In addition, household rules are more prevalent for older students, particularly with regard to grades and doing household chores. Younger students with disabilities have fewer rules in general, and they are more likely to pertain to a specific bedtime and to watching television.
- Parents do not hold different expectations for their sons with disabilities than for their daughters, nor do they establish different rules for behavior at home or offer different kinds or levels of family support for learning.
- Lower-income students generally are subject to lower expectations for educational attainment than their peers from wealthier households. Despite lower overall expectations, parents of lower-income students with disabilities support their children's learning in many ways at rates similar to those of wealthier students. Economic differences do not translate into differences in the rates at which parents report frequently reading to children or helping them with homework. Exceptions are that parents of lower-income students are less likely to talk regularly with their children about school and, not surprisingly, are less likely to provide a computer at home. Among those who have a home computer, lower-income students are less likely to use it for educational purposes than their wealthier peers. However, lower-income students are more likely to be subject to household rules about attaining a specific grade point average than are other students.
- There are no significant differences between racial/ethnic groups in parents' expectations for students' enrollment in postsecondary education, in levels of family support for learning at home, or in the frequency with which students have rules regarding homework, bedtime, or the amount of television they can watch. In contrast, graduating from high school with a regular diploma is markedly more likely to be considered a sure thing by parents of white students than those of African-American or Hispanic students. White students also are subject to fewer rules at home than the other two groups, particularly rules about attaining a particular grade point average.

## Students' Extracurricular Activities

Children are active in their nonschool hours with both personal friendships and organized extracurricular activities.

- More than 90% of students are supervised after school, either at home or in programs of various kinds.
- More than 90% of students with disabilities see friends outside of school at least weekly and are invited to other children's social activities.
- Three-fourths of students with disabilities participate in some type of extracurricular activities, including lessons or classes outside of school (30%), various groups sponsored by the school or community organizations (51%), or volunteer activities (30%). Rates of extracurricular activity approach of those of the general student population.
- However, not all children with disabilities have positive experiences in their nonschool hours. Six percent of elementary and middle school students with disabilities typically have no adult supervision after school. More than one in four students participate in no organized extracurricular activities, and 1% have no interactions with friends of the kinds explored in SEELS.
- Students with different kinds of disabilities demonstrate differences in some of the activities that fill their nonschool hours, but are quite similar in others. For example, large majorities of students in all disability categories are involved with friends. They get together outside of class with friends at least weekly, and are invited to play at other students' homes, attend birthday parties, or take part in other students' social activities. However, autism and deaf-blindness are disabilities that appeared to present significant obstacles to these kinds of interactions.
- Students participate in lessons or enrichment classes outside of school at fairly uniform rates, regardless of disability. However, there is much wider variation in the extent to which students take part in both school-sponsored and community-sponsored groups. Students with mental retardation; multiple disabilities, including deaf-blindness; autism; or traumatic brain injuries are less likely than other students to take part in group activities.
- Older students have markedly different experiences after school. They are much more likely than younger students not to go directly home after school and, when they do go home, to have no adult supervision.
- Where students go after school, if they do not go home, also differs between age groups. Younger students are more likely to attend after-school childcare programs, whereas older students are more likely to participate in extracurricular activities. Younger and older students are equally involved in after-school group activities, but younger students are more likely to take part in groups sponsored by community organizations and older students in groups sponsored by their schools.

This may reflect the greater array of extracurricular activities sponsored by middle schools relative to elementary schools.

- There are no important differences in the degree to which older and younger students interact with friends, but the form of interaction differs; telephone calls between friends and using a computer for email and chat room participation are more common among older students.
- Boys and girls do not differ in their overall level of involvement with friends, but boys are markedly more likely than girls to get together with them outside of class, whereas girls are more likely to interact with friends by phone. Similarly, boys and girls with disabilities are equally likely to be involved in extracurricular activities but to choose different kinds of activities. Boys are much more likely to be reported by parents as having a particular aptitude for athletics and to be involved with sports teams as their most common extracurricular activity. In contrast, parents of girls with disabilities report more often that their daughters have an aptitude for the performing arts; consistent with this, taking lessons and participating in performing groups are more common extracurricular activities among girls with disabilities than boys.
- Friendship interactions of many kinds are less common among lower-income students. Although the majority of students in all income groups interact with friends, students in the lowest-income group are more likely to be reported "never" to visit with friends outside of class, "rarely" or "never" to receive phone calls from them, and not to be invited to other children's social activities. Lower-income students also are less likely to participate in extracurricular activities. When they do participate, they are less likely to take part in sports teams, scouting, or performing groups—activities for which financial barriers may be present.
- White students are more likely than others to be home after school without adult supervision, and they are the most active participants in organized extracurricular activities. Hispanic students generally are less involved with individual friendships than other students; they are more likely than white students, for example, to be reported "never" to see friends outside of class, "rarely" or "never" to get phone calls from friends, and not to be invited to other children's social activities. They also are the least likely to take part in volunteer or community service activities. Computer technology is particularly prominent in the social interactions of Asian and Pacific Islander students; among those who have a home computer, they are the most likely to use it to participate in email or chat room interactions. Participation in extracurricular group activities is less common for this group than other students.

## Language Arts Classroom Experiences

Language arts is a long-standing core academic content area for elementary and middle school students, both with and without disabilities. Because of numerous reports of poor student performance with regard to language arts skills, the link of literacy to school and workplace success, and the potential of direct intervention to improve those skills, reading and language arts are the focus of many legislative, policy, and practice reforms.

Although language arts instruction plays an important role in the education of all students, among students with disabilities, it varies dramatically between students whose primary language arts instruction takes place in a special education setting and those who are instructed in general education classrooms. Students in the two settings differ markedly in the needs and abilities they bring to their learning experiences and in the instruction and support they receive in those settings. However, even among students who share a given instructional setting, differences in instruction and support are apparent for those who differ in their primary disability, grade level, and other factors as summarized below.

### Instructional Settings

- Almost all elementary and middle school students who receive special education services are general education students as well—virtually all spend some part of their school day in general education classes. Those who spend any part of their school day in those classes, on average, spend the majority of their day there. Thus, the "shared responsibility" of general and special education for achieving positive results for students with disabilities is readily apparent in their actual school experiences.
- Fifty-five percent of elementary and middle school students with disabilities receive their primary language arts in general education classes; the remainder receive it in special education settings—usually resource rooms, but also self-contained special education classes or through one-to-one instruction.

### Classroom Contexts

- Special education language arts classes are less than half the size of general education classes, containing an average of 10 students. General education classes average 23 students, among whom three receive special education services.
- Students who represent the range of student characteristics, including ability levels and demographic backgrounds, are found in both settings. As a group, however, students who receive their primary

language arts instruction in special education settings have a broader range of learning challenges than their peers with disabilities in general education classes. For example, students with more apparent cognitive and other learning challenges (e.g., those with mental retardation, autism, or multiple disabilities) are more likely to be in special education settings. Their functional abilities in many domains are more limited, including self-care, social, communication, and functional cognitive skills, and they are more likely to be in poorer health.

- In addition to greater learning challenges, compared with students with disabilities in general education classes, students in special education settings are more likely to be living in poverty and in households with only one parent, with another person with a disability, and with a head of household who has a low level of education.
- Special education language arts classrooms are more than twice as likely as general education language arts classrooms to include instructional aides. Having fewer students and more instructional staff, language arts classes in special education settings are more likely to include individual and small-group instruction than are general education classes.

## Instructional Practices

- Students with disabilities receive instruction in a variety of groupings, including whole-class, small-group, and individual instruction, with frequent whole class instruction being much more likely to occur in general education than in special education language arts classes (75% vs. 49%).
- For about half or more of students with disabilities, general education language arts instruction frequently includes activities such as discussing in class, answering questions, taking tests, reading literature and informational materials, practicing vocabulary and phonics, and working independently. Students in special education language arts classes are less likely to work independently frequently but more likely to interact with others frequently by answer questions and by participating in discussions than their peers with disabilities in general education classes.
- Although a diversity of general instructional activities and reading-related activities occur in both settings, special education settings exhibit a greater emphasis on skills-oriented instruction, such as sight reading and phonics or phonemic skills, in contrast to the greater emphasis in general education classes on reading literature and informational materials and on writing. Further, although class work, tests, and special projects are the most commonly-used means to determine grades in both settings, special education teachers place

greater emphasis on in-class activities and less emphasis on attitudes or attendance in determining students' grades than their peers who teach general education classes.

- Students receive an average of six accommodations or learning supports in general education language arts classes, such as increased time for tests or assignments, different or modified materials, tutors, and computer software. Peers in special education classes average 10 such accommodations or learning supports.
- Nearly all general education language arts teachers who have students with disabilities in their classes receive some form of information about them when they enroll, with information about students' IEP goals and academic and behavioral needs being the most common. Direct supports also are provided many teachers, with consultation from a special educator being most common. However, one in five students with disabilities in general education settings have teachers who report they do not receive adequate support to meet students' needs and almost one-third of these students have teachers who report they are not adequately trained to teach students with disabilities.

## Disability Differences within Settings

Some kinds of language arts classroom experiences are notably different among students with different disabilities who share the same setting. These differences suggest that the learning needs of students with different kinds of disabilities are reflected in students' instructional experiences, regardless of setting.

- For example, some kinds of resources to support students in general education classes vary markedly for students with different disabilities. Whereas half of students with traumatic brain injuries have special education teachers in their general education classrooms, no more than 20% of students with most other types of disabilities do. Similarly, two-thirds of students with autism and about three-fourths of those with multiple disabilities have classroom aides, one-to-one instructional assistants, or other specialists in their general education classrooms, but only from 25% to 42% of students with other types of disabilities have such staff in their classrooms. Interpreters or readers are most often provided to students with hearing impairments.
- Instructional practices and accommodations also differ in some ways for students with different disabilities in the same setting. For example, more than half of students with multiple disabilities in general education classes receive individual instruction frequently, whereas only one in four students with speech impairments do. More than half of students with speech impairments in general education language arts classes work independently, participate in class discussions, or respond orally to questions frequently, whereas about

one-fourth of students with mental retardation in that setting participate in those activities frequently. Thus, schools may attempt to reflect the diversity of students' needs, not only in their placement decisions but also in individual teacher practices within general and special education settings.

### Demographic Differences within Settings

As with disability differences, many of the differences in instructional experiences of students who vary in demographic factors are related to the differences in their likelihood of being in general or special education settings. However, some differences within settings remain.

- In general education classes, low-income and African-American students are more likely than wealthier and white students to receive frequent individual instruction. They also are more likely than white students to concentrate on learning and practicing vocabulary. In these same settings, Asian or Pacific Islander students are much less likely than white students to engage frequently in most of the skill-building language-arts activities.
- Grade-level differences also are apparent. In both general education and special education settings, skill acquisition becomes less important in the middle school years. Also, class size increases in the upper grade levels, as does the average number of special education students in general education classes. Further, special education settings increasingly rely on whole-class instruction as students move to middle school.

Thus, for some students with disabilities, language arts instruction closely resembles the instruction of their classmates in general education, and only modest numbers of supports are necessary. For others, language arts instruction occurs in special education settings with more individual attention and more extensive support. The diversity in language arts instruction points to the efforts of schools to accommodate a wide range of student needs.

## Student Outcomes in Multiple Domains

A primary objective of SEELS is to depict how students with disabilities are doing in their elementary and middle school years. Those years are a period of rapid development, during which students move from beginning the process of formal education to preparing for the demands of high school and adolescence. In important ways, these years provide the formative experiences and the skills that will contribute to students' later success. It also is during this time that intervention to address learning or behavior problems is believed to have the greatest likelihood of success in mitigating the extent and effects of problems. SEELS provides data about how students with disabilities in this age range are doing on a number

dimensions, including school engagement, academic achievement, social adjustment, and emerging independence.

The question of whether elementary and middle school students with disabilities are making progress or falling behind is difficult to answer with a single statement. There are both indications of real achievement and causes for concern apparent across the outcome domains.

## School Engagement

Most students with disabilities are reported by parents to like school, and about 40% describe themselves as highly motivated students. Few are excessively absent from school, and poor health is a common reason when they are. Language arts teachers give high ratings on classroom engagement to more than half their students with disabilities.

## Academic Achievement

**Course grades.** Reports of students' overall grades would lead most students with disabilities and their parents to conclude that students are making progress both in the curriculum and the accomplishment of IEP goals.

- High grades are common for students with disabilities; one-third receive "mostly As or Bs", according to parents.
- Only 4% are reported to be getting "mostly Ds" or below.

**Understanding reading passages.** [7] In contrast to teacher-given grades, students' abilities to understand passages they read indicate they are seriously behind their peers in the general population.

- Although some students with disabilities score above the 50$^{th}$ percentile in passage comprehension, nearly two-thirds score below the 25$^{th}$ percentile established with national norms.
- However, students in different disability categories compare with general education peers quite differently. Students with visual or speech impairments have test scores that resemble those of the general population. On the other hand, students with mental retardation, autism, or multiple disabilities have test scores that overwhelmingly cluster at the low end of the range.
- Among the largest group of students receiving special education services—those with learning disabilities—3% score above the 75$^{th}$

[7] SEELS used research editions of the Woodcock Johnson III (WJ3) to conduct standardized assessments of reading and mathematics abilities (Woodcock, McGrew, & Mather (2001)). The WJ3 is an individually administered test with excellent technical characteristics that has current norms and is used in many school districts to assess students for eligibility for special education and for diagnostic purposes.

percentile, whereas almost three-fourths score below the 25th percentile.

- There is noteworthy within-disability-category variation in passage comprehension, as some students in every disability category perform within each performance quartile.

**Math calculation.** As a group, students with disabilities perform considerably better in mathematics calculation than they do in reading passage comprehension, yet the pattern of results across disability categories is similar for the two kinds of skills. Student performance in calculation still suggests that there is a considerable gap between students with disabilities and their peers in the general population.

- Thirty percent of students with disabilities score above the 50th percentile in math calculation, whereas 40% score below the 25th percentile.
- Students with visual or speech impairments have higher scores in calculation than peers in other disability categories, with more than 47% of such students scoring at or above the 50th percentile. In contrast, students with mental retardation or multiple disabilities have the lowest scores, with more than 75% scoring in the lowest quartile.
- Although students in all categories do better in calculation than passage comprehension, the difference is greatest among students with learning disabilities or speech, visual, or hearing impairments. Students in these categories have scores that average 12 percentile points better in math calculation than in reading comprehension.

**Grade-level discrepancies in reading and mathematics.** Teachers' estimates of reading and math ability for students with disabilities show they are, on average, just over a year behind grade level in both their reading and mathematics abilities. Differences across disability categories in these measures of reading and math generally mirror those of standardized test scores in those subjects. Students with speech and visual impairments are closest to grade level, averaging from .4 to .8 years behind. Students with mental retardation are about 3 years behind grade level in both subjects, whereas those with multiple disabilities are 2.2 and 2.6 years behind in reading and math, respectively. These skill deficits in core academic subjects do not bode well as students encounter increasingly difficult content as they move towards secondary school and beyond.

## Social Adjustment

- In the social domain, most students with disabilities are considered to have fairly good social skills, according to parents; more than 80% are rated in the medium or high range on a scale of overall social skills.

- Although most students with disabilities have relatively good social skills, they are still scored lower than students in the general population on many social skills measures, which is a cause for concern. Poor social skills are related to a variety of indicators of poor outcomes across the outcome domains.
- At school, even though parents report that 90% of students with disabilities get along with other students, and 50% follow directions in class, more than a third were subject to disciplinary actions at school in the 2000-01 school year.

## Emerging Independence

Students with disabilities show signs of emerging independence in their personal behaviors, at home, and in the community. They are beginning to demonstrate important self-determination skills; parents report that more than one-third persists in completing tasks "very often." The vast majority students with disabilities are able to take care of their personal care needs, and about half are reported by parents to be able to do common cognitive processing tasks, such as counting change and telling time, "very well." Nonetheless, these activities remain challenging to some degree for about half of students with disabilities.

Students with disabilities differ from one another terms of their confidence in their effectiveness as learners. Approximately one in four students with disabilities have a strong sense that their efforts at school affect such things as their grades, a concept referred to as "locus of control as a learner." However, a sizeable percentage (21%) self report low locus of control scores and are less confident in their ability to influence their success at school.

## What Makes a Difference?

Students with disabilities experience the full range of possible experiences across multiple outcome domains, from achievement that is comparable to general education peers to significant struggles. What accounts for this variation in experience? What factors help explain why some students with disabilities do well and others are not succeeding in meeting the challenges they face? Multivariate analyses suggest that characteristics of students themselves, as well as of their households and their school programs and experiences all come into play in explaining the diversity of experiences of students with disabilities.

### Disability and Functioning

**Disability characteristics.** Both the nature of a students' primary disability and the functional limitations it imposes independently influence the outcomes he or she experiences. Yet different disabilities have different impacts across the outcome domains. For example, students

whose functional abilities are similar have the following kinds of differences in outcomes associated with the nature of their disability:

- Relative to students with learning disabilities, those with visual impairments experience more positive outcomes at school, with higher locus of control and standardized test scores in reading and math, but more negative social outcomes, in terms of having friends and belonging to groups, apart from other differences between students.
- Like students with visual impairments, those with orthopedic impairments generally succeed at school, relative to those with learning disabilities, but their disabilities relate to less social involvement with extracurricular groups and friends.
- Students with emotional disturbances tend to do better on test scores but have lower grades than students 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 negative consequences for behavior at school, in terms of disciplinary actions.
- Students with mental retardation have very similar outcomes to those with learning disabilities across most domains, independent of differences captured in the functional skills measures discussed below. An exception is that the cognitive nature of the disability is reflected in their reading and mathematics skills, which are significantly farther behind grade level than those of students with learning disabilities. However, there are no significant differences in grades related to having mental retardation vs. a learning disability, independent of other differences in functioning between students, including their placements in general and special education settings.

In addition to the nature of students' primary disabilities, SEELS also investigated the independent relationship to outcomes of having ADD/ADHD. Apart from other differences between students in their disability, functioning, or other characteristics, having ADD/ADHD is associated with several negative school-related outcomes, including poorer classroom engagement behaviors in special education settings, poorer grades, and a higher likelihood of being subject to disciplinary action. However, ADD/ADHD is not associated with lower academic performance; students with parent-reported ADD/ADHD are no more or less behind in reading or mathematics than are students without it. In fact, having ADD/ADHD appears to be positively associated with some social and independence outcomes; students with parent-reported ADD/ADHD are more active than others in extracurricular groups.

Two other characteristics of disability also are considered in SEELS multivariate analyses. The number of areas in which students experience functional limitations and the age at which their disabilities first were

diagnosed are considered proxies for the breadth or severity of students' disabilities and are expected to show similar relationships with poorer outcomes.

The breadth of disability, in terms of the number of areas (e.g., use of appendages, hearing, vision, communication) in which students have functional limitations is related to five outcomes and age of identification is related to three indicators. For example, having functional limitations in more areas is associated with lower motivation for schooling, lower likelihood of disciplinary actions, but also seeing friends less frequently. Dealing with the consequences of disability from an early age is related to lower classroom engagement in general education classes and lower motivation for schooling, as well as lower grades, but not lower test scores. These differences underscore the complex relationships between disability and achievements.

**Functioning.** As was the case with indicators of the breadth or severity of disability, various measures of students' functional abilities could be expected to relate in similar ways to outcomes, with higher skills being consistently associated with better outcomes. However, as was the case above, SEELS analyses show that different kinds of skills relate differently across the outcome domains in terms of both intensity and direction of relationship. For example:

- **Functional cognitive skills.** Somewhat surprisingly, higher functional cognitive skills are not related to better classroom engagement. They are, however, associated with higher academic achievement in both reading and math, as expected. The amount of increased academic performance associated with higher cognitive skills is three times larger among students with low self-care skills than among those with high skills. This pattern exists in the domain of locus of control as well. Finally, higher functional cognitive skills also relate to having more active friendships.
- **Self-care skills.** Although one might think that disabilities that limit students in managing basic self-care needs would have fairly pervasive negative affects on outcomes, SEELS analyses only partially support that conclusion. Relatively poorer self-care skills are associated with higher absenteeism, independent of other differences between students. However, as in the case of academics, the difference between having high and low self-care skills is conditioned by student cognitive skills. For students with high cognitive skills, having higher self-care skills actually has a negative and fairly strong relationship. In contrast, among students with low cognitive skills, increased self-care skills are positively associated with performance.
- **Social skills.** Social adeptness clearly would be expected to relate to better social adjustment outcomes, and it does. Students with higher social skills ratings by parents are significantly more likely to belong

to groups and see friends regularly, other factors held constant. At school, students with higher social skills have higher grades but they are absent more and have lower test scores in reading, reinforcing the notion that grades reflect more than academic ability.

- **Persistence.** The ability to persist with tasks to completion has beneficial effects for students in school. Those rated by parents as being more persistent also exhibit more engagement in classroom activities in all settings, and receive better grades than less persistent peers, other things being equal. This self-determination skill does not relate to academic abilities in reading and math, apart from other differences between students.
- **Students' general health.** This aspect of functioning is included in analyses of absenteeism and demonstrates one of the strongest relationships to that indicator of engagement of any factor. The strong relationship between health and absenteeism underscores the fact that absenteeism from school often is involuntary.

Taken together, these aspects of students' disability and functioning explain much of the variance in the outcomes assessed, although that is more the case for some outcome domains (e.g., independence) than others (e.g., academic performance). Yet characteristics of students apart from their disabilities also contribute to an understanding of variations in their outcomes, as noted below.

### Individual Demographic Characteristics

Several of the demographic characteristics that typically are examined in studying student outcomes in the general population, such as age, gender, or race/ethnicity, are intertwined with issues of disability. For example, students with speech impairments tend to be younger and students with emotional disturbances older than those in most other disability categories. Boys are much larger proportions of students with emotional disturbances or autism than those with other disabilities. African-Americans are disproportionately represented among students with mental retardation or emotional disturbances. For these reasons, simple bivariate descriptions of outcomes for students with disabilities who differ in age, gender, or race-ethnicity cannot be interpreted in a straightforward way. It is never clear whether it is age, gender, race/ethnicity, disability, or a combination of them that contributes to differences in outcomes observed. Multivariate analyses permit a disentangling of these factors, identifying their independent relationships with outcomes, holding constant the disability and other factors in the analyses.

**Age.** Even when students with disabilities are in the comparatively young 6- to-13-year-old[8] age range, differences in student age relate to some aspects of their outcomes, but in different ways and possibly for different reasons. For example, older students with disabilities exhibit a pattern of results indicating greater difficulty in several domains. Older students are less motivated at school and are more likely to receive disciplinary actions than younger peers. Analyses also reveal that older students tend to be further behind in their reading and math abilities and have lower test scores, which may suggest that the skills of students with disabilities do not develop at the same rate as those of students in the general population, so that with the passage of time, they fall farther behind. In the social domain, older students are more likely to belong to groups, but are less likely to spend time with friends than younger peers.

**Gender.** SEELS analyses illustrates a number of differences between boys and girls in several outcome domains. Independent of other differences, boys with disabilities experience greater challenges in engagement and locus of control, are absent more frequently, have poorer classroom engagement behaviors in special education classes, and are less motivated for school than girls. On the other hand, girls are both further from grade level in mathematics and have lower test scores in math calculation than boys.

**Race/ethnicity.** Not only is race/ethnicity intertwined with disability in that students of different racial/ethnic backgrounds are differentially represented across disability categories, it also is inextricably linked with household income. For example, among students with disabilities, the likelihood of living in poverty is almost three times as high for African-American or Hispanic students as for white students. In addition, both students with disabilities of color and those from lower-income households experience a tangle of other characteristics often associated with poor outcomes, such as single-parent families and low parent education.

However, multivariate analyses that include both race/ethnicity and household income indicate that race/ethnicity is independently related to a relatively small number of student outcomes, irrespective of disability, income, and other differences between students. Compared with white students with disabilities, both African-American and Hispanic students have higher motivation for schooling scores. However, the outcome patterns of these two groups diverge in other areas. Relative to white students with disabilities, African-Americans are farther behind grade level in mathematics and are more likely to be subject to disciplinary actions at school than white students with disabilities. In contrast, Hispanic students with disabilities tend to be less likely to participate in

[8] Students were ages 6 to 13 when Wave 1 parent interview data were collected and 7 through 14 when school questionnaires were distributed.

organized group activities than white students, independent of income and other differences between them. This different pattern of experiences of African-American and Hispanic students with disabilities cautions against considering "minority students" or "students of color" as a single group in assessing their outcomes relative to white students.

### *Household Characteristics*

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

**Household income.** SEELS analyses show a pattern of less positive outcomes for low-income students, holding constant other factors. The fact that students with disabilities are more likely to live in low-income households than students in the general population may help explain some of the difference in some outcomes between students with disabilities and those in the general population, apart from differences related to disability. Regarding school engagement, students with disabilities from lower-income households are more likely than wealthier peers to be absent from school, are less likely to demonstrate behaviors that indicate engagement in general education, and have lower locus of control scores. Their academic performance also is poorer; they have lower standardized test scores in reading, are farther behind grade level in reading and math, and more likely to receive poor grades that students with disabilities from wealthier households. Students from lower-income households are less likely to take part in organized group activities and are more likely to be subject to disciplinary actions at school, independent of other differences between them.

**Family support for education.** Students 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, benefit from that support or from other activities associated with it. Those students have better grades than students with less family involvement at school. They also are more likely to be actively involved in organized groups (many of which are at school) and with individual friendships. In contrast, family support for education at home (i.e., talking regularly about school and helping with homework, providing a computer for school work) is not related to many outcomes, controlling for other differences among students. The exception is that greater family support for education at home is negatively associated with grades, possibly because parents are more likely to provide homework help when students are doing poorly in school. Nevertheless, these findings reinforce the importance of parents' activities in support of their children in multiple domains.

**Family expectations for the future.** It is clear that the expectations parents hold for the future for their children with disabilities in part reflect

parents' experience with and perceptions of the ways those disabilities limit activities and accomplishments. However, SEELS findings suggest that, irrespective of the nature of students' disabilities and their levels of functioning, family expectations for the future also contribute to the achievements of students with disabilities.

Other things being equal, students with disabilities whose parents expect that they are more likely to go on to postsecondary education after high school have higher grades and test scores in reading and are closer to grade level in their reading and math abilities than students whose parents do not share that optimism for the future. Students with disabilities whose parents hold high expectations for educational achievement also are more likely to affiliate with organized groups, many of which may be sponsored by or meet at school.

### *School Programs*

Although individual and household factors help shape outcomes for students with disabilities, schools do make a difference for students, particularly in the realm in which they are active partners—school engagement and academic performance. Course taking, curricula; instruction; services, accommodations and supports; and other education-related experiences all figure into students' school engagement and academic performance. In fact, SEELS multivariate analyses have been most successful with regard to the most direct measure of student learning analyzed in SEELS—standardized test scores. School factors explain about 25% of the variation in reading as well as math performance. What schools do can matter for students with disabilities.

**Enrollment in general education courses.** Controlling for differences in the disability, functioning, demographic, and household factors discussed thus far, spending more time in general education classrooms relates independently to the engagement, achievement, and social adjustment of students with disabilities at school. 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 have higher test scores in those same areas than students who take fewer general education courses, irrespective of other differences between them. Outside of class, students appear to accrue benefits in terms of a higher likelihood of taking part in extracurricular group activities at school or in the community.

**Class size.** SEELS findings offer mixed support for the notion that smaller classes facilitate student learning. Students with disabilities in larger classes have lower grades, but tend to be closer to grade level in their reading and math abilities than students who are in smaller classes, irrespective of other differences in the amount of time they spend in general education or other aspects of their school programs or disability,

functioning, demographic, or household characteristics. On the other hand, in special education language arts settings, students in larger classes have lower engagement scores, independent of other factors.

**Other services, accommodations, and supports.** Results of SEELS multivariate analyses illustrate the difficulty of identifying benefits that may accrue from receiving services, accommodations, or supports while students are receiving them. Students with disabilities are provided services (e.g., tutors or mental health services), accommodations (e.g., more time to take tests, use of a reader or interpreter), or supports (e.g., a behavior management plan, books on tape) because they are deemed unable to perform up to their potential without them. Their limitations can be exhibited as negative outcomes, such as poor behavior or poor grades. Thus, when receipt of services, accommodations, or supports is measured at the same time as the outcomes on which students perform poorly enough to qualify for them, a negative relationship between interventions and outcomes often occurs. These negative relationships are found in SEELS analyses of the relationships of a variety of academic and social supports. For example, receiving a greater number of instructional or testing modifications is related to poorer classroom engagement behaviors in general education, lower locus of control scores, lower than average grade level performance in both reading and math, and lower test scores. Similarly, receiving a variety of social adjustment supports is related to lower classroom engagement ratings in both general and special education, a higher likelihood of being subject to disciplinary actions, but also to closer to grade level performance in reading and math.

On the other hand, 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 suggests that tutors are helping students with disabilities keep up with peers who do not receive (and presumably do not need) tutoring. Similarly, receiving an array of communication or presentation accommodations is not associated with academic achievement. Thus, SEELS has had mixed success in overcoming the limits of analyses of intervention effectiveness that are conducted at a single point in time. Subsequent waves of SEELS data will permit the longitudinal analysis that is more appropriate to the question of intervention effectiveness.

**Curriculum modification.** Modifications made to curricular content or presentation format represent another mechanism for individualizing instructional materials for students with disabilities to provide greater access to the general education curriculum. The extent of curricular modification relates to student outcomes in the same way as other accommodations. The need for and receipt of greater modification is associated with lower engagement in special education, below grade level performance in reading, and lower test scores.

**Instructional grouping and classroom activities.** The frequent application of both whole-class and small-group instruction is associated with improved classroom engagement scores in special education classes and with higher motivation for schooling. On the other hand, independent of the differences in their functioning that are controlled with other factors in the analyses, students who receive frequent individual instruction from a teacher have lower classroom engagement in general education settings and lower test scores in reading than peers who receive less individual attention. The frequent participation in activities related to literature is associated with higher classroom engagement in both general and special education language arts. It also is associated with improved performance in math and in reading in terms of performing closer to grade level and earning higher test scores. Participation in general class activities (e.g., class discussions, etc.) also is related to positive outcomes in these same areas, with the exception of math calculation. Students whose programs frequently focus on developing phonetic or vocabulary skills have improved engagement in both general and special education classes but do not differ in academic measures from students whose programs emphasize these skills less, other differences between them being equal.

## School-related Experiences

SEELS analyses demonstrate that school experiences beyond courses, programs, and services impact students' outcomes both in and out of school.

**Absenteeism**. Missing school can exact a high price. As an indicator of poor school engagement, high absenteeism from school is associated with more frequent teacher reports of poor classroom behaviors in general education classroom settings, and students who miss a good deal of school are more likely to receive poor grades than students whose attendance is better. Higher absenteeism is not, however, independently associated with lower test scores.

**School mobility.** Other factors held constant, students with disabilities who change schools often, other than for the natural progression up the grade level ladder, exhibit lower classroom engagement in general education classes and poorer motivation for schooling than students whose school affiliations have been more stable. Although SEELS analyses show no direct independent relationship between frequent school mobility and indicators of academic performance, mobility is associated with a higher likelihood of being subject to disciplinary actions at school.

**Grade retention.** SEELS analyses contribute to the debate over the value of having poorly performing students repeat grades. On one hand, students with disabilities who have been retained at grade level one or more times in the past are not currently less engaged in their school

activities than other students; their absenteeism is not significantly higher, nor do teachers assess their classroom engagement behaviors differently from other students, independent of other factors in the analyses. Neither are there independent effects of being retained on these students' social adjustment. And importantly, students with disabilities who have been retained are closer to grade level in reading and math, other factors held constant. However, students who have been retained at grade level in the past are more likely to receive lower grades currently and to have lower locus of control scores than nonretained students.

**Students' grades.** Controlling for other factors included in the analyses, students with disabilities who receive lower grades from their classroom teachers also have lower classroom engagement scores across settings and are more likely to be subject to disciplinary actions. These relationships underscore the fact that teacher-given grades measure more than students' academic performance.

## Clusters of Factors that Make a Difference

This summary of the results of multivariate analyses of outcomes of students with disabilities identifies the independent effects of many aspects of students, 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 students, resulting in additive effects that distinguish students to a greater extent than is revealed by looking at factors independently. For example, we know that students with emotional disturbances are more likely than students in many other categories to be male, African-American, and from lower-income households. They also are likely to spend much of their school day in general education classes and receive a variety of social adjustment supports. In contrast, the category of visual impairment includes higher proportions of girls and students who are white and from higher-income households. Like students with emotional disturbances, students with visual impairments also spend a high percentage of their school day in general education classes, where they receive accommodations and supports appropriate to their disability.

These combinations of differences between these two hypothetical students add up to a dramatically different picture across outcome domains. Compared with other students with disabilities, both of these students would be doing comparatively well academically. They would both be less than a year behind grade level in reading and in math. The girl with a visual impairment, however, would out-score the boy with an emotional disturbance by 10 and 4 standard score points in reading and math, respectively. In the social adjustment domain, the probability of the boy with an emotional disturbance described above being subject to disciplinary actions at school is 53 percentage points greater than that for the girl with a visual impairment. The boy with the emotional disturbance

is 14 percentage points more likely to see friends, but 7 percentage points less likely to belong to a group. Although the magnitude of these differences varies, they reinforce the importance of considering the entirety of a student's characteristics, background, and experiences in considering the relationships, instructions, services, and supports that will best help them succeed.

## Opportunities and Challenges

SEELS provides a comprehensive examination of the characteristics, educational experiences and services, and the outcomes of students with disabilities during their elementary and middle school years just before the passage of NCLB. It shows a picture of a population of students who differ from the general population in many ways, but who differ from each other dramatically in many ways as well. This diversity extends from student characteristics to the types of instruction students receive. In the area of outcomes, too, many students with disabilities are making progress, whereas others struggle to engage in and to succeed at school, to get along with peers and adults, and to evidence emerging independence. However, analyses of school-related factors that are associated with more positive outcomes highlight the myriad of ways those factors can combine to help shape the achievements of students with disabilities and underscores the importance of maintaining individualization of school programs and services as the central tenet in the education of all students.