8. *Changes in the School Engagement and Academic Performance of Students with Disabilities*

By Jose Blackorby and Renée Cameto

This chapter looks at change from one school year to the next in the experiences of students with disabilities in two areas of critical concern: engagement in school and academic performance. *Engagement, Academics, Social Adjustment, and Independence: The Achievements of Elementary and Middle School Students with Disabilities* (Blackorby, Wagner, Cameto, et al., 2004) paints a portrait of diversity in school engagement and academic performance both within and across disability categories. Most students with disabilities are reported to enjoy school, be motivated for schooling, and engage in classroom activities. Further, most students with disabilities receive grades at the positive end of the spectrum. In contrast, student performance on standardized tests suggests that many, if not most students with disabilities have significant deficits in core academic skills when compared with general education peers—deficits that are likely to present obstacles as they move into higher grades and more challenging academic work.

Several factors could contribute to this mix of findings changing over time. Regarding school engagement, for example, there is a well-researched tendency for students to be less engaged with school as they enter adolescence (Sabournie, 1994). Further, the diversity both within and across disability categories in engagement and performance suggests differences also might be reflected in different longitudinal patterns. There also could be variation in these trends across demographic characteristics or other features of students' school programs.

The following sections describe changes in a 1-year period in multiple measures of the school engagement and academic achievement of students with disabilities. Findings are reported for students with disabilities as a whole and for students who differ in their primary disability category, age, and selected demographic and school program characteristics when significant.

School Engagement

The extent to which students participate actively in their educational experiences can have critical and lasting implications. Poor engagement in school has been identified as a strong predictor of academic failure (Donahoe & Zigmond, 1990; Hudley et al., 2002; Schellenberg, Frye, & Tomsic, 1988; Wagner et al., 1991). Low achievement, in turn, is a precursor to dropping out (Redd, Brooks, & McGarvey, 2001). Students need reasons to be enthusiastic about and dedicated to school, and many students with disabilities are considered to be at risk for lack of engagement because of difficulties faced at school.

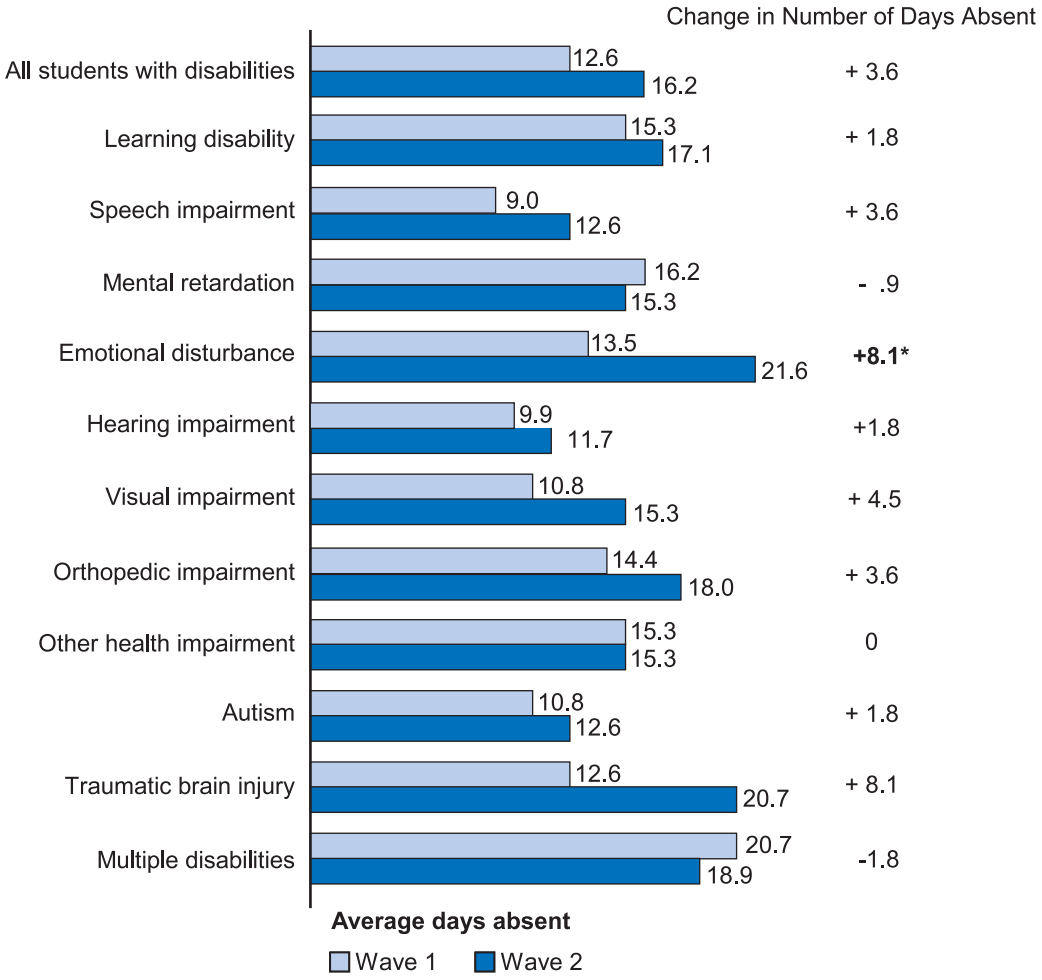
Analyses from Wave 1 of SEELS suggest that elementary and middle school students with disabilities are generally positively engaged, are reported to enjoy school, have relatively high motivation for schooling, and many are reported by their teachers to exhibit positive classroom behaviors. However, students with emotional disturbances stand out from their peers in other disability categories in having less positive results on most dimensions of engagement. Their peers with hearing or visual impairments generally have among the highest school engagement profiles. Wave 2 findings related to student engagement parallel Wave 1 results in the aggregate, with no significant changes in measures for students with disabilities as a group. However, changes vary among students in different disability categories over the 1-year time period, and when looking beyond aggregate measures, there is considerable fluctuation in some aspects of individual students' engagement. The following sections consider aggregate and individual change in the following aspects of engagement, including absenteeism, motivation for schooling, and classroom behavior.

Absenteeism

A fundamental dimension of school engagement is simply whether students physically make it to school. Although absenteeism can be either involuntary (e.g., caused by health problems) or voluntary (i.e., students "skipping school"), high levels of absenteeism can contribute to lower grades and ultimately the failure to attain a diploma. Each missed day limits exposure to instructional materials and activities, and cumulatively, they can affect the ability to keep up, move to the next grade level, and in high school, and accumulate credits toward graduation. Absenteeism among students with disabilities is fairly high (Exhibit 8-1).

- In Wave 2 the estimated absenteeism of students with disabilities is more than 3 weeks of school, or almost 9% of a 180-day school calendar.
- Only among students with emotional disturbances is there a meaningful increase in absenteeism over the 1-year period (8 days per year)
- There is significant variation in absenteeism by disability category. In Wave 2, students with emotional disturbances, orthopedic impairments, traumatic brain injuries, or multiple disabilities have the highest levels of absenteeism—from 18 to 22 days per year; students with speech or visual impairments or autism are absent the least—an average of 12 or 13 days.

Exhibit 8-1
Changes in Absenteeism, by Disability Category



Source: SEELS school program questionnaires, Waves 1 and 2.
Statistically significant difference in a two-tailed test at the following level:
* p < .05.

- Students aged 10-12 in 2001 were absent nearly 5 additional days while both younger and older peers rates were virtually unchanged.
- Changes in absenteeism across other demographic categories are not significant.

Student Motivation for School

The psychological dimension of engagement at school reflects the extent to which a student identifies with the school environment (Finn, 1993; Hudley, 2002). Students who have positive feelings about school are more likely than other students to attend school and participate fully in their educational experience. Students' motivations, their overall attitudes toward coming to

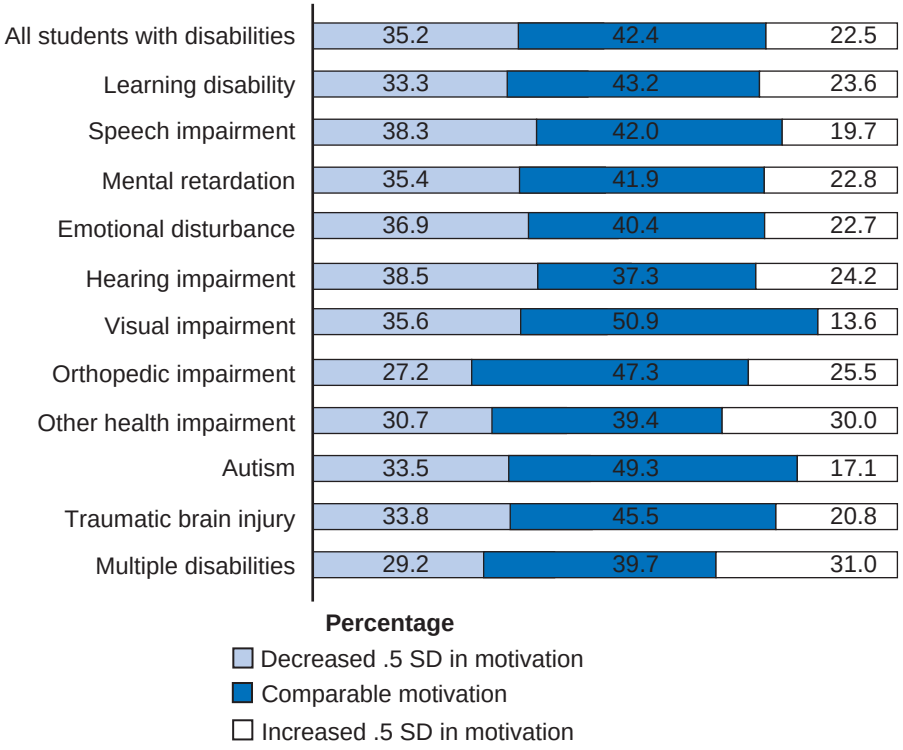
school each day, and their disposition while they are there are other psychological indicators of their engagement at school. SEELS uses the School Attitude Measure (Wick, 1990) to assess the psychological aspects of student engagement. It includes responses to statements such as: "School is the best place for me to learn," "I look forward to each new school year", "I am glad that I have many more years of school". A scale has been created from these responses to assess overall motivation for schooling (please see Appendix A for details regarding this scale).

In Wave 1, students with disabilities demonstrated a range of levels of motivation for schooling, but high levels of motivation were more common than low ones.

- A year later, in the aggregate, student motivation for schooling remains generally high, with no significant change over time in either the percentage scoring high or low for students with disabilities as a whole. Overall, 42% of students with disabilities are highly motivated toward schooling and 16% have low motivation in Wave 2.
- There is a large reduction in high scores on motivation for schooling among students with visual impairments (20 percentage points). Whereas in Wave 1, these students had among the largest proportion of highly motivated students, in Wave 2, they are well below students with disabilities as a whole on this measure.
- An increase in the level of low motivation is apparent among students with mental retardation (13 percentage points). Nonetheless, this group has the largest share of students with high motivation of the disability categories (53%) in Wave 2.
- In addition, at the individual level there is considerable fluctuation in this dimension of engagement (Exhibit 8-2)[1].

[1] Categories for increase or decrease in motivation were set to changer greater or less .5 of the standard deviation of the motivation scale.

Exhibit 8-2
Fluctuation in Students' Motivation for Schooling, by Disability Category



Source: SEELS student attitude questionnaires, Waves 1 and 2.

- Most students (42%) are about as motivated for school in Wave 2 as in Wave 1, but more than one in three are reported to be less motivated than in the previous year, and 23% are more motivated than previously.
- Stable levels of motivation are most apparent among students with visual impairments or autism; about half of these students show similar levels of motivation for school in both waves.
- Reductions in motivation range from 27% and 29% for students with orthopedic impairments or multiple disabilities, respectively, to 38% among students with speech or hearing impairments.
- Increases in motivation are least common among students with visual impairments or autism (14% and 17%) and most common among those with other health impairments (30%).
- Increases in motivation for schooling are about as common for students in disability categories with high Wave 1 levels (e.g., students with speech impairments or mental retardation) as with lower levels a year earlier (e.g., students with emotional disturbances).
- Fluctuation in student motivation is not related to student demographic characteristics.

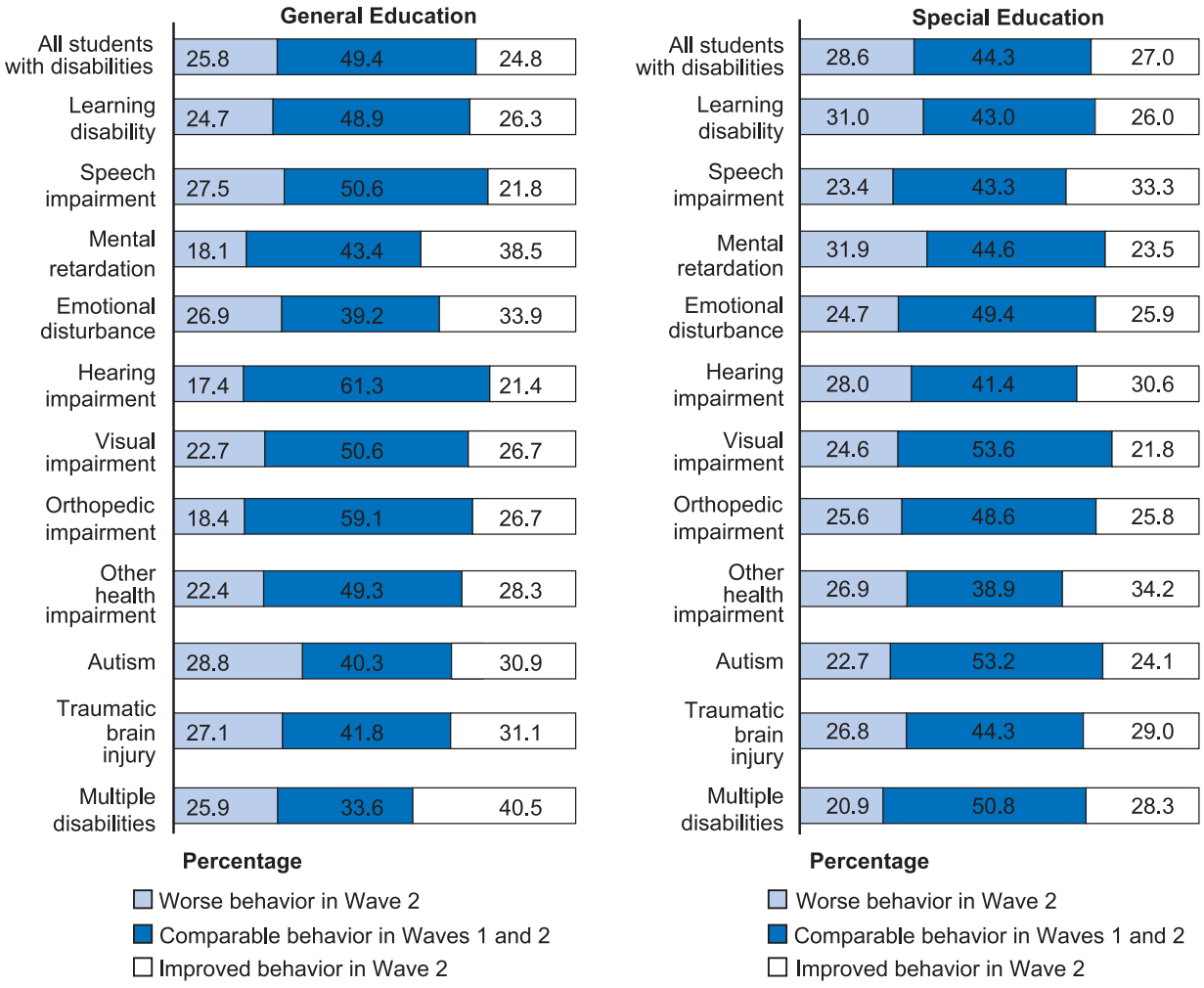
Classroom Behavior

SEELS is investigating the behavioral dimension of engagement at school by using a scale of language arts teachers' ratings of the frequency that students complete homework on time, take part in group discussions in their classes, perform difficult tasks independently, and persevere until completing a task.[2] In Wave 1, levels of classroom behavior varied considerably by disability category and instructional setting. Students in many disability categories were more likely to be highly engaged when they were in a general rather than special education language arts class. Students with mental retardation showed the opposite pattern; they were more likely to be highly engaged when they were in a special education class. Students with learning disabilities, emotional disturbances, or autism were about as likely to be highly engaged in either setting. A year later, the Wave 2 classroom behavior scale generally mirrors the Wave 1 results; however, there is some fluctuation at the individual level (Exhibit 8-3).

- While the aggregate differences in classroom behavior ratings persist in Wave 2, the fluctuation between improved, stable, or worsened behavior is comparable in the two settings.
- Students with disabilities are more likely to exhibit stable classroom behaviors than to exhibit either improved or worsened behavior.
- In general education settings, the range in the number of students exhibiting improved behavior ranges from 39% (students with mental retardation) to 21% (students with hearing impairments).
- In special education settings, the range in the number of students exhibiting improved behavior ranges from 34% (students with other health impairments) to 22% (students with visual impairments).
- Students with hearing or orthopedic impairments are most likely to exhibit stable behavior in general education settings.
- Fluctuation in student behavior in both settings is not related to student demographic characteristics.

[2] Ratings are reported on a 3-point scale ranging from "never" to "very often."

Exhibit 8-3
Fluctuation in Students' Classroom Behaviors, by Disability Category and Language Arts Setting



Source: SEELS teacher & school program questionnaires, Waves 1 and 2.

Suspensions and Expulsions

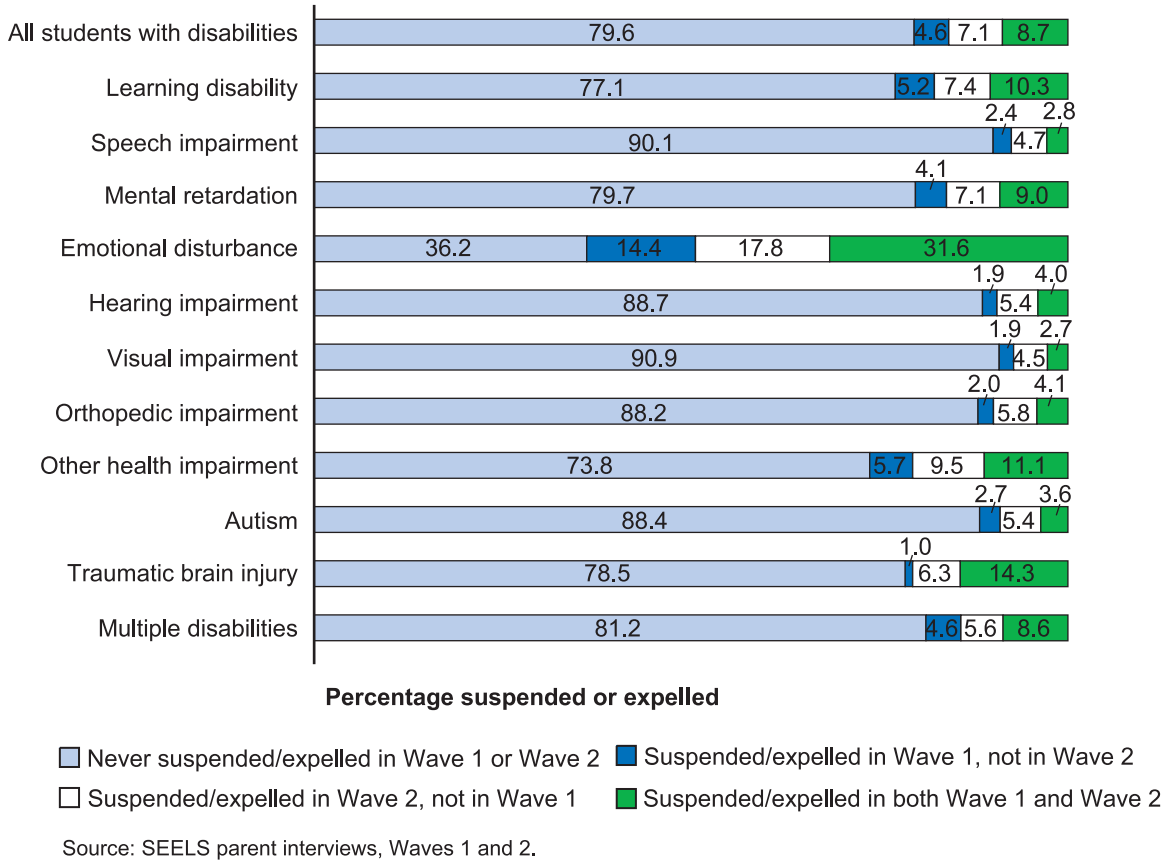
Like all organizations, schools have rules that govern student conduct and behavior and have procedures for disciplining students who break those rules. When events or behaviors are considered serious violations, schools use the mechanisms of "in-school" and "out-of-school" suspensions to seek improved behavior. For in-school suspensions, students are typically taken out their usual classroom routine for a period ranging from hours to days. Out-of-school suspensions require that students not to attend school at the specified period that can last from days to a week or more. In cases of extreme violations, schools may expel students. The behaviors that lead to these actions can represent low engagement and is linked to school dropout (Bock, Tapscott, & Shavner, 1998).

In Wave 1, although some students in all categories had been suspended or expelled at some time in their school careers, students with serious emotional disturbances had been subject to these disciplinary actions at school far more frequently. For example, nearly 50% of students with serious emotional disturbances in elementary and middle school had been suspended or expelled at some time in their school careers. Students with learning disabilities (16%), other health impairments (17%) and traumatic brain injuries (15%) all had been suspended or expelled at rates not markedly above the general population (13%), but still far below that of peers with emotional disturbance.

In addition to the aggregate changes over time in the number of students with disabilities who have been suspended or expelled, individual fluctuation also illustrates variation in students' behavior and/or the response of schools to it among different groups. Exhibit 8-4 displays 4 categories of students with respect to the longitudinal pattern of suspensions and/or expulsions: (1) Not suspended or expelled in either Wave 1 or Wave 2; (2) Suspended or expelled in Wave 1 but not in Wave 2; (3) Not suspended or expelled in Wave 1 but was in Wave 2; and (4) Suspended or expelled in both Wave 1 and Wave 2.

- As one would expect with the passage of time, in Wave 2, more students with disabilities have been suspended or expelled at some point in their school careers. The overall increase is 7 percentage points, bringing the rate to 20%. This includes 9% of students suspended or expelled in Wave 1 and Wave 2, 5% suspended in Wave 1 but not Wave 2, and 7 percent who were suspended or expelled for the first time in Wave 2.
- Increases in new and repeated suspensions/expulsions are evident for students in most disability categories. Increases in the total rates after Wave 2 range from 5 percentage points among students with speech or hearing impairments or autism to 18 points among students with emotional disturbances.
- The suspension/expulsion rate for students with emotional disturbances (64%) approaches three times that of students in any other category and nearly one in three of these students was suspended or expelled in both Waves, more than twice the rate of the next highest categories (i.e., learning disabilities, other health impairments, traumatic brain injuries).
- Only about 1 in 10 students with speech, hearing, or visual impairments have been suspended or expelled by Wave 2, representing the lowest among all disability categories.

Exhibit 8-4
Changes in Suspensions or Expulsions of Students with Disabilities, by Disability Category

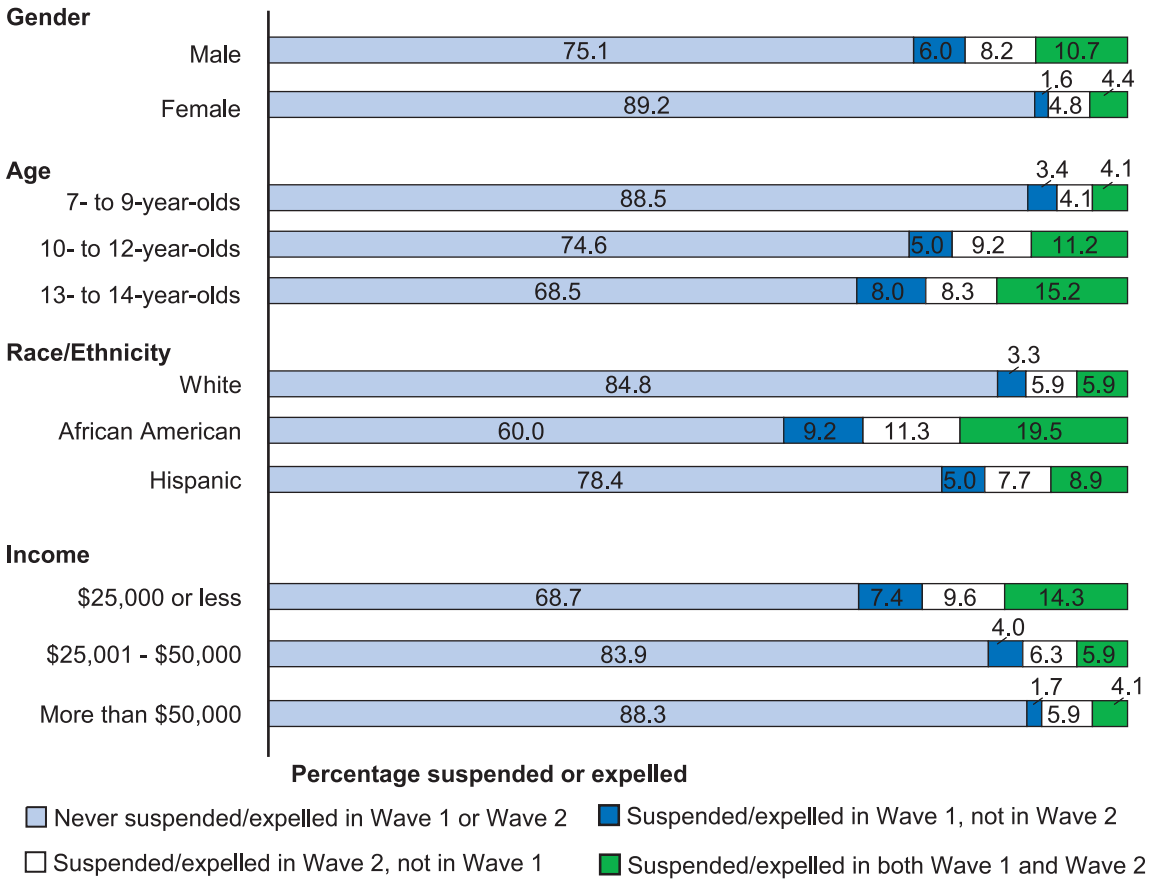


Source: SEELS parent interviews, Waves 1 and 2.

Exhibit 8-5 displays fluctuations with respect to the longitudinal pattern of suspensions and/or expulsions across student demographics.

- Consistent with the general population (Zoccolillo, 1993), boys with disabilities are more likely than girls to have been suspended or expelled (25% vs. 11%) and to have been expelled repeatedly (i.e., in both waves, 11% vs. 4%).
- African-American students are more likely than white peers to have been suspended or expelled (40% vs. 15%) and to have been subjects to these actions repeatedly (20% vs. 6%).
- Low-income students are more likely than their higher income counterparts to be suspended or expelled at all (69% vs. 84% and 88%) and repeatedly (14% vs. 6% and 4%).

Exhibit 8-5
Changes in Rates of Suspensions and Expulsions of Students with Disabilities, by Students' Demographic Characteristics



Source: SEELS parent interviews, Waves 1 and 2.

Academic Performance

Student learning is the business of education. It is the primary purpose of schools, and the widespread evidence of inadequate student performance has made it the centerpiece of the most recent period of systemic and accountability reforms. Improving academic performance is the primary objective of the *No Child Left Behind Act of 2001* in its efforts make schools and school districts accountable for assessing and improving student performance annually (Linn, Baker, & Betebenner, 2002). Further, limitations in academic achievement represent the primary implication of disability for most students receiving special education services, and those limitations constrain their ability to be successful in school. In Wave 1, SEELS provided a national perspective on academic performance of students with disabilities from multiple perspectives, including teacher-given grades, deviations from expected grade-level performance in reading and mathematics, and standardized test scores in reading and

mathematics (Woodcock, McGrew, & Mather, 2001). The following sections consider changes in aggregate and individual performance on these measures one year later.

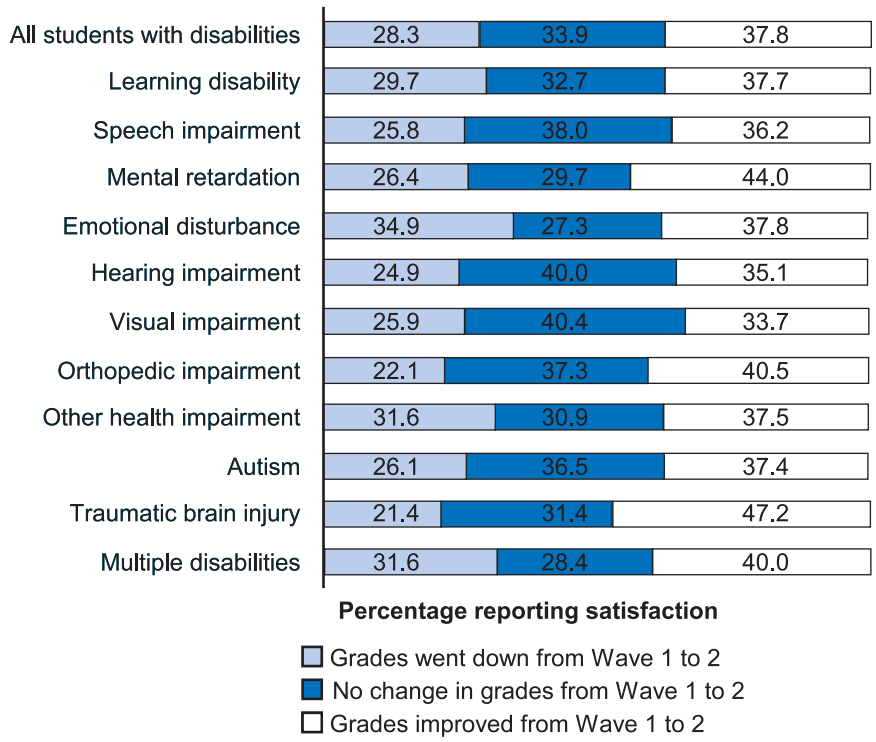
Students' Grades

Although teacher-given grades have well known limitations related to grading standards and criteria and to their general reliability, teachers' evaluations of performance, as indicated by course grades, represent a common metric of student performance that is tied to the day-to-day business of teaching and learning. Grades communicate to students and parents information about students' mastery of course content and overall performance in class. When students reach secondary school, course grades become an important part of applications to postsecondary education. In both waves, students with disabilities generally received high grades; in Wave 2, 40% receive mostly As or Bs, according to parents' reports. Eleven percent are reported to be getting mostly Ds or below. This pattern of higher grades as students age suggests that students are continuing to make progress toward curriculum goals, in the judgment of the teachers.

- As observed in other domains, there is considerable fluctuation at the individual level. Thirty-eight percent of students with disabilities have seen their grades improve over a 1-year period, whereas 28% have seen them decline (Exhibit 8-6).[3]

[3] Increase or decrease in grades was defined by a difference between Wave 1 and Wave 2 equal to at least one category on the 9-category grade scale.

Exhibit 8-6
Fluctuations in Grades, by Disability Category



Source: SEELS parent interviews, Waves 1 and 2.

- Improvements generally outnumber declines in grades for students in most categories, particularly those with mental retardation (44% have improved, 26% have declined), orthopedic impairments (40% improved vs. 22% declined) or traumatic brain injuries (47% improved vs. 21% declined).
- Students with emotional disturbance are the most likely to have lower grades in Wave 2 than in Wave 1 (35%).
- Students in grades 6 and above (33%) are more likely to see lower grades over time than their peers in lower grades (24%).
- Compared to girls (23%), boys are more likely to see declines in their grades (31%).
- Increases in grade performance are more common among students from middle and low-income households (41%) than among peers from higher income ones (33%).

Standardized Test Scores

Reading. SEELS uses research editions of the Woodcock Johnson III (Woodcock, McGrew, & Mather, 2001) to conduct standardized assessments of reading ability. The WJ III passage comprehension test presents students with a series of items requiring a "fill in the blank" response, which are ordinally ranked

in difficulty. The least difficult items present a sentence in conjunction with a graphic representation and students must provide the appropriate word to complete the sentence. The more difficult items are entirely text-based, address more technical topics, and require both greater vocabulary and ability to make inferences from context.

SEELS analyses include reports of students' raw scores, which are converted into standard scores for comparisons with same age peers in the general population. So, for example, students who provide the same number of correct responses in Wave 2 and Wave 1 would have the same raw score and difference of 0. However, the standard scores are calculated relative to the norm sample, so the student whose score does not differ over time would have a negative score because same-age peers generally would have improved over that interval. Performance also is reported relative to the percentile rank of the norm sample; for example, 50% of same-age peers in the general population score at or below the 50th percentile.

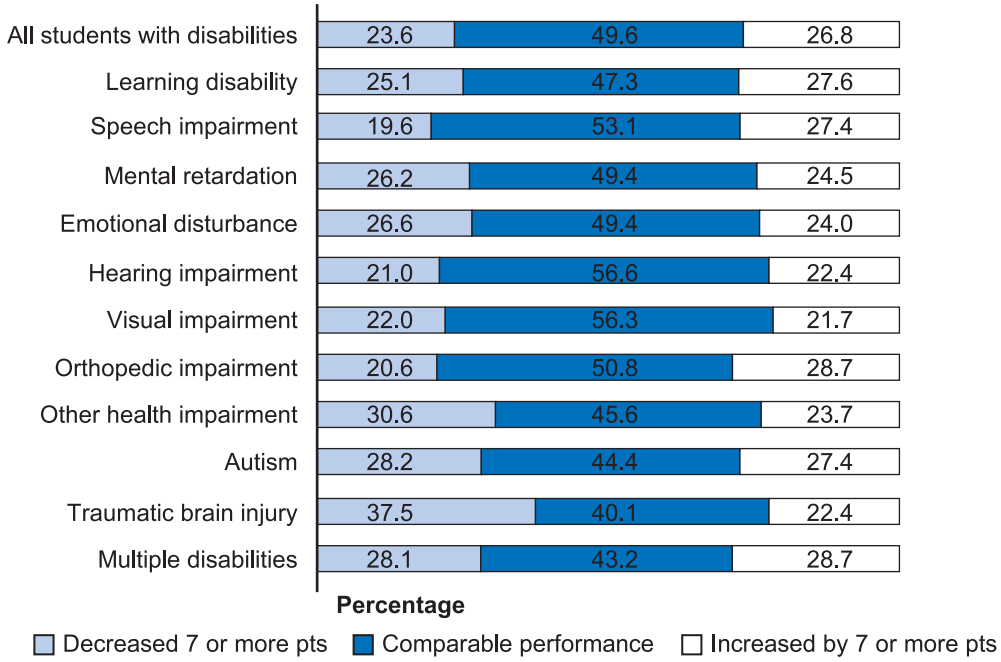
The performance of students with disabilities as a group has changed little over the single-year period. About 63% of students with disabilities have scores that fall at or below the 25th percentile at both time points, and the average achievement in reading is similar in Wave 1 (24th percentile) and Wave 2 (25th percentile). However, at both points in time, there is diversity in performance both within and across disability categories. In each disability category, there are students who perform close to peers in the general population. For example, at both points in time, students with speech or visual impairments have the highest scores and have distributions most like the general population. Students with mental retardation or multiple disabilities have the lowest scores.

Although the aggregate picture is one of consistency over time, there are some students who gain ground and others who lose ground relative to the general population over the single year period (Exhibit 8-7).[4]

- Nearly equal proportions of students with disabilities have meaningfully improved their performance (i.e., increased by 7 or more raw score points) as have lowered their performance (decreased by 7 or more raw score points) in reading comprehension in Wave 2 compared with Wave 1 (27% and 24%).

[4] The categories of "increased" and "decreased" performance were defined as 7.5 standard score points as this represents .5 of a standard deviation of the WJ III standard score scale and, in effect size terms, could be considered educationally meaningful.

Exhibit 8-7
Fluctuation in Scores of Reading Passage Comprehension, by Disability Category



Source: SEELS WJIII (research version), Waves 1 and 2.

- Students in all disability categories include those who improved as well as those who lost ground.
- Across disability categories, the percentages of students whose scores have improved are very similar; they range from 22 % (students with traumatic brain injuries) to 29 % (students with orthopedic impairments).
- Across disability category, the number of students whose scores worsened range more broadly, from 20 % (students with speech impairments) to 38 % (students with traumatic brain injuries).
- Students with among the highest scores in both Waves 1 and 2 had the most stable scores, including students with visual (56%) or hearing impairments (57%).

Mathematics. As well as reading, SEELS uses research editions of the Woodcock Johnson III (Woodcock, McGrew, & Mather, 2001) to conduct standardized assessments in mathematics. The WJ III calculation subtest measures students' computation skills, using a worksheet that presents the problems. An important characteristic of these problems is that the employed notation signals the operation (e.g., addition, etc.) that is required to produce the correct result. If the student understands the notation, then it tests his/her ability

to perform it accurately. The least difficult items are simple single digit addition problems, whereas the most difficult ones require knowledge of calculus.

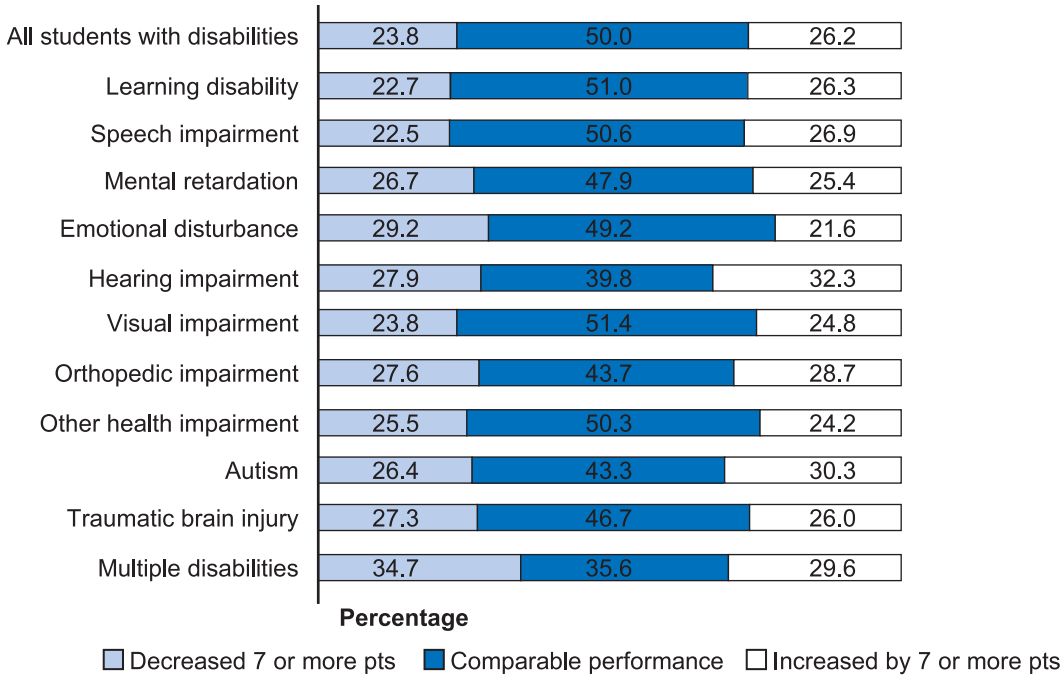
Analyses of WJ III mathematics calculation show comparable scores for Wave 1 and Wave 2 both within and across disability category, although students in virtually all disability categories exhibit higher scores in mathematics than reading. In Wave 2, 40% of students with disabilities score at or below the 25th percentile. Average achievement in mathematics is comparable in Wave 1 (36th percentile) and Wave 2 (38th percentile).

Similar to the results regarding passage comprehension, there is diversity in performance both within and across disability categories. Although scores below the 25th percentile are the most common for students in all disability categories, there are many more students in all disability categories with scores approaching and, in some cases, exceeding the general population mean. As was the case with reading comprehension, students with speech or visual impairments have the highest scores and show distributions most like the general population. Students with mental retardation or multiple disabilities have the lowest scores.

Also similar to test results for reading comprehension, the aggregate findings of stability over time mask considerable fluctuation in individual student math performance over the single year period (Exhibit 8-8).

- The percentage of students with disabilities whose math calculation performance improved significantly (i.e., increased by 7 or more points) is comparable to the percentage of their peers who did worse (i.e., decreased by 7 or more percentage points); 26% of students with disabilities showed this level of improvement or more, and 24% showed this level of decline or more.

Exhibit 8-8
Fluctuations in Mathematics Calculation Scores, by Disability Category



Source: SEELS WJIII (research version), Waves 1 and 2.

- Some students in all categories improved and some lost ground from Wave 1 to Wave 2. However, stable scores are most common for students in most disability categories.
- Across disability categories, the percentage of students whose scores improved ranges from 22% (students with emotional disturbances) to 32% (students with hearing impairments).
- Across disability categories, the percentage of students whose scores declined ranges from 23% (students with speech impairments) to 35% (students with multiple disabilities).
- Students with learning disabilities, speech impairments, visual impairments, or other health impairments have the most stable mathematics scores, relative to students with hearing impairments.

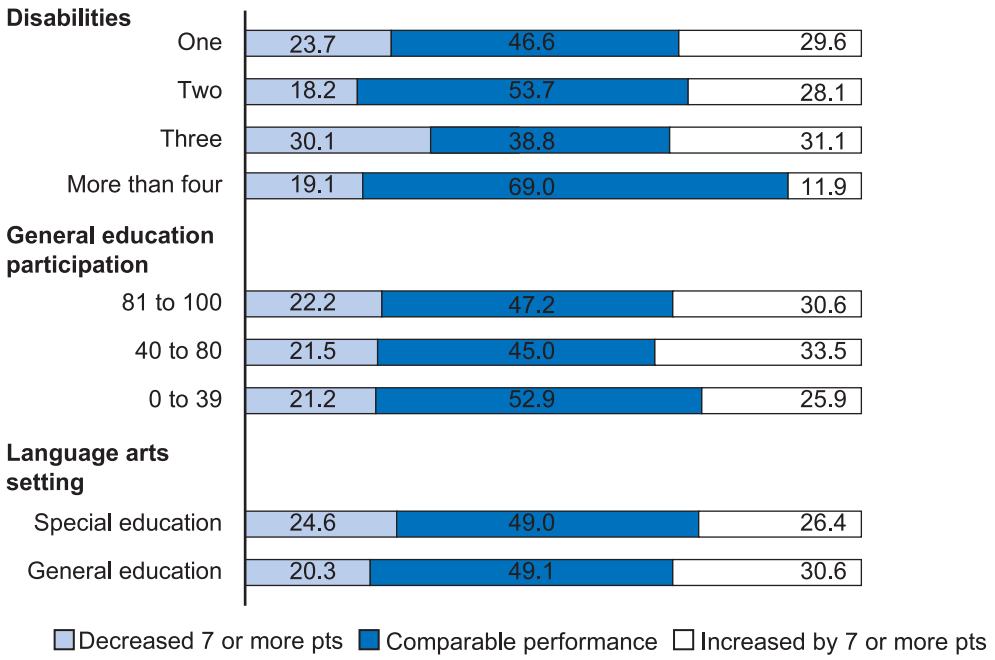
Fluctuation in Performance by Functioning and Program Characteristics

Analyses of performance data from both Wave 1 and Wave 2 illustrate wide variation in light of student functioning and school program characteristics. For example, in both waves, students whose teachers report that they have a greater number of disabilities have significantly lower test scores in reading and mathematics than peers with just one affected domain. Similarly, from a programming perspective, students with disabilities who receive language arts instruction in a general education setting, or spend more time in general

education settings generally, also have higher test scores in both reading and mathematics. It reasonable to pose the question about the level of individual change in performance in light these kinds of characteristics as shown in Exhibit 8-9.

- While aggregate performance levels favor students with fewer identified disabilities, in terms of fluctuation across waves, comparable performance in comprehension represents the largest category for students in all severity groups, dramatically so students identified with four or more disabilities (69%).
- Similar proportions of student in all four groups are equally likely to see their reading comprehension scores improve as to see it decline.
- Students with four or more identified disabilities are less likely to see significant improvements in reading comprehension (12%) than peers with fewer disabilities (28% to 31%).
- Although there are significant differences in reading achievement with the amount of time students spend in general education settings, these differences are not reflected in fluctuations at the individual level. Those who spend more time in general education settings are not more likely to be either improving or declining in reading comprehension relative to students who spend more time in special education classes.
- Similarly, students who have special education as their primary language arts class are just as likely to improve in reading comprehension as their peers who receive language arts instruction in general education settings, although the aggregate achievement differences between the two groups of students remains large.

Exhibit 8-9
Fluctuations in Measures of Passage Comprehension, by Number of Students' Disabilities, Level of Participation in General Education, and Students' Language Arts Setting



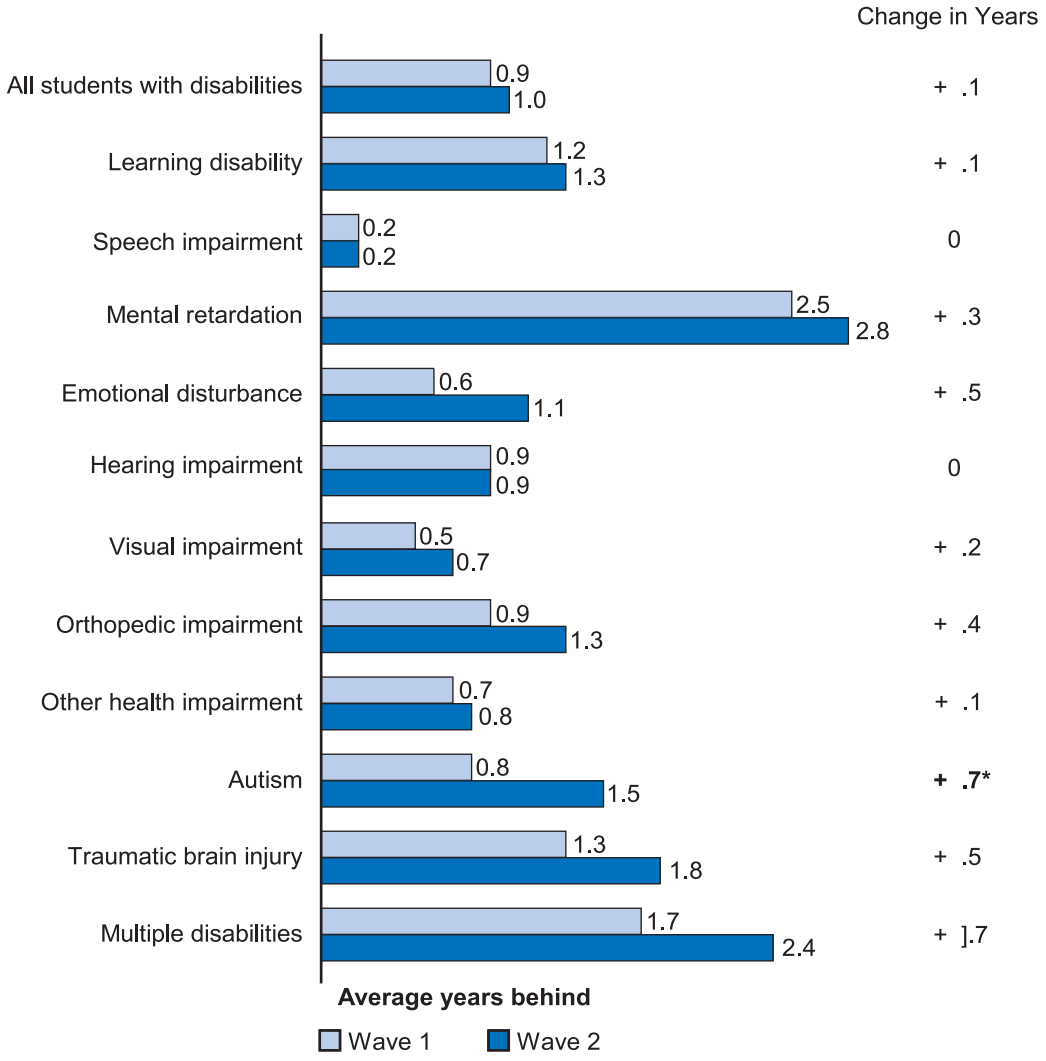
Source: SEELS WJIII, parent interviews, teacher and school program questionnaires, Waves 1 and 2.

Expected Grade Level Performance

Reading. SEELS calculates a measure of the deviation between the actual grade level of students with disabilities and the grade-level equivalent of their tested performance in reading and mathematics. This measure indicates how far ahead or behind their actual grade level that students are functioning. (Exhibit 8-10)

- In both waves, students with disabilities as a group are an average of about 1 year behind grade level in reading.
- There also is diversity in performance both within and across disability categories. There has been little change in grade level discrepancy for students with learning disabilities, speech impairments, hearing impairments, visual impairments, or other health impairments.
- In contrast, students with autism are reported to be more than 6 months further behind in Wave 2 than they were in Wave 1.

Exhibit 8-10
Changes in Average Years Behind Grade Level in Reading, by Disability Category

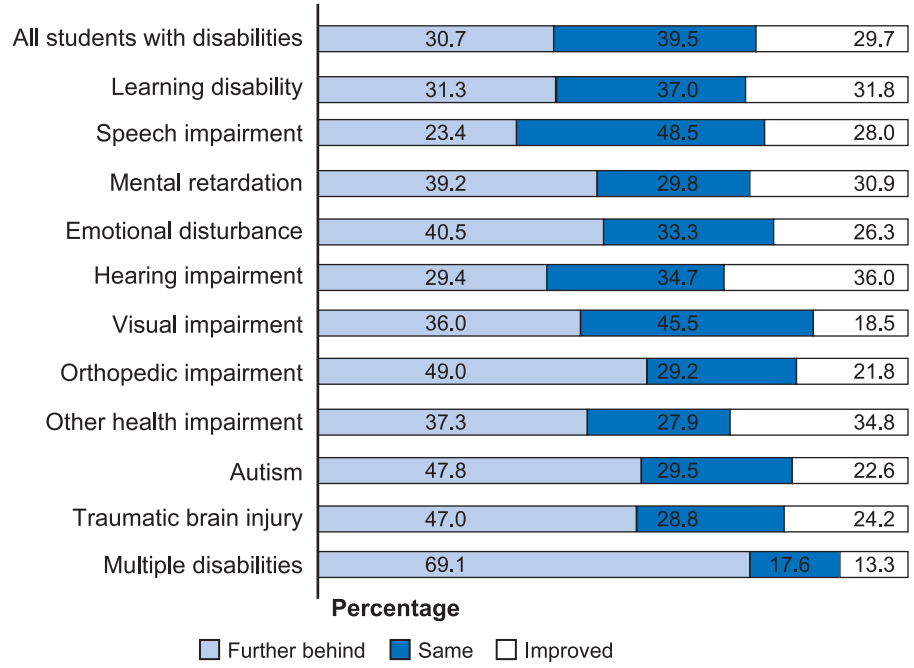


Source: SEELS school program questionnaires, Waves 1 and 2.
Statistically significant difference in a two-tailed test at the following level: * p < .05.

As is the case in other measures of engagement and academic performance, substantial fluctuation is evident among individual students in their grade-level discrepancies in reading (Exhibit 8-11).

- Forty percent of students with disabilities have remained essentially unchanged, with a grade-level discrepancy at Wave 2 that is within 1 year of their discrepancy at Wave 1.

Exhibit 8-11
Fluctuations in Grade Level Discrepancy in Reading, by Disability Category

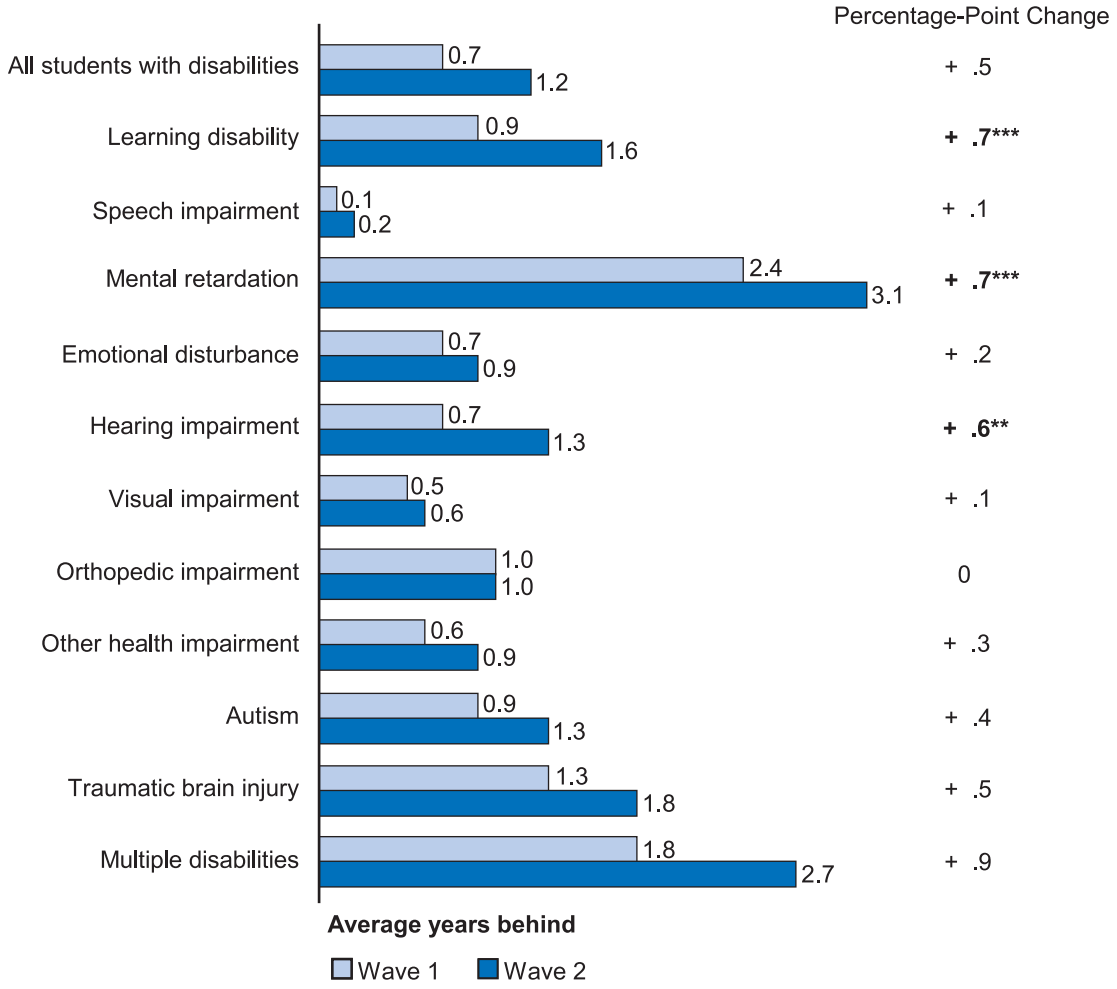


Source: SEELS school program questionnaires, Waves 1 and 2.

- The proportion of students who fell further behind grade level over the 1-year period is virtually the same as the proportion that improved their performance relative to grade level by more than 1 year.
- Students with hearing impairments or other health impairments are most likely to improve their performance relative to grade level over the 1-year time period.
- Students with autism, traumatic brain injuries, or multiple disabilities are the most likely to have lost ground.
- Students with speech impairments or visual impairments, who are among the students closest to grade level expectations in reading, are most likely to exhibit performance that is unchanged from one year to the next.
- Fluctuation in reading comprehension is not related to student demographic characteristics.

Mathematics. Variations from expected grade-level performance in mathematics for students with disabilities are presented in Exhibit 8-12.

Exhibit 8-12
Changes in Years Behind Grade Level in Mathematics, by Disability Category

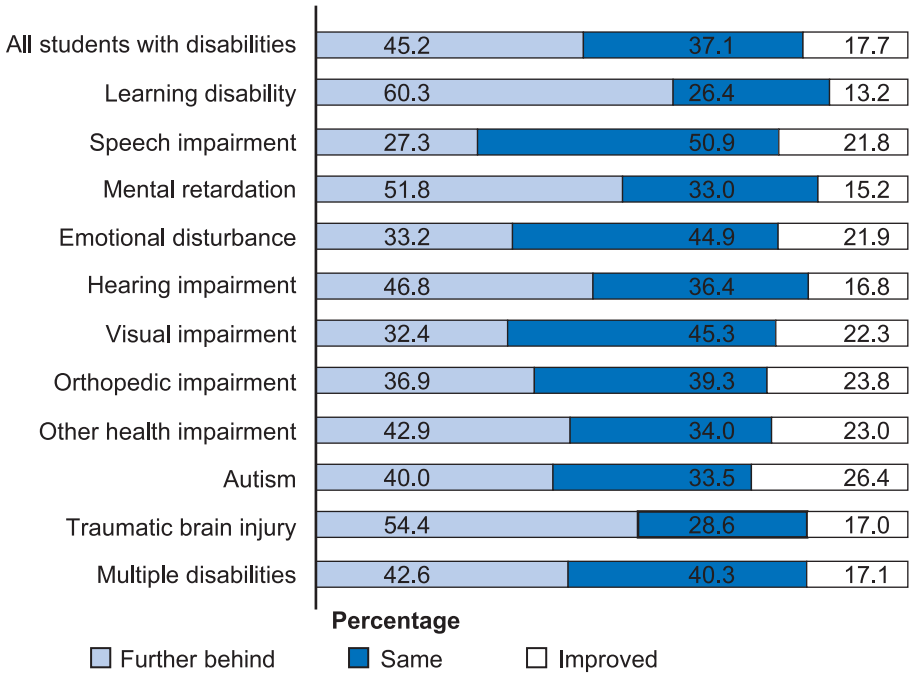


Source: SEELS school program questionnaires, Waves 1 and 2.
Statistically significant difference in a two-tailed test at the following levels: ** p < .01, *** p < .001.

- Over the one-year period from Wave 1 to Wave 2, students with disabilities' fell further behind in mathematics by approximately 6 months.
- The difference from grade level in mathematics was six or more months among several groups of students including those with learning disabilities, mental retardation, or hearing impairments, traumatic brain injury, or multiple disabilities.
- In terms of individual-level change in mathematics, performance has decreased for 45% of students with disabilities by more than 1 year, more than twice the proportion whose performance improved (18%, Exhibit 8-13).
- Substantially more students in all disability categories, with the exception of speech impairments, have had their performance in mathematics worsen than have had it improve.

- Students with learning disabilities, mental retardation, or traumatic brain injury are most likely to lose ground in mathematics over the one year time period.
- Students with speech impairments or visual impairments are least likely to lose ground.
- Fluctuation in mathematics calculation is not related to student demographic characteristics.

Exhibit 8-13
Fluctuations in Discrepancy from Grade-Level Performance in Mathematics, by Disability Category



Source: SEELS school program questionnaires, Waves 1 and 2.

Summary

This chapter has examined changes in the school engagement and the academic performance of students with disabilities over a 1-year period. In this short time period, most of the change in both areas is modest, but there is considerable fluctuation when looking at individual student trajectories as well as some differences across disability categories or demographic groups.

Changes in Engagement

A year is relatively small period of time, but many students are either in the midst or on the cusp of beginning their transition to adolescence and secondary school, where attitudes toward school frequently become less positive. SEELS findings confirm this trend among students with disabilities.

Absenteeism remains relatively high among students with disabilities, as they miss an average of 2 additional days in a 4-week period than they had a year earlier. This represents as much a 3 weeks over the course of a school year. Absenteeism is especially acute among students with emotional disturbances, orthopedic impairments, traumatic brain injuries, or multiple disabilities.

Students' self-ratings of motivation toward school, although generally positive, have shifted significantly in the negative direction. Consistent with the aggregate findings, more students with disabilities report themselves to feel less positively toward school than they had been the year earlier. Still, there are some students whose motivation has improved over that time period.

In the area of classroom behavior, Wave 2 performance mirrors Wave 1 in that students in general education language arts settings are more likely than special education peers to have high levels of participating in class, completing homework, etc. However, these differences are not as evident at the individual level. Change in behavior is comparable among students in the two settings.

Negative attitudes toward school can be demonstrated in behaviors that result in suspensions and expulsions. Increases in suspensions and expulsions have been experienced for students in many disability categories and most notably among students with emotional disturbances.

Changes in Academic Performance

Wave 2 findings related to academic performance also illustrate a pattern of modest change over the previous year, variation by different measures, and student characteristics. As with engagement, fluctuation is quite common, with substantial numbers of students improving, but also similar numbers losing ground over the year.

Grades—the most common form of assessment of student progress—suggest that students with disabilities continue to be more likely to receive positive evaluations from teachers than negative ones. In fact, as a whole, and notably for students with mental retardation, students were more likely to have their grades improve than decline.

Wave 2 standardized test scores in reading and mathematics mirrored Wave 1 results closely, suggesting that, relative to the general population, students with disabilities' are holding their ground in both subjects but still have comparatively low scores. However, despite the relatively small amount of change at the group level, there is considerable movement in both positive as well as negative directions at the individual level. In tests measuring both reading comprehension

and mathematical calculation, the performance of about half of students with disabilities remained stable, but the performance of the other half fluctuated with equal likelihood of improving and declining. A slightly different picture emerges through the longitudinal analysis of teacher reported performance in reading and math relative to grade level expectations. Over the one year time period, students with disabilities were reported be just as far behind in reading than they were the previous year. By contrast, in mathematics calculation, students had fallen nearly 6 months further behind.

These results show the considerable individual variation in student engagement and academic performance. Future SEELS analyses will shed light both on change over a 3-year span of time and further focus on differences between students who succeed and their peers who have difficulty