

3. SCHOOL ENGAGEMENT OF YOUTH WITH DISABILITIES

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Policy-makers, educators, and researchers agree that students who participate actively in and enjoy school are more likely to experience educational success (Herman & Tucker, 2000; Hudley, Daoud, Hershberg, Wright-Castro, & Polanco, 2002; Newmann, 1992; Singh, Granville, & Dika, 2002; Sirin & Jackson, 2001). This chapter examines the engagement in or “connection” to the school experience of secondary school students with disabilities.

The extent to which students participate in their educational experiences can have critical and lasting implications. Low or inadequate 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). Moreover, the association between engagement at school and academic achievement appears to be independent of the effects of other student characteristics, such as gender, race/ethnicity, or socioeconomic status (Finn, 1993). 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, particularly over the secondary school years, when dropping out becomes problematic.

Students who show little engagement in their education often have fewer positive experiences in the classroom than other students. For example, students who have frequent school absences necessarily lose opportunities to participate fully in their education. Likewise, those who struggle to meet academic or behavioral expectations while in the classroom may experience repeated embarrassment or failure, which in turn may lead to diminished satisfaction and interest in school.

Many students with disabilities have characteristics and experiences that put them at risk for disengagement from school. Students with disabilities may miss more school than other students because of factors associated with their disability. Teachers may have lower expectations for them than for other students, resulting in their receiving fewer opportunities and less encouragement to participate in stimulating or challenging classroom activities (Goodenow, 1992; Grossman, 2002). Some have disabilities that may make it difficult to sustain attention to school tasks.

Fortunately, unlike some other student characteristics (e.g., demographics or disability category), a student’s level of engagement at school can be modified by external influences, such as teachers’ behaviors, the school climate, and attitudes of parents and peers (Finn, 1993; King, Vidourek, Davis, & McClellan, 2002; Marks, 2000; Naffziger, Steele, & Varner, 1998; Tucker et al., 2002). Students who are made to feel welcome at school and who are given opportunities and encouraged to excel may be fully engaged, despite academic disadvantages.

Agreement is widespread that much can be gained from promoting students’ engagement at school, but studies have shown little consensus in defining engagement. Some have focused on students’ overt behaviors that indicate engagement, such as attending school regularly and completing homework, whereas others consider students’ emotional experience of school. Current thinking suggests that engagement at school is a multidimensional construct, having emotional or subjective as well as behavioral components (Finn, 1993; Sirin & Jackson, 2001).

This chapter examines both the subjective and behavioral dimensions of school engagement for students with disabilities, including:

- Feelings about school
- School attendance
- Classroom engagement behaviors.

School engagement is described in regard to these dimensions for youth with disabilities as a group and for those who differ in their primary disability category. Then, two indicators receive more in-depth analysis: school attendance and classroom engagement behaviors.

Dimensions of School Engagement

The Subjective Dimension of School Engagement

The subjective or emotional dimension of engagement at school reflects the extent to which a student identifies with the school environment (Finn, 1993; Hudley et al., 2002). Students who have positive feelings about school are more likely than other students to attend school and participate fully in their educational experience.

To measure the feelings of youth with disabilities about school, parents were asked to indicate their level of agreement with the statement, “[Youth’s name] enjoys school.” Although almost three-quarters (73%) of their parents agree or strongly agree with the statement, approximately one in four youth are reported not to enjoy school (Exhibit 3-1).

	Number/ Percentage	Standard Error
Percentage of students whose parents agree with the statement “[Youth] enjoys school”		
Strongly agree	21.9	1.3
Agree	51.0	1.6
Disagree/strongly disagree	27.0	1.4
Absenteeism		
Mean number of days absent in 4 weeks	2.6	.2
Percentage absent 6 or more days in 4 weeks	13.7	1.5

Source: National Longitudinal Transition Study-2 (NLTS2) Wave 1 parent interview and student’s school program survey.

School appears to be somewhat less enjoyable for students with disabilities than for students in the general population, at least as perceived by their parents. In a national sample of adults with children in the 6th through 12th grades, 86% of parents agreed or strongly agreed that their child enjoys school (Chandler, Nolin, & Zill, 1993). Students in middle or junior high school were as likely to be reported as enjoying school as were senior high school students.

The Behavioral Dimension of School Engagement

At least in part reflecting their feelings about school, students also demonstrate their school engagement by their behaviors. The behavioral aspect of student engagement relates to a student’s overt participation in his or her education (Finn, 1993; Sirin & Jackson, 2001). This aspect includes attending school and the behaviors that students exhibit while in the classroom.

Attendance. School attendance is the most basic indicator of being engaged, and, for some students, absenteeism represents disengagement from their education. Missing days of school means missing coursework that is often difficult to make up. Students who are frequently absent also lose access to teachers and peers who can promote positive attitudes about and approaches to learning. High absenteeism has been identified as perhaps the single strongest predictor of academic failure and dropout decisions for students with disabilities (Blackorby & Wagner, 1996; Donahoe & Zigmond, 1990; Schellenberg et al., 1988; Thurlow, Sinclair, & Johnson, 2002; Wagner et al., 1991).

On average, students with disabilities miss 2.6 days of school in a 4-week period, excluding suspensions and expulsions. This number translates to 23.4 days during a school year, or about a full month of school. This average masks considerable variation. Overall, 34% of students with disabilities miss no school at all in a 4-week period, whereas almost 14% miss more than 5 days. Four percent are absent 10 or more days, missing more than half of their classes.

Figures for 13- to 17-year olds in the general population are not available, so a full comparison cannot be made. However, national figures for 8th and 10th graders suggest that students with disabilities are more likely than their nondisabled peers to miss some school. Specifically, 68% of eighth-grade students with disabilities are absent at least 1 day in a 4-week period, compared with 55% of eighth-grade students in the general population (National Center for Education Statistics, 2002). Figures are similar for 10th graders. On the other hand, youth with disabilities are not more likely than their peers in the general population to miss a large number of days of school. Among youth with disabilities, 10% of both 8th and 10th graders are reported to be absent more than 5 days in a 4-week period, whereas among youth in the general population 13% of 8th graders and 14% of 10th graders are reported to be absent that frequently (National Center for Education Statistics, 2002).

Classroom engagement behaviors. Attending school does not guarantee that students are engaged in their coursework. Although attendance is necessary for reaping the benefits of school, it is by no means sufficient. Students make the greatest gains when they work hard and consistently, and when they engage actively in the learning enterprise in the classroom.

To measure students' classroom engagement behaviors, teachers were asked to report how often youth:

- Take part in group discussions
- Complete homework on time
- Stay focused on classwork
- Withdraw from social contact or class activities.

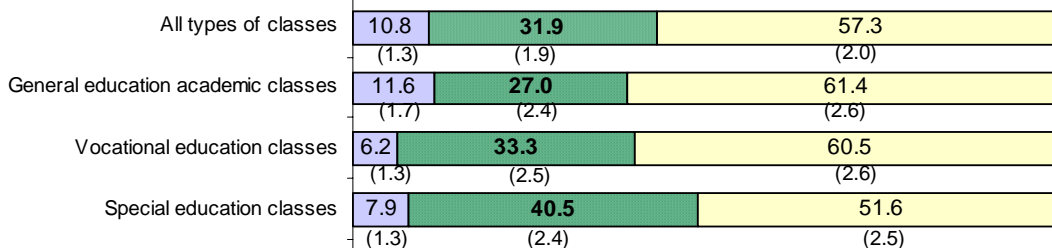
Teachers responded on a 4-point scale, ranging from "rarely" to "almost always."

According to teachers, almost 60% of students with disabilities usually or almost always stay focused in their classwork, and a similar percentage tend to complete their homework on time (Exhibit 3-2). Approximately 1 in 10 youth rarely stay focused on classwork, and 1 in 6 rarely complete their homework on time.

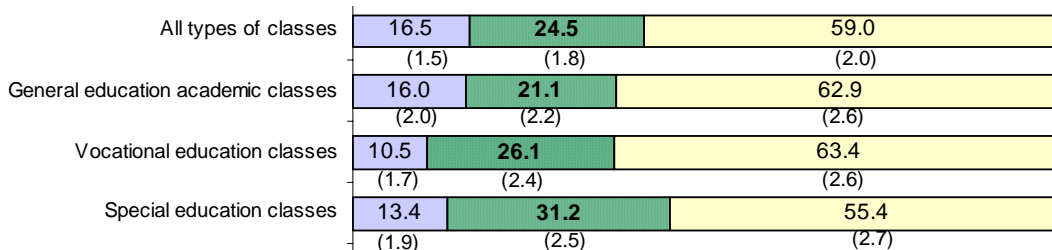
Exhibit 3-2 CLASSROOM ENGAGEMENT BEHAVIORS OF YOUTH WITH DISABILITIES, BY CLASS SETTING

Percentage who

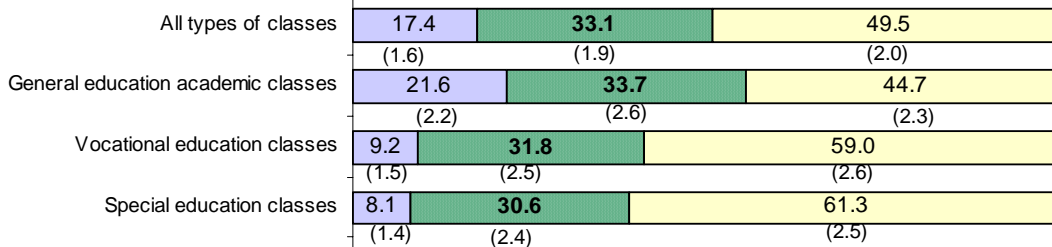
Stay focused on classwork



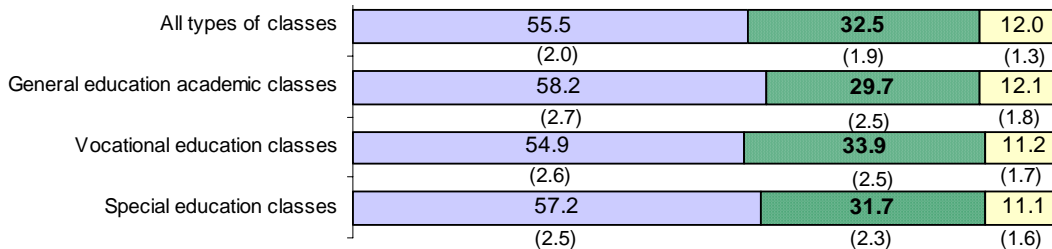
Complete homework on time



Participate in group discussions



Withdraw from social contact



■ Rarely
 ■ Sometimes
 ■ Usually or almost always

Source: NLTS2 Wave 1 student's school program survey.
Standard errors are in parentheses.

Note: Percentages for "all types of classes" are calculated by using the type of class in which the student spends the most time. Percentages for each type of class are calculated for all students with each type of class, regardless of whether they have the other two types of classes. Thus, a student with classes in all three types of settings is included in analyses of general education academic classes, vocational education classes, and special education classes.

Taking part in class discussions appears to be more challenging than staying focused on classwork or completing homework for youth with disabilities. Although about half usually or almost always participate in class discussions and a similar percentage rarely withdraw from social contact, 17% rarely participate in class discussions and 12% usually or almost always withdraw from social contact.

Some aspects of youth's behaviors differ in general education academic classes, vocational education classes, and special education classes.¹ Students are less likely to stay focused on their classwork in special education than in general education settings; 52% usually or almost always do so in special education classes, compared with 61% and 60% in general and vocational education academic classes, respectively ($p < .05$). They also are less likely to complete their homework on time (55% vs. 63% usually or almost always do so, $p < .05$). On the other hand, students are more likely to take part in class discussions in special education settings than in general education settings. In special education settings, 61% usually or almost always take part in such discussions and 8% rarely take part in them, whereas in general education settings, 45% usually or almost always take part in discussions ($p < .001$) and 22% rarely participate in them ($p < .001$). There are no differences across settings in the extent to which students withdraw from social contact in class.

Students in vocational education classes behave similarly to students in special education classes in terms of their taking part in class discussions, but similarly to students in general education classes in terms of staying focused or completing homework on time.

These findings raise the question whether differences in behaviors across class settings are related to differences in the students who take classes in those settings or to influences of class settings on behavior. To explore this issue, behaviors in the three settings were compared for the subset of students who take classes in all of them. The findings for this subset of students are very similar to the findings reported in Exhibit 3-2. Thus, the differences across settings shown in Exhibit 3-2 cannot be attributed to differences in the groups of students in each type of setting. Instead, they appear to relate to aspects of the class setting, such as class size, comfort with the teacher or other students in the class, or the teacher's expectations for behavior.

Classroom engagement scale. To examine overall classroom behavior in each type of setting, a scale was created by summing the ratings on the four behaviors. The scale ranges from 4 (all behaviors given the least positive rating) to 16 (all behaviors given the most positive rating). Scale scores are grouped as low engagement (scores of 4 to 8), moderate engagement (scores of 9 to 14), and high engagement (scores of 15 or 16).

Although mean scale scores do not differ by class setting, some differences are found at the two extremes (Exhibit 3-3). In general education classes, students are more likely than in vocational or special education settings to receive a score indicating low engagement (19% vs.

¹ Overall, 69% of students with disabilities take at least one general education academic class, 70% take at least one subject in a special education setting, and 68% take a vocational education class. Approximately 85% of students take classes in more than one setting. In Exhibit 3-2, percentages for "all types of classes" are calculated by using the type of class in which the student spends the most time. Percentages for the three types of classes are calculated for the students in each type of class, regardless of whether they have the other two types of classes. Thus, a student with classes in all three types of settings is included in analyses of general education academic classes, vocational education classes, and special education classes.

11% and 13%, $p < .01$ and $p < .05$). In addition, in special education classes, students are more likely than in vocational classes to be rated as highly engaged (20% vs. 14%, $p < .05$).

Exhibit 3-3
CLASSROOM ENGAGEMENT SCALE
SCORES OF YOUTH WITH DISABILITIES,
BY CLASS SETTING

	General Education Academic Class	Vocational Education Class	Special Education Class
Percentage less engaged (scores of 4 to 8)	18.9 (2.2)	10.9 (1.7)	13.3 (1.9)
Percentage highly engaged (scores of 15 or 16)	18.2 (2.1)	14.1 (1.9)	20.4 (2.2)
Mean scores	11.4 (.2)	11.6 (.1)	11.7 (.2)

Source: NLTS2 Wave 1 teacher and student's school program surveys.
Standard errors are in parentheses.

Relationships among Dimensions of School Engagement

For students with disabilities, enjoyment of school is associated with fewer absences ($r = -.09$, $p < .0001$) and positive classroom behaviors ($r = .1$, $p < .0001$). Higher absenteeism also is associated with poorer classroom behaviors that indicate engagement ($r = -.16$, $p < .0001$). These relationships differ little across the three types of class setting.

Disability Differences in School Engagement

School engagement differs markedly across disability categories (Exhibit 3-5). On nearly all measures, students with emotional disturbances are less engaged than their peers with other kinds of disabilities. For example, they are the least likely to have positive feelings about school; 42% of their parents indicate that they do not enjoy school, compared with one-third or fewer of students in other categories ($p < .05$ to $p < .001$). The fact that students with emotional disturbances are less likely than other students to enjoy school may explain in part why they are

Exhibit 3-4
CORRELATIONS AMONG INDICATORS OF
SCHOOL ENGAGEMENT OF YOUTH WITH
DISABILITIES

	Youth Enjoys School	Classroom Behavior Scale
Absences excluding suspensions	-.09 ($p < .0001$)	-.16 ($p < .0001$)
Youth enjoys school		.18 ($p < .0001$)

Source: NLTS2 Wave 1 teacher and student's school program surveys.
Standard errors are in parentheses.

less likely to attend school regularly. Students with emotional disturbances have the highest absenteeism from school—an average of 3.1 days in 4 weeks. Of these students, 16% miss 6 or more days of school in 4 weeks—more than students in every other disability category except traumatic brain injury and multiple disabilities ($p < .05$ to $.001$ across categories).

Generally, when they are in school, students with emotional disturbances tend not to be active participants. Consistently across the class settings, a substantial minority of these students are considered to have low engagement—30% in general education academic classes, 22% in vocational education classes, and 27% in special education classes. Moreover, fewer than 10% are considered highly engaged in any of the three classroom settings.

Exhibit 3-5
SCHOOL ENGAGEMENT OF YOUTH WITH DISABILITIES, BY DISABILITY CATEGORY

	Learning Disability	Speech/Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities	Deaf-Blindness
Enjoyment of school												
Percentage of students whose parents agree that "[Youth] enjoys school" ^a												
Strongly agree	20.1 (2.0)	25.3 (2.2)	32.3 (2.4)	13.2 (1.8)	31.6 (2.7)	31.9 (3.3)	33.9 (2.6)	19.6 (1.9)	34.3 (2.6)	21.2 (3.7)	40.4 (2.7)	44.7 (5.2)
Disagree/strongly disagree	27.7 (2.2)	18.0 (1.9)	17.2 (1.9)	41.8 (2.6)	12.5 (1.9)	12.9 (2.4)	14.8 (2.0)	34.1 (2.3)	14.5 (1.9)	27.7 (4.1)	11.7 (1.8)	15.0 (3.8)
Absenteeism												
Average days absent in 4 weeks	2.7 (.3)	1.9 (.2)	2.2 (.2)	3.1 (.4)	1.8 (.3)	1.4 (.3)	2.0 (.2)	2.0 (.2)	1.3 (.2)	2.7 (.5)	2.7 (.3)	1.8 (.4)
Percentage absent 6 or more days in 4 weeks	14.9 (2.4)	7.5 (1.9)	10.5 (2.1)	16.0 (3.2)	7.8 (2.3)	3.2 (1.8)	9.3 (2.1)	10.7 (2.1)	6.0 (1.6)	16.0 (4.6)	16.0 (2.9)	9.6 (3.8)
Classroom behavior												
Mean scores:												
General education academic class	11.6 (.2)	11.9 (.2)	10.2 (.4)	10.4 (.3)	12.5 (.3)	12.7 (.4)	12.2 (.2)	10.9 (.2)	11.4 (.4)	11.9 (.5)	12.2 (.5)	--
Vocational education class	12.0 (.2)	12.0 (.2)	11.0 (.2)	10.5 (.3)	12.5 (.3)	13.1 (.5)	12.4 (.3)	11.3 (.2)	9.8 (.3)	11.7 (.4)	10.7 (.3)	11.8 (.5)
Special education class	12.0 (.2)	12.0 (.3)	11.6 (.2)	10.3 (.3)	12.5 (.3)	12.5 (.6)	12.0 (.3)	11.5 (.2)	10.6 (.3)	12.1 (.5)	11.2 (.3)	12.2 (.7)
Percentage with high classroom engagement scale scores (15 or 16) in:												
General education academic classes	20.2 (3.0)	20.7 (3.1)	6.4 (3.8)	9.9 (3.7)	30.4 (4.5)	34.8 (6.3)	22.8 (3.6)	13.1 (2.5)	18.1 (5.0)	23.6 (7.0)	22.7 (8.2)	--
Vocational education classes	16.1 (3.1)	16.9 (3.6)	9.2 (2.3)	6.4 (2.8)	27.0 (4.6)	39.1 (7.9)	25.1 (4.1)	11.5 (2.8)	8.0 (2.5)	12.6 (5.6)	7.0 (2.6)	16.7 (6.3)
Special education classes	24.2 (3.6)	20.3 (4.1)	16.4 (3.0)	7.2 (2.7)	30.0 (5.7)	29.7 (8.5)	25.7 (4.1)	15.1 (3.0)	10.5 (3.0)	28.7 (7.2)	10.9 (3.5)	29.5 (11.7)
Percentage with low classroom engagement scale scores (4 to 8) in:												
General education academic classes	16.9 (2.8)	14.0 (2.6)	27.1 (6.9)	29.9 (5.7)	13.2 (3.3)	9.9 (3.9)	13.8 (3.0)	23.4 (3.1)	14.7 (4.6)	13.7 (5.7)	14.0 (6.8)	--
Vocational education classes	7.5 (2.2)	7.7 (2.5)	16.3 (2.9)	21.9 (4.8)	7.9 (2.8)	6.9 (4.1)	7.6 (2.5)	12.7 (2.9)	34.4 (4.4)	8.5 (4.7)	23.6 (4.4)	12.4 (5.6)
Special education classes	10.4 (2.6)	8.4 (2.8)	16.1 (2.9)	26.6 (4.6)	6.0 (2.9)	12.6 (6.2)	10.8 (2.9)	13.0 (2.8)	25.4 (4.3)	12.8 (5.3)	17.7 (4.3)	8.0 (6.9)

Source: NLTS2 Wave 1 parent interview and student's school program survey.

^a The category "agree" is omitted from the exhibit.

-- Too few to report separately.

Standard errors are in parentheses.

Students with mental retardation or other health impairments also tend to be less engaged in school than many of their peers in other disability categories. Their average classroom engagement scores are lower than many of their peers' scores across the class settings, and about one-third of students with other health impairments are reported not to like school.

In contrast, students with hearing or visual impairments are among the most engaged at school. Approximately 90% of these students have parents who indicate that they enjoy school. They are absent fewer days than many of their peers in other disability categories (1.8 and 1.4 days, respectively) and are more likely than others to be rated as highly engaged across the class settings, ranging from 27% to 30% for those with hearing impairments and 30% to 39% for those with visual impairments. Youth with orthopedic impairments also have relatively high engagement, as indicated by the large percentage reported to enjoy school (85%) and relatively small percentages receiving low classroom behavior scores (8% to 14% across behaviors). Youth with hearing, visual, or orthopedic impairments are the only groups to have average classroom engagement scale scores above 12 across all three settings.

The pattern of a larger percentage of students with disabilities scoring low on the classroom engagement scale in general education academic classes than in other kinds of classes holds true for 9 of the 12 disability categories; for 7 of those categories, vocational education classes have the fewest low scorers, as is true for students with disabilities overall. Similarly, the pattern observed for high scorers for students overall—with a smaller proportion scoring high on classroom engagement in vocational than in special education classes—holds true for 11 categories. The relatively small differences across settings in mean scores on the classroom engagement scale (.3) observed for students with disabilities as a whole also pertains to most categories. However, significant variation occurs across settings in average scale scores for youth with mental retardation, autism, and multiple disabilities (1.4 to 1.6, $p < .01$ and $p < .05$).

Factors Associated with School Engagement

Thus far, this chapter has described the school engagement of youth with disabilities as a group and for youth in each disability category. But such analyses do not provide information about the associations of a host of other factors with school engagement or about the associations of the various types of disabilities with school engagement when other factors are held constant. For example, there are more males among youth with emotional disturbances than among youth with visual impairments, so the extent to which the differences presented in Exhibit 3-4 are associated with differences in gender, not disability, is unclear.

Multivariate regression analyses were conducted to explore the associations of many characteristics of youth, their families, and their school programs and experiences with absenteeism and classroom engagement scale scores in general education academic, vocational education, and special education settings. Results from these analyses illuminate the association of each variable with the outcome, controlling for all other variables.

Individual Characteristics

Individual characteristics include those associated with the disabilities of youth, their functioning, and their demographics (Exhibit 3-6).

Exhibit 3-6
DIFFERENCES IN SCHOOL ENGAGEMENT ASSOCIATED WITH
INDIVIDUAL CHARACTERISTICS OF YOUTH WITH DISABILITIES^a

	Estimated Difference In:				
	Average Number of Days Absent per Year	General Education Academic Classroom Engagement Scale Score	Vocational Education Classroom Engagement Scale Score	Special Education Classroom Engagement Scale Score	
Disability characteristics					
Youth classified with:					
Speech/language impairment	-.6	-.5*	-.7*	-.8**	vs. learning disability ^b
Mental retardation	-4.4	-.2	-.4	-.6*	vs. learning disability
Emotional disturbance	-.2	-.3	-.9**	-.7*	vs. learning disability
Hearing impairment	-4.2	-.0	.3	-.3	vs. learning disability
Visual impairment	-8.2**	.4	.1	-.2	vs. learning disability
Orthopedic impairment	-1.5	-.4	-.0	-.6*	vs. learning disability
Other health impairment	-4.2	-.9***	-.8**	-1.1***	vs. learning disability
Autism	-7.8**	-.3	-1.7***	-1.7***	vs. learning disability
Traumatic brain injury	1.9	.4	-.1	.0	vs. learning disability
Multiple disabilities/deaf-blindness	-2.7	-.1	-.3	-.6*	vs. learning disability
ADD/ADHD ^c	-.4	-.3	-.2	-.3*	Yes vs. no
Age at identification	.4	.0	-.1	-.2*	8 years vs. 4 years
Number of problem domains	-2.2**	.0	-.0	-.1	Three vs. one
Functioning					
General health status	-10.6***				Excellent vs. poor (5 vs. 1)
Self-care skills	-4.4*	-.8*	1.0***	.4	High vs. low (8 vs. 4)
Functional cognitive skills	1.1	.3	.5**	.3	High vs. low (15 vs. 7)
Social skills	-.2	.5*	.7***	.5**	High vs. low (27 vs. 17)
Persistence	2.1	1.1***	.6***	.5**	Very often keeps at tasks vs. rarely (3 vs. 1)
Demographics					
Age	.6	-.2	-.0	.1	17 vs. 14
Gender	-2.9**	-.6***	-.6***	-.5***	Male vs. female
African American	-.2	-.5*	-.3	-.3*	vs. white
Hispanic	2.3	-.5	-.3	-.2	vs. white
Other or multiple race/ethnicity	7.9**	-.2	-.6	-.1	vs. white
Primarily language other than English spoken at home	-2.0	.2	.2	.1	Yes vs. no

^aStatistics in this exhibit are calculated from models that included all individual characteristics, as well as household characteristics (results shown in Exhibit 3-7) and school programs and experiences (results shown in Exhibit 3-8).

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

^cADD/ADHD is included to determine its relationships as a primary or secondary disability to school engagement, independent of youth's primary disability category.

*p<.05; **p<.01; ***p<.001.

Exhibit reads: In a school year, youth with visual impairments are absent 8.2 days less than youth with learning disabilities, other factors in Exhibits 3-6 through 3-8 being equal. In a school year, youth with a high self-care skills score are absent 4.4 days less than youth with a low self-care skills score, other factors being equal.

Disability characteristics. These findings confirm some of the descriptive analyses presented earlier in the chapter regarding disability category differences in school engagement. For example, there are few significant differences in absenteeism associated with disability category, with the exceptions that absenteeism is about 8 days lower for students with visual impairments or autism than for the comparison condition (students with learning disabilities), and students with limitations in a greater number of functional domains have lower absenteeism than those less broadly affected by disability. Also mirroring the bivariate analyses, students with autism are less likely to be engaged in their classes, receiving lower vocational and special education classroom engagement scores than their peers with learning disabilities.

However, unlike bivariate analyses, in which the greatest range in classroom engagement scores is apparent for vocational education classes, in multivariate analyses that control for other factors, disability differences are most apparent in students' engagement in their special education classes. Students in all but three categories (hearing and visual impairment and traumatic brain injury) receive lower special education classroom engagement scale scores than do their peers with learning disabilities, other things being equal. Moreover, in special education classes, ADD/ADHD is related to lower classroom engagement scores; a similar relationship is noted for youth who were older when they were first identified as having a disability.

Functioning. Although voluntary absenteeism from school is often considered an indicator of alienation from school (e.g., Finn, 1989; Hudley et al, 2002), clearly not all absenteeism is voluntary. Students with disabilities often are absent from school because of illnesses or overall poor health. Holding other differences constant, students whose parents report their health as being "excellent" miss an estimated 11 fewer days of school in a school year than those whose health is rated as "poor."

Students' self-care skills are related to their school engagement, but not in a consistent direction. Those with higher self-care skills scores miss fewer days of school and receive higher engagement score ratings in their vocational education classes, but receive lower class engagement ratings in their general education academic classes. Controlling for other factors, self-care skills are not related to differences in special education classroom engagement scores. Functional cognitive skills appear to be related only to engagement in vocational classes; those with higher cognitive skills receive higher vocational classroom engagement scores, other factors being equal.

Having stronger social skills is consistently related to higher levels of engagement in all types of classes, although it does not appear to be related to rates of absenteeism when other differences among students are held constant. The relationship between social skills and class-level engagement is not surprising, given that two of the aspects of classroom engagement are taking part in group discussions and not withdrawing from social contact or class activities.

Persistence also is related highly to classroom engagement across all class settings. This relationship is expected in that two components of the classroom engagement scale are completing homework on time and staying focused on classwork—activities that require persistence.

Demographic characteristics. Age differences are unrelated to students' school engagement. However, both absenteeism and classroom behaviors are related to gender, although in opposite directions. Independent of differences in disability and other factors, boys

miss 3 fewer days of school per year than girls, but girls receive higher classroom engagement scale scores than boys in all three settings.

Controlling for other factors, racial/ethnic background is related to only a few aspects of school engagement. African-American students with disabilities receive lower classroom behavior ratings in general education academic and special education classes than white students. Further, students who are Asian, Native American, or of multiple or “other” racial/ethnic backgrounds miss 8 more days of school per year than their white peers.

Household Characteristics

Household income is related only to differences in absenteeism, with youth from wealthier families less likely to be absent (Exhibit 3-7). No differences are found in classroom engagement scores related to household income when other factors are taken into account. Family involvement at home or at school is not related to most aspects of engagement, with the exception that students whose families are more highly involved at home are more likely to be rated as engaged in vocational class activities than are those whose families are less involved at home. An aspect of the classroom engagement scale is completing homework on time, and one facet of family involvement at home is frequency of helping with homework. It is possible that this additional homework support is related to more successful homework completion for students in vocational classes.

In contrast to the absence of consistent relationships between family involvement and school engagement, families’ expectation that their adolescent children with disabilities will continue their education past high school is highly related to classroom engagement across settings. Students who are expected “definitely” to attend postsecondary school receive higher classroom engagement ratings in all types of classes than their peers who are not expected to continue their education, with the largest difference noted for general education academic classes.

Exhibit 3-7 DIFFERENCES IN SCHOOL ENGAGEMENT ASSOCIATED WITH HOUSEHOLD CHARACTERISTICS OF YOUTH WITH DISABILITIES^a

	Estimated Difference In:				For Increment
	Average Number of Days Absent per Year	General Education Academic Classroom Engagement Scale Score	Vocational Education Classroom Engagement Scale Score	Special Education Class Behavior Scale Score	
Household income	-2.2**	.2	.0	-.1	\$55,000 to \$60,000 vs. \$20,000 to \$24,000 (12 vs. 5)
Family involvement at home	-.9	-.2	.3*	.1	High vs. low (8 vs. 4)
Family involvement at school	.3	-.0	-.1	-.0	High vs. low (6 vs. 1)
Family expectations for postsecondary attendance	-1.6	1.0***	.6***	.5***	Definitely will vs. probably won't (4 vs. 2)

^aStatistics in this exhibit are calculated from models that included all household characteristics, as well as individual characteristics (results shown in Exhibit 3-6) and school programs and experiences (results shown in Exhibit 3-8).

*p<.10; **p<.05; ***p<.01; ****p<.001.

Exhibit reads: In a school year, youth whose household incomes are between \$55,000 and \$60,000 are absent 2.2 days less than youth whose family incomes are between \$20,000 and \$24,000, all other variables being equal.

School Programs and Experiences

School program factors. Several aspects of the school programs of youth with disabilities are related to their school engagement (Exhibit 3-8). Holding constant all other individual and household characteristics shown in Exhibits 3-6 and 3-7 (including type of disability and levels of functioning), both greater inclusion in general education academic classes and taking one or more vocational education courses are related to lower average absenteeism for students with disabilities. Conversely, students who do not have these kinds of courses in their school schedule—those whose course taking emphasizes special education classes—miss more school, other things being equal. In addition, several kinds of accommodations and supports provided students with disabilities are related to their classroom behavior. Controlling for other factors, students who receive more modifications for tests, instructions, and assignments are more likely to receive lower engagement behavior scale scores in general education academic and vocational education courses. Although one could expect these kinds of supports to help students with disabilities feel more engaged and successful in their classes, it also is reasonable to expect that students who are struggling in class are the most likely to receive such supports. Although other factors related to disability and functioning are included in the analyses to attempt to control statistically for variations in students' needs for supports, a negative relationship between receiving supports and school engagement persists in general education academic and vocational education settings.

Other school experiences. Strong relationships exist between students' current school engagement and a variety of current and past experiences with school. The negative relationships between absenteeism and classroom engagement confirm the findings presented earlier that these aspects of school engagement are interrelated. Further, experiencing current or past behavior and/or academic problems at school is related to lower school engagement. Those who have been retained at grade level at some time in their school careers receive lower general education academic and special education classroom engagement scores, other differences held constant. Students who have been subject to disciplinary action or an in-school suspension are estimated to miss 7 more days of school per year other than for suspensions or expulsions and to have lower behavior scale ratings in all types of classes than those who have not had such problems. Changing schools frequently for reasons other than grade-level progression also is associated with greater absenteeism; students who have changed schools three times miss an estimated 4 days more of school per year than those who have made no changes, other things being equal.

Conversely, some school experiences are related to lower rates of absenteeism, including belonging to school groups. In this respect, youth with disabilities are similar to their peers in the general population, where participation in extracurricular activities is associated with increased school engagement (Brown & Evans, 2002; Jordan, 1999). Group participation usually is elective; students choose to participate in school groups because they enjoy the activities that are the focus of the groups (e.g., drama, sports). Having this type of self-selected affiliation is related to students with disabilities missing an estimated 3 fewer days of school per year.

Exhibit 3-8
DIFFERENCES IN SCHOOL ENGAGEMENT ASSOCIATED WITH
SCHOOL PROGRAMS AND EXPERIENCES OF YOUTH WITH DISABILITIES^a

	Estimated Difference In:				
	Average Number of Days Absent per Year	General Education Academic Classroom Engagement Scale Score	Vocational Education Classroom Engagement Scale Score	Special Education Classroom Engagement Scale Score	
School programs					
Percentage of classes in general education academic classes	-3.1**				75% vs. 25%
Enrollment in a vocational education class	-2.7*				Yes vs. no
Class size	-.0	-.1	-.1*	-.1	22 students vs. 10
Number of social adjustment supports provided	1.0	-.2	-.0	-.1	Two vs. none
Number of modifications to tests, instruction, assignments, and grades provided		-.6**	-.4*	.0	Seven vs. one
Number of presentation/communication aids provided		-.0	.4	.0	Five vs. none
Other school experiences					
Days absent per month		-.4**	-.6***	-.6***	5 vs. 0
Retention at grade level	-1.1	-.3*	-.1	-.3*	Yes vs. no
Subject to disciplinary action or in-school suspension this school year	6.6***	-1.3***	-1.0***	-1.2***	Yes vs. no
School mobility other than for grade-level changes	3.6**	-.2	.0	-.1	Three school changes vs. none
Membership in school groups	-2.9**				Yes vs. no

^aStatistics in this exhibit are calculated from models that included the school programs and experiences shown in this exhibit, as well as individual characteristics (results shown in Exhibit 3-6) and household characteristics (results shown in Exhibit 3-7).

*p<.05; **p<.01; ***p<.001.

Exhibit reads: In a school year, youth who had 75% of their classes in a general education setting were absent 3.1 days less than youth who had 25% of their classes in a general education setting, all other variables being equal.

Non-School-Related Outcomes

In addition to the school-related experiences discussed above, some experiences outside of school also could be expected to relate to the school engagement of youth with disabilities. For example, active involvement with friends or with jobs outside of school might compete with school responsibilities and result in higher absenteeism. In fact, seeing friends frequently is related to higher absenteeism; students who see friends outside of school 6 or 7 days per week are estimated to miss 3 more days of school per year than their peers who visit with friends an average of 1 day a week. However, holding a paid job is not associated with higher absenteeism for youth with disabilities.

How Much Is Explained?

The four multivariate analyses of measures of school engagement each explain a statistically significant portion of the variation in the measures analyzed (p<.001), although a larger percentage of variation is explained in classroom behaviors than in absenteeism. Analyses of

classroom behavior produce r^2 values of .18 for behavior in special education classes and .24 for behavior in general education academic and vocational education classes. In contrast, the r^2 is .07 for absenteeism. More than half of the explained variation in engagement is attributable to disability and functioning. Overall, consideration of school program and experience factors adds more to the explanatory power of the analyses than household characteristics and parents' support for education.

Looking Back to NLTS

The original NLTS examined the issue of classroom engagement, as indicated by the absenteeism of students with disabilities in their most recent school year (Wagner, 1991a), using the same regression analysis approach reported here for NLTS2. Despite more than a decade between studies and the richer database for NLTS2, which permits the inclusion of more school factors in the analysis, several findings are consistent across the two studies.

Students with visual impairments have consistently lower absenteeism than those with learning disabilities in both studies; however, the lower absenteeism of youth with hearing impairments and multiple disabilities in NLTS has not been maintained over time. Higher self-care skills also consistently relate to lower absenteeism for youth with disabilities. Differences in demographic factors are noted; although higher household income is consistently related over time to lower absenteeism, gender and racial/ethnic differences that are apparent in NLTS2 were not found in the earlier study. Although few school factors were included in the NLTS multivariate analysis of absenteeism, it did consider the extent to which students spent time in general education academic classes and whether their course schedule included a vocational education class. In both studies, taking vocational education is significantly related to lower absenteeism. General education academic class participation was not related to absenteeism in NLTS, although in NLTS2, students who take a greater portion of their courses in general education classes miss less school.

Summary

This chapter examines the school engagement of students with disabilities, addressing the extent to which students enjoy school, are absent from school, and exhibit various behaviors that suggest engagement in classroom activities.

According to parents, most students with disabilities enjoy school. Nonetheless, they are somewhat less likely to enjoy school than their counterparts in the general population. On average, students with disabilities are absent about as frequently as those in the general population, but they are less likely to have perfect attendance. Approximately 60% usually stay focused on their classwork, and a similar percentage usually complete their homework on time. On the other hand, approximately 1 in 10 rarely stay focused in class, and 1 in 6 rarely complete their homework on time. Rates of class participation are lower, with half of students participating in classroom discussions frequently and one in six participating rarely. Although more than half of youth with disabilities rarely withdraw from social contact in their classes, one in eight usually or almost always withdraw from contact.

Students' levels of engagement are related to class setting (i.e., general, special, or vocational education classroom). Specifically, students with disabilities who take general education academic classes tend to be less engaged there than students with disabilities who take classes in

other settings. Furthermore, students with disabilities who take classes in all three settings are the least engaged when they are in general education academic classes. These patterns tend to hold across disability categories. The varying levels of engagement of students in different class settings suggest that the learning environment may play an important role in helping students with disabilities maintain interest in school.

Engagement at school varies by disability category, although multivariate analyses show less consistent differences than do bivariate analyses. For example, although bivariate analyses show that students with emotional disturbances are less engaged in school than are students with other disabilities on all measures, when other differences between students are controlled, those with emotional disturbances differ from students with learning disabilities only with regard to lower classroom engagement in vocational and special education classes. Similarly, in bivariate analyses, the most highly engaged students with disabilities are those with hearing or visual impairments. However, in multivariate analyses, those with hearing impairments do not differ on any measure from students with learning disabilities, and students with visual impairments differ only with regard to lower absenteeism.

Not surprisingly, several indicators of health and functioning are associated with measures of school engagement—better health with lower absenteeism, and higher functional cognitive skills, social skills, and persistence with better classroom engagement in most settings. Interestingly, higher levels of self-care skills are associated with lower engagement in general education classes but with higher in engagement in vocational education classes.

Relatively few demographic and family characteristics are associated with absenteeism or classroom engagement. One exception is that boys tend to be absent fewer days than girls; however, they also tend to have lower levels of engagement, regardless of setting. In addition, students whose families expect them to attend postsecondary school are more likely to be engaged in all three settings.

School factors make a difference in student engagement. Taking more courses in general education classes, enrollment in a vocational education class, and membership in school groups are associated with better attendance, whereas disciplinary actions and changing schools often are associated with higher absenteeism. That disciplinary actions and belonging to groups have opposite associations with engagement is not surprising, given that they are negatively related to each other (see Chapter 5).