

January 2009

# Facts from SEELS

---



## **Elementary and Middle School Students with Disabilities: Are They Accessing the General Education Curriculum?**

An increasing emphasis of special education has been to enable students with disabilities to access the general education curriculum. Such access is discussed in the Individuals with Disabilities Acts of 1997 and 2004 (IDEA). In addition, it is assumed by the No Child Left Behind Act of 2002 (NCLB), which mandates that students with disabilities participate in state accountability testing systems and that their results be reported separately from the general population. Including students with disabilities in general education classrooms has been found to be related to beneficial outcomes for both students with disabilities (Baker, Wang, & Walberg, 1994; Waldron, 1997) and their general education peers (Salend & Duhaney, 1999; Stainback & Stainback, 1996; Staub & Peck, 1994). For example, inclusive practices have been found to be related to more appropriate social behavior and higher levels of achievement for students with disabilities, as well as to increased comfort with and awareness of human differences for students in the general population (Baker & Zigmond, 1995; Walther-Thomas, Bryant, & Land, 1996). In other cases, comparisons of achievement between students with disabilities in general and special education settings have been less clear (Kavale & Forness, 2000).

The mere presence of students with disabilities in general education classrooms does not necessarily imply that they have access to the general education curriculum. For access to occur, the students' "educational programs [must be] based on high expectations that acknowledge each student's potential and ultimate contribution to society" and "[they must] be provided with the supports necessary to allow them to benefit from instruction." Several issues need consideration in the current context of general curriculum access: What are the academic classroom experiences of students with disabilities? What are the characteristics of the classroom instruction provided to them? To what extent do the experiences and instruction of students with disabilities differ from those of their classmates without disabilities? To what extent are they included in state accountability testing systems?

These questions are addressed in this fact sheet, with a focus on elementary and middle school students with disabilities. Data from the Special Education Elementary Longitudinal Study (SEELS)<sup>1</sup> provide a national picture of the educational experiences of students with disabilities who receive services under

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

**Author:**  
Camille Marder  
SRI International

---

<sup>1</sup> SEELS, which was conducted by SRI International for the Office of Special Education Programs of the U.S. Department of Education, had a nationally representative sample of more than 11,000 youth who on December 1, 2000, were ages 6 through 13 and receiving special education. SEELS collected three waves of data from the parents of SEELS sample members, from their language arts teachers, and from other school staff, and has conducted direct assessments of students using standardized tests. SEELS data are weighted to represent youth with disabilities nationally as a group, as well as youth in each of 12 federal special education disability classifications. See <http://www.seels.net> for more information about SEELS and the surveys.

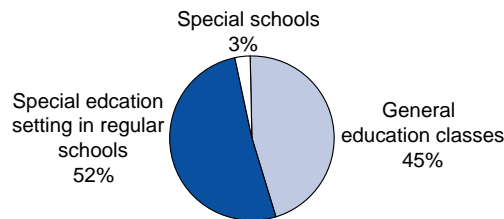
IDEA.<sup>2,3</sup> The data analyzed for this fact sheet come from the SEELS Wave 3 survey of language arts teachers, conducted in spring 2004, when SEELS students were 10 to 17 years old. Teachers of more than 5,400 students responded to the survey, which included questions about the instructional placement and selected classroom experiences of students with disabilities. More than 2,000 of these students received their language arts instruction in general education classrooms, and their teachers were also asked about the experiences of the other students in the classroom. Teachers' reports of the experiences of the "other students in the classroom" are used here as a proxy for the experiences of students without disabilities.

The experiences examined in this fact sheet include instructional placement, groupings, participation in selected instructional and reading activities, types of curriculum materials and equipment used, and participation in standardized tests. Taken together, they provide a picture of the extent to which the experiences of students with disabilities differ from those of students without disabilities.

### The Experiences of Students in Three Instructional Settings

Forty-five percent of students with disabilities receive language arts instruction in general education classes in regular schools,<sup>4</sup> 52% receive the instruction in special education classes in regular schools, and 3% receive it in special schools.

#### Percentages of Students With Disabilities in Three Instructional Settings



SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Instructional groupings in language arts.** Teachers' reports reveal that they are using instructional groupings, such as small-groups and individual instruction, to help reduce the student-teacher ratio for some students with disabilities, particularly so in special education classes in regular schools and in special schools. Relative to students without disabilities:

- Students with disabilities are less likely to receive whole-class instruction, whereas they are much more likely to receive individualized instruction from both teachers and other adults.<sup>5</sup>

<sup>2</sup> Data reported here are population estimates from data weighted to represent students in each disability classification who attended school in the kinds of districts from which they were sampled.

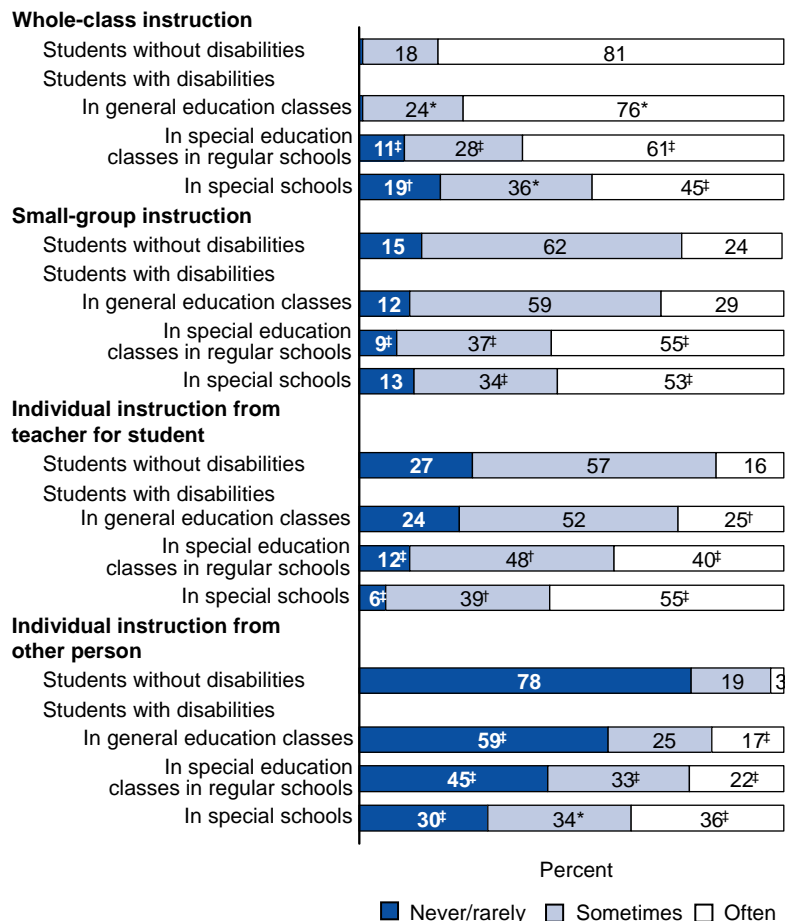
<sup>3</sup> As used in this report, the term "students with disabilities" includes only those students receiving services under IDEA.

<sup>4</sup> Students' instructional settings are measured here by their placement for language arts.

<sup>5</sup> Throughout this fact sheet, comparisons of groups of students with disabilities and students without disabilities are reported only if they reached statistical significance of at least the  $p < .05$  level using two-tailed  $t$  tests.

- Students in special education classes in regular schools and students in special schools<sup>6</sup> are more likely to receive small-group instruction.

### Frequency of Selected Instructional Groupings for Students Without and With Disabilities



\* $p < .05$ ; † $p < .01$ ; ‡ $p < .001$  for difference between students in marked category and students without disabilities.

NOTE: Percentage numbers are not shown in the exhibit when <3%. Percentages may not sum to 100 due to rounding.

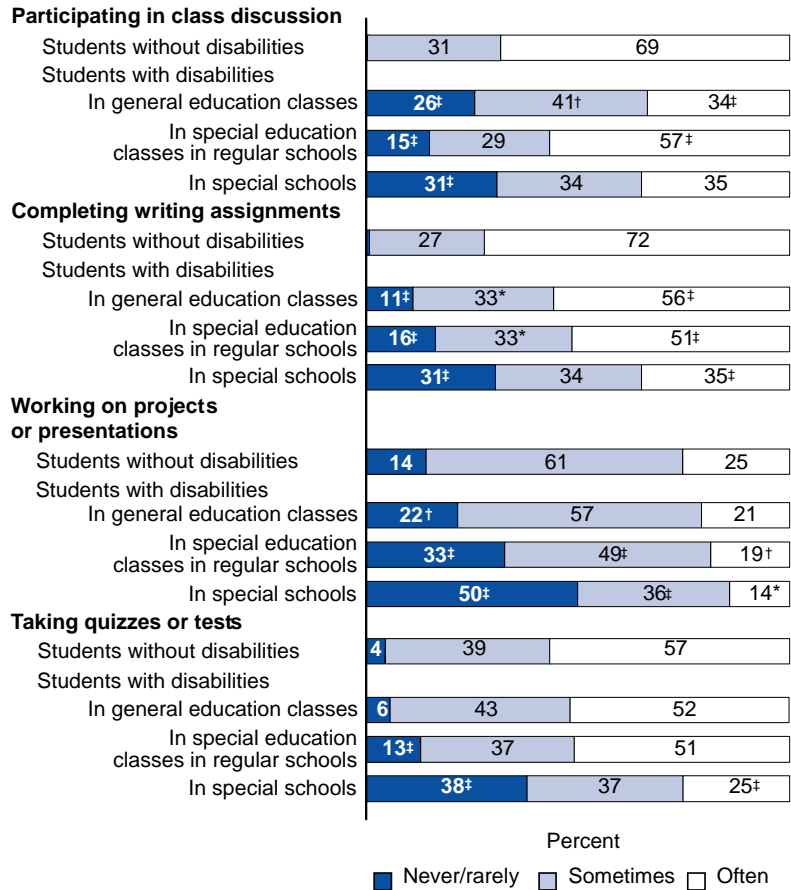
SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Instructional activities.** The instructional activities in which students with disabilities engage tend to differ somewhat from the activities engaged in by students without disabilities. Compared with students without disabilities:

- Students with disabilities in all three instructional settings are less likely to participate in class discussions, complete writing assignments, or work on projects or presentations.
- Students in special schools and, to a lesser extent, students in special education classes in regular schools, are less likely to take quizzes or tests.

<sup>6</sup> In this report, “students in special education classes in regular schools” means “students with disabilities in special education classes in regular schools,” and “students in special schools” means “students with disabilities in special schools.”

## Frequency of Participation in Selected Instructional Activities by Students Without and With Disabilities



\* $p < .05$ ; <sup>†</sup> $p < .01$ ; <sup>‡</sup> $p < .001$  for difference between students in marked category and students without disabilities.

NOTE: Percentage numbers are not shown in the exhibit when <3%. Percentages may not sum to 100 due to rounding.

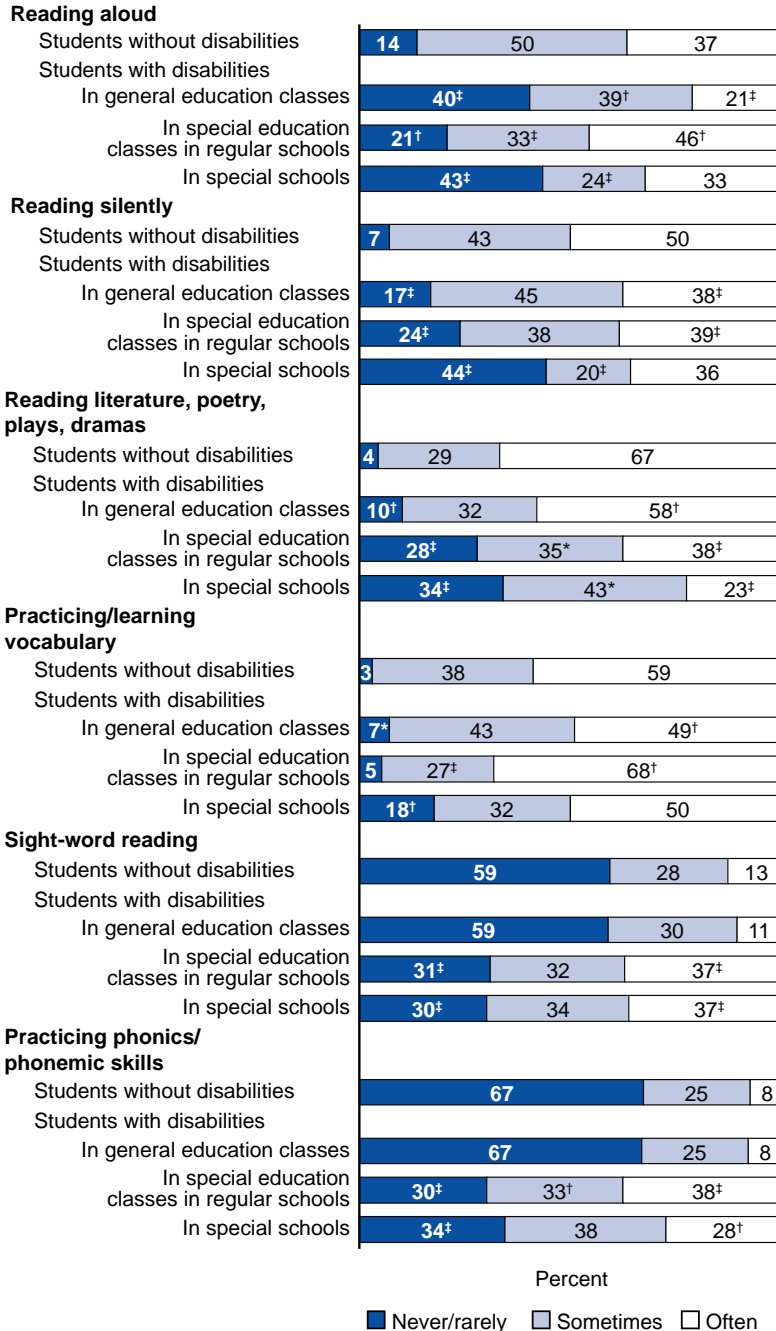
SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Reading activities.** In general, students with disabilities in all three instructional settings are less likely than students without disabilities to engage in reading activities; however, students in special education classes in regular schools and students in special schools are more likely to engage in two pre-reading activities. Relative to students without disabilities:

- Students with disabilities in all three settings are less likely to read aloud, to read silently, or to read literature, poetry, plays, or dramas. The gap in regard to reading literature, poetry, plays, or dramas is smallest for students with disabilities in general education settings and largest for students in special schools.
- Students with disabilities in general education settings are less likely to learn or practice vocabulary, although they are about equally likely to engage in sight-word reading or to practice phonemic skills or phonics.
- Students in special education classes in regular schools are more likely to practice vocabulary, engage in sight-word reading, or practice phonemic skills or phonics.

- Students in special schools also are more likely to engage in sight-word reading and practice phonemic skills or phonics. In contrast, they are less likely to practice vocabulary.

### Frequency of Participation in Selected Reading Activities by Students Without and With Disabilities



\* $p < .05$ ; <sup>†</sup> $p < .01$ ; <sup>‡</sup> $p < .001$  for difference between students in marked category and students without disabilities.

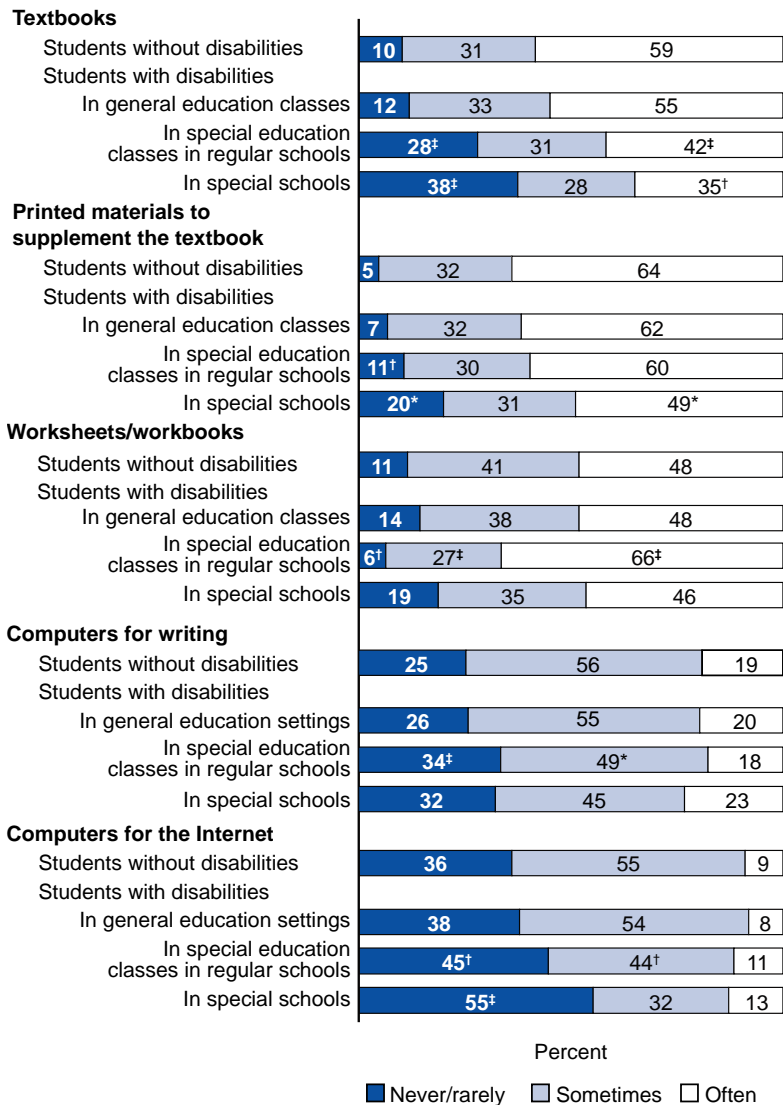
NOTE: Percentages may not sum to 100 due to rounding.

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Use of materials and computers in language arts.** Students with disabilities in general education settings do not differ from students without disabilities in terms of the frequency with which they use textbooks, printed materials to supplement textbooks, worksheets and workbooks, computers for writing, and computers for accessing the Internet. In contrast, relative to students without disabilities:

- Students in special education classes in regular schools are more likely to use worksheets and workbooks “often,” whereas they are more likely “never” or “rarely” to use textbooks, printed materials to supplement the text, computers for writing, and computers for the Internet.
- Students in special schools are less likely to use textbooks, printed supplements to textbooks, and computers to access the Internet.

**Frequency of Use of Selected Materials and Computers by Students Without and With Disabilities**



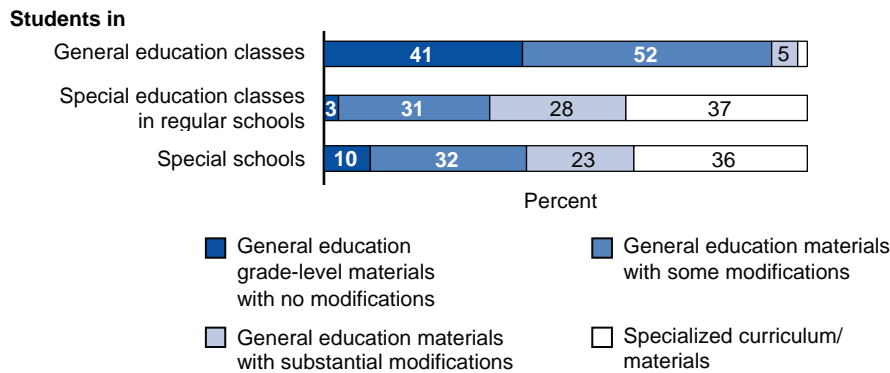
\* $p < .05$ ; <sup>†</sup> $p < .01$ ; <sup>‡</sup> $p < .001$  for difference between students in marked category and students without disabilities.

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

A majority of students with disabilities in all three instructional settings use general education curriculum materials with modifications, and substantial minorities of students in special education classes in regular schools and students in special schools use specialized curriculum materials:

- Approximately half of students with disabilities in general education classrooms use general education curriculum materials with “some” modifications. Such materials may contain modified content or may be somewhat below grade level. Most other students with disabilities in these classrooms use general education grade-level curriculum materials without modifications.
- Slightly more than one-third of students in special education classes in regular schools and students in special schools use specialized curriculum materials. Almost as many use general education curriculum materials with “some” modifications, and approximately one-fourth use general education curriculum materials with “substantial” modifications (e.g., materials with very different content expectations or significantly below grade level).

**Language Arts Curriculum Materials Used by Students With Disabilities, by Instructional Setting**

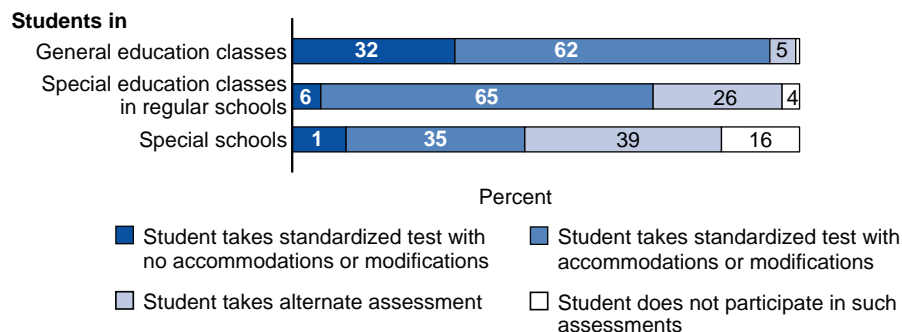


NOTE: Percentage numbers are not shown in the exhibit when <3%.

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Participation in accountability testing.** Almost all students with disabilities in general education classes and in special education classes in regular schools participate in standardized tests or alternate assessments, with about two-thirds taking standardized tests with accommodations or modifications. However, whereas most of the remaining students with disabilities in general education classes take standardized tests without accommodations, most of the remaining students in special education classes in regular schools participate in alternate assessments. Somewhat fewer students in special schools participate in either standardized or alternate assessments. Those who do are about as likely to take a standardized test with accommodations or modifications as they are to participate in an alternate assessment.

## Participation in Standardized Testing by Students With Disabilities, by Instructional Setting



NOTE: Percentage numbers are not shown in the exhibit when <3%.

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

## Differences in Academic Experiences by Disability Classification

This section discusses selected classroom experiences of students with each primary disability classification.<sup>7</sup> Previous SEELS reports have shown that the academic experiences of students with different disability classifications vary considerably.<sup>8</sup> Thus, it is not surprising to find variation across the disability categories in the patterns of differences between students with disabilities and their peers without disabilities, although, in general, the experiences of students with mental retardation, autism, and multiple disabilities differ the most from those of students without disabilities.

**Instructional settings for language arts.** The instructional settings of students with disabilities differ greatly, depending on their disability classification.

- Roughly half of students with learning disabilities, visual impairments, physical/orthopedic impairments, or other health impairments, and almost two-thirds of students with speech or language impairments are in general education classrooms. Most of the remaining students with these classifications are in special education classrooms in regular schools.
- The majority of students with mental retardation, emotional disturbance, autism, traumatic brain injury, or multiple disabilities are in special education classrooms in regular schools.
- Approximately one-fifth of students with visual impairments or multiple disabilities are in special schools. The only other disability classifications with more than 10% of students in such schools are hearing impairments, autism, and traumatic brain injury.

<sup>7</sup> The small number of students in the deaf/blind category with data from the Wave 3 teacher survey does not permit presentation of findings for that group of students separately.

<sup>8</sup> See especially Blackorby, J., Wagner, M., Marder, C., et al. (2004). *Inside the classroom: The language arts classroom experiences of elementary and middle school students with disabilities*. Menlo Park, CA: SRI International.



## Percentages of Students in Three Instructional Settings, by Disability Classification

	Learning disabilities	Speech or language impairments	Mental retardation	Emotional disturbance	Hearing impairments	Visual impairments	Physical/Orthopedic impairments	Other health impairments	Autism	Traumatic brain injury	Multiple disabilities
General education	49	64	12	35	44	53	49	54	23	23	7
Special education class in regular schools	51	33	83	59	44	29	47	44	66	65	72
Special schools	1	3	5	6	12	19	4	3	12	13	22

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Instructional groupings in language arts.** Relative to students without disabilities, students with every disability classification are less likely to receive whole-class instruction, and those with almost all disability classifications are more likely to receive each other type of instruction. Differences are greatest for students with mental retardation, autism, or multiple disabilities, who are particularly likely to receive individualized instruction.

## Frequency of Selected Types of Instruction Groupings for Students Without Disabilities and for Students With 11 Disability Classifications

	Students without disabilities	Learning disabilities	Speech or language impairments	Mental retardation	Emotional disturbance	Hearing impairments	Visual impairments	Physical/Orthopedic impairments	Other health impairments	Autism	Traumatic brain injury	Multiple disabilities
<b>Percent of students receiving type of instruction</b>												
<b>Whole class</b>												
Often	81	70 <sup>†</sup>	71 <sup>*</sup>	53 <sup>‡</sup>	68 <sup>‡</sup>	71 <sup>†</sup>	71 <sup>†</sup>	68 <sup>‡</sup>	71 <sup>†</sup>	45 <sup>‡</sup>	61 <sup>‡</sup>	50 <sup>‡</sup>
Never/rarely	1	4 <sup>*</sup>	4	16 <sup>‡</sup>	8 <sup>‡</sup>	6 <sup>‡</sup>	5 <sup>†</sup>	8 <sup>‡</sup>	6 <sup>†</sup>	30 <sup>‡</sup>	14 <sup>†</sup>	15 <sup>‡</sup>
<b>Small group</b>												
Often	24	41 <sup>‡</sup>	40 <sup>‡</sup>	54 <sup>‡</sup>	41 <sup>‡</sup>	46 <sup>‡</sup>	40 <sup>‡</sup>	45 <sup>‡</sup>	40 <sup>‡</sup>	49 <sup>‡</sup>	38 <sup>*</sup>	60 <sup>‡</sup>
Never/rarely	15	9 <sup>*</sup>	13	11	10	8 <sup>†</sup>	11	10	11	17	21	9 <sup>*</sup>
<b>Individual—from teacher</b>												
Often	16	31 <sup>‡</sup>	25 <sup>*</sup>	54 <sup>‡</sup>	37 <sup>‡</sup>	35 <sup>‡</sup>	41 <sup>‡</sup>	42 <sup>‡</sup>	29 <sup>‡</sup>	51 <sup>†</sup>	38 <sup>‡</sup>	52 <sup>‡</sup>
Never/rarely	27	18 <sup>†</sup>	24	12 <sup>‡</sup>	16 <sup>‡</sup>	13 <sup>‡</sup>	16 <sup>‡</sup>	12 <sup>‡</sup>	13 <sup>‡</sup>	11 <sup>†</sup>	14 <sup>†</sup>	6 <sup>‡</sup>
<b>Individual—from other adult</b>												
Often	3	15 <sup>‡</sup>	18 <sup>‡</sup>	35 <sup>‡</sup>	16 <sup>‡</sup>	21 <sup>‡</sup>	28 <sup>‡</sup>	25 <sup>‡</sup>	24 <sup>‡</sup>	48 <sup>‡</sup>	34 <sup>‡</sup>	43 <sup>‡</sup>
Never/rarely	78	57 <sup>‡</sup>	57 <sup>‡</sup>	31 <sup>‡</sup>	49 <sup>‡</sup>	47 <sup>‡</sup>	44 <sup>‡</sup>	42 <sup>‡</sup>	46 <sup>‡</sup>	22 <sup>‡</sup>	38 <sup>‡</sup>	18 <sup>‡</sup>

\* $p < .05$ ; <sup>†</sup> $p < .01$ ; <sup>‡</sup> $p < .001$  for difference between students in marked category and students without disabilities.

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Instructional activities in language arts.** With few exceptions, students with all disability classifications are less likely than students without disabilities to engage in a variety of types of instructional activities. Differences tend to be largest for participating in class discussions and completing writing assignments. Most differences in working on projects or presentations concern the percentages of students who “never” or “rarely” engage in the activities rather than the percentages of students who “often” engage in them. With the exception of the fact that students with autism are among those who differ most from their nondisabled peers for all activities, the disability group or groups with the largest

gaps from students without disabilities tend to vary depending on the specific activity. For example:

- Students with speech or language impairments are among those with the largest gaps for participating in class discussions, yet their differences from the general population are relatively small for completing writing assignments and are not statistically significant for working on projects or presentations, or taking quizzes or tests.
- In contrast, students with mental retardation are among those with the smallest gaps for participating in class discussions but among those with the largest gaps for completing writing assignments, working on projects or presentations, and taking quizzes or tests.

**Frequency of Participation in Selected Instructional Activities by Students without Disabilities and Students With 11 Disability Classifications**

	Students without disabilities	Learning disabilities	Speech or language impairments	Mental retardation	Emotional disturbance	Hearing impairments	Visual impairments	Physical/Orthopedic impairments	Other health impairments	Autism	Traumatic brain injury	Multiple disabilities
<b>Percent of students who...</b>												
Participate in class discussion												
Often	69	46 <sup>‡</sup>	42 <sup>‡</sup>	50 <sup>‡</sup>	48 <sup>‡</sup>	47 <sup>‡</sup>	50 <sup>‡</sup>	55 <sup>‡</sup>	46 <sup>‡</sup>	28 <sup>‡</sup>	46 <sup>‡</sup>	46 <sup>‡</sup>
Never/rarely	1	17 <sup>‡</sup>	24 <sup>‡</sup>	22 <sup>‡</sup>	19 <sup>‡</sup>	18 <sup>‡</sup>	17 <sup>‡</sup>	17 <sup>‡</sup>	19 <sup>‡</sup>	41 <sup>‡</sup>	12 <sup>†</sup>	27 <sup>‡</sup>
Complete writing assignment												
Often	72	56 <sup>‡</sup>	62 <sup>*</sup>	38 <sup>‡</sup>	41 <sup>‡</sup>	59 <sup>‡</sup>	55 <sup>‡</sup>	55 <sup>‡</sup>	51 <sup>‡</sup>	38 <sup>‡</sup>	51 <sup>‡</sup>	37 <sup>‡</sup>
Never/rarely	1	12 <sup>‡</sup>	7 <sup>†</sup>	29 <sup>‡</sup>	17 <sup>‡</sup>	11 <sup>†</sup>	20 <sup>‡</sup>	16 <sup>‡</sup>	17 <sup>‡</sup>	33 <sup>‡</sup>	14 <sup>†</sup>	33 <sup>‡</sup>
Work on project or presentation												
Often	25	20	22	15 <sup>‡</sup>	17 <sup>*</sup>	23	18 <sup>*</sup>	24	18 <sup>*</sup>	11 <sup>‡</sup>	15 <sup>*</sup>	17 <sup>*</sup>
Never/rarely	14	26 <sup>‡</sup>	21	43 <sup>‡</sup>	34 <sup>‡</sup>	23 <sup>†</sup>	30 <sup>‡</sup>	31 <sup>‡</sup>	26 <sup>‡</sup>	54 <sup>‡</sup>	37 <sup>‡</sup>	44 <sup>‡</sup>
Take quizzes or tests												
Often	57	55	52	37 <sup>‡</sup>	51	53	48 <sup>*</sup>	51	57	31 <sup>‡</sup>	44 <sup>*</sup>	27 <sup>‡</sup>
Never/rarely	4	6	6	25 <sup>‡</sup>	10 <sup>†</sup>	9 <sup>*</sup>	18 <sup>‡</sup>	17 <sup>‡</sup>	7	39 <sup>‡</sup>	18 <sup>†</sup>	40 <sup>‡</sup>

\* $p < .05$ ; <sup>†</sup> $p < .01$ ; <sup>‡</sup> $p < .001$  for difference between students in marked category and students without disabilities.

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Reading activities.** The patterns of differences in frequency of engaging in selected reading activities between students with and without disabilities noted on pages 4 and 5 are found for students with most disability classifications. Relative to students without disabilities:

- Students with most disability classifications are less likely to read aloud or read silently, and students in every disability classification are much less likely to read literature, poetry, plays, or dramas.
- Students with every disability classification are more likely to engage in sight-word reading and to practice phonics and phonemic skills.
- Students with hearing impairments are more likely than students without disabilities to practice or learn vocabulary “often.” In contrast, students with mental retardation, visual impairments, physical/orthopedic

impairments, autism, and multiple disabilities are more likely to “never” or “rarely” engage in this activity.

- Students with mental retardation, autism, and multiple disabilities are among those with the largest gaps for reading activities.

### Frequency of Participation in Selected Reading Activities by Students without Disabilities and Students With 11 Disability Classifications

	Students without disabilities	Learning disabilities	Speech or language impairments	Mental retardation	Emotional disturbance	Hearing impairments	Visual impairments	Physical/Orthopedic impairments	Other health impairments	Autism	Traumatic brain injury	Multiple disabilities
<b>Percent of students who...</b>												
<b>Read aloud</b>												
Often	37	33	38	36	36	30*	31	38	33	34	37	31
Never/rarely	14	31 <sup>‡</sup>	24*	34 <sup>‡</sup>	29 <sup>‡</sup>	29 <sup>‡</sup>	37 <sup>‡</sup>	30 <sup>‡</sup>	30 <sup>‡</sup>	36 <sup>‡</sup>	24	44 <sup>‡</sup>
<b>Read silently</b>												
Often	50	37 <sup>‡</sup>	46	28 <sup>‡</sup>	42	50	42	45	37 <sup>†</sup>	34 <sup>‡</sup>	36*	28 <sup>‡</sup>
Never/rarely	7	20 <sup>‡</sup>	12	40 <sup>‡</sup>	17 <sup>‡</sup>	11	26 <sup>‡</sup>	22 <sup>‡</sup>	18 <sup>‡</sup>	38 <sup>‡</sup>	22 <sup>†</sup>	44 <sup>‡</sup>
<b>Read literature, poetry, plays, or dramas</b>												
Often	67	53 <sup>‡</sup>	52 <sup>†</sup>	21 <sup>‡</sup>	41 <sup>†</sup>	46 <sup>‡</sup>	52 <sup>‡</sup>	44 <sup>‡</sup>	50 <sup>‡</sup>	25 <sup>†</sup>	37 <sup>‡</sup>	22 <sup>‡</sup>
Never/rarely	4	16 <sup>‡</sup>	11*	45 <sup>‡</sup>	20 <sup>‡</sup>	20 <sup>‡</sup>	23 <sup>‡</sup>	26 <sup>‡</sup>	18 <sup>‡</sup>	47 <sup>‡</sup>	22 <sup>‡</sup>	50 <sup>‡</sup>
<b>Practice/learns vocabulary</b>												
Often	59	59	59	63	60	75 <sup>‡</sup>	54	60	56	53	62	54
Never/rarely	3	5	5	11 <sup>‡</sup>	5	4	17 <sup>‡</sup>	12 <sup>‡</sup>	8*	14 <sup>‡</sup>	9	19 <sup>‡</sup>
<b>Engage in sight-word reading</b>												
Often	13	21 <sup>†</sup>	23*	44 <sup>‡</sup>	26 <sup>‡</sup>	28 <sup>‡</sup>	23 <sup>†</sup>	29 <sup>‡</sup>	22 <sup>†</sup>	40 <sup>‡</sup>	33 <sup>‡</sup>	37 <sup>‡</sup>
Never/rarely	59	47 <sup>‡</sup>	45 <sup>†</sup>	29 <sup>‡</sup>	40 <sup>‡</sup>	36 <sup>‡</sup>	52	46 <sup>†</sup>	50*	37 <sup>‡</sup>	38 <sup>‡</sup>	36 <sup>‡</sup>
<b>Practice phonics/phonemic skills</b>												
Often	8	21 <sup>‡</sup>	23 <sup>‡</sup>	38 <sup>‡</sup>	24 <sup>‡</sup>	21 <sup>‡</sup>	16 <sup>†</sup>	28 <sup>‡</sup>	21 <sup>‡</sup>	25 <sup>‡</sup>	32 <sup>‡</sup>	33 <sup>‡</sup>
Never/rarely	67	52 <sup>‡</sup>	42 <sup>‡</sup>	31 <sup>‡</sup>	46 <sup>‡</sup>	53 <sup>‡</sup>	59*	47 <sup>‡</sup>	56 <sup>†</sup>	47 <sup>‡</sup>	42 <sup>‡</sup>	35 <sup>‡</sup>

\* $p < .05$ ; <sup>†</sup> $p < .01$ ; <sup>‡</sup> $p < .001$  for difference between students in marked category and students without disabilities.

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Use of materials and computers.** Students with every disability classification, except for speech or language impairments, are less likely than students without disabilities to use textbooks. Variation regarding other types of materials is greater. Relative to students without disabilities:

- Students with 7 of the 11 disability classifications use printed materials less frequently, and students with 6 classifications use worksheets or workbooks more frequently.
- More students with three disability classifications “never” or “rarely” use computers for writing, and more students in four disability classifications “never” or “rarely” use computers for the Internet. In contrast, more students with physical/orthopedic impairments “often” use computers for writing, and more students with emotional disturbance or physical/orthopedic impairments “often” to use computers for the Internet.

- Students with mental retardation, autism, and multiple disabilities tend to differ the most from students without disabilities concerning the types of materials shown in the following exhibit. In addition, students with visual impairments also are among the least likely to use computers.

**Frequency of Use of Selected Materials and Computers by Students Without Disabilities and Students With 11 Disability Classifications**

	Students without disabilities	Learning disabilities	Speech or language impairments	Mental retardation	Emotional disturbance	Hearing impairments	Visual impairments	Physical/Orthopedic impairments	Other health impairments	Autism	Traumatic brain injury	Multiple disabilities
<b>Percent of students using...</b>												
<b>Textbooks</b>												
Often	57	*	57	30 <sup>†</sup>	53	48*	49	46*	44 <sup>†</sup>	26 <sup>†</sup>	44*	30 <sup>†</sup>
Never/rarely	11	17*	14	41 <sup>†</sup>	20 <sup>†</sup>	22 <sup>†</sup>	24 <sup>†</sup>	26 <sup>†</sup>	20 <sup>†</sup>	45 <sup>†</sup>	27 <sup>†</sup>	46 <sup>†</sup>
<b>Printed materials</b>												
Often	64	62	65	52 <sup>†</sup>	61 <sup>†</sup>	66	56	58	55*	51 <sup>†</sup>	58	45 <sup>†</sup>
Never/rarely	5	6	7	20 <sup>†</sup>	11 <sup>†</sup>	9	16 <sup>†</sup>	13 <sup>†</sup>	8	22 <sup>†</sup>	11	23 <sup>†</sup>
<b>Worksheets</b>												
Often	47	58 <sup>†</sup>	52	65 <sup>†</sup>	62 <sup>†</sup>	64 <sup>†</sup>	47	56*	55	49	61*	54
Never/rarely	13	9	12	10	6 <sup>†</sup>	9	17	16	12	15	10	23 <sup>†</sup>
<b>Computers for writing</b>												
Often	19	16	19	19	24	23	24	33 <sup>†</sup>	24	24	21	24
Never/rarely	25	31	26	33*	32	30	35*	27	27	35*	26	32
<b>Computers for the Internet</b>												
Often	8	9	9	12	16 <sup>†</sup>	12	11	14*	10	10	9	13
Never/rarely	38	38	45	52 <sup>†</sup>	42	39	48*	46	37	56 <sup>†</sup>	44	52 <sup>†</sup>

\* $p < .05$ ; <sup>†</sup> $p < .01$ ; <sup>‡</sup> $p < .001$  for difference between students in marked category and students without disabilities.

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

The extent to which students with disabilities use general education materials with or without modifications or specialized materials differs greatly across the disability classifications.

- Substantial majorities of students with 6 of the 11 disability classifications use either general education grade-level curriculum materials with no modifications or general education curriculum materials with some modifications. Students with speech or visual impairments are the most likely to use materials with no modifications.
- Substantial majorities of students with 4 of the 11 disability classifications (mental retardation, autism, traumatic brain injury, and multiple disabilities) use either general education materials with substantial modifications or specialized curriculum or materials. Students with mental retardation, autism, and multiple disabilities are particularly likely to use specialized materials.

## Language Arts Curriculum Materials Used by Students With 11 Disability Classifications

	Learning disabilities	Speech or language impairments	Mental retardation	Emotional disturbance	Hearing impairments	Visual impairments	Physical/Orthopedic impairments	Other health impairments	Autism	Traumatic brain injury	Multiple disabilities
<b>Percent of students using...</b>											
General education grade-level curriculum materials with											
No modifications	19	37	2	19	26	35	27	21	10	7	4
Some modifications	49	39	16	42	36	29	29	46	22	33	18
Substantial modifications	16	14	32	18	18	11	16	15	20	32	27
Specialized curriculum or materials	17	9	50	22	21	26	28	19	49	28	51

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

**Participation in accountability testing.** The vast majority of students with all disability classifications participate in accountability systems through standard or alternate assessments.

- Between half and three-fourths of students with most disabilities participate in standardized tests with accommodations or modifications.
- Students with speech or language impairments are by far the most likely to take standardized tests without accommodations or modifications.
- Students with mental retardation, autism, and multiple disabilities are at least as likely to participate in alternate assessments as in standardized tests.

## Participation in Accountability Testing by Students With 11 Disability Classifications

	Learning disabilities	Speech or language impairments	Mental retardation	Emotional disturbance	Hearing impairments	Visual impairments	Physical/Orthopedic impairments	Other health impairments	Autism	Traumatic brain injury	Multiple disabilities
<b>Percent of students who...</b>											
Take standardized tests											
Without accommodations or modifications	16	34	3	17	20	5	17	20	5	7	2
With accommodations or modifications	70	58	43	64	63	71	52	65	37	69	40
Participate in alternate assessments	14	6	46	15	16	18	25	12	48	21	45
Do not participate in standardized tests or alternate assessments	1	2	8	4	1	6	7	2	10	4	13

SOURCE: Data obtained through SEELS Wave 3 Teacher Questionnaire.

## Summary

Policy and practice over the last decade has emphasized the principle of increasing access to general education curriculum for students with disabilities, as appropriate. The reported data from SEELS suggest that the academic experiences of most students with disabilities differ from those of students without disabilities. However, the differences vary considerably by instructional setting and disability classification. On the positive side, teachers of students in general education

classes, special education classes in regular schools, and special schools appear to be reducing the student-teacher ratio using smaller groups or individualized instruction. Nevertheless, students in all three settings are less likely than general education peers to engage in a variety of instructional and reading activities, including participating in class discussions, completing writing assignments, and reading literature. These differences from general education peers are smallest for students with disabilities in general education classrooms, and largest for students in special schools. In addition, relative to students without disabilities, students in special education classes and special schools are less likely to use textbooks and printed supplements to textbooks and more likely to use worksheets or workbooks. Although the vast majority of students with disabilities in general education classes use general education grade-level curriculum materials without modifications or general education curriculum materials with some (but not substantial) modifications, the majority of students in special education classes in regular schools and students in special schools use general education curriculum materials with substantial modifications or specialized curriculum materials. Percent participation in state accountability testing is highest for students in general education classes—almost all of whom participate in such tests—lower for students in special education classes in regular schools, and lowest for students in special schools.

The educational experiences of students with disabilities vary considerably by disability classification. For the majority of measures, students with autism, mental retardation, or multiple disabilities differ the most from students without disabilities. Patterns are less consistent with regard to which groups show the least departure from students without disabilities, although on a majority of measures students with speech or language impairments show only small differences from students without disabilities.

Of the measures reported in this fact sheet, those that can provide helpful insight into whether students with disabilities have access to the general education curriculum appear to be reading literature, plays, poetry, or dramas; the extent of modifications to curriculum materials; and participation in standardized testing. Using those three measures, it appears that many students with disabilities in general education settings are accessing the general education curriculum, but fewer of their peers in special education classes in regular schools or special schools are doing so. Once again, concerning disability classifications, the findings are mixed. On the one hand, students in all categories are considerably less likely than students without disabilities to read literature, plays, poetry, or dramas; more than one-fifth of the students in each disability category (including a majority of students in four of those disability classifications) use general education curriculum materials with substantial modifications or specialized curriculum materials; and about a fourth or more of students in six of the disability classifications do not participate in regular standardized tests (with or without modifications). On the other hand, between one-half and three-fourths of students in most disability classifications use general education curriculum materials without substantial modifications, and at least two-thirds of students in all but three disability classifications participate in regular standardized tests (with or without modifications).

This report has illustrated that students with disabilities vary by disability classification and by educational placement, with respect to the amount and type of access they receive to general education. It also illustrates that additional improvement will be required in the future to meet the intent of policy initiatives of IDEA and NCLB.

## References

- Baker, E. T., Wang, M. C., & Walberg, H. J. (1994). The effects of inclusion on learning. *Educational Leadership*, 52(4), 33–35.
- Baker, J. M., & Zigmond, N. (1995). The meaning and practice of inclusion for students with learning disabilities: Themes and implications from the five case studies. *Journal of Special Education*, 29(2), 163–180.
- Kavale, K., & Forness, S. (2000). Policy decisions in special education: The role of meta-analyses. In R. Gersten, E. Schiller, & S. Vaughn (Eds.), *Contemporary special education research*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Nolet, V., and McLaughlin, M. (2000). *Accessing the general curriculum: Including students with disabilities in standards-based reform*. Thousand Oaks, CA: Corwin Press.
- Salend, S. J., & Duhaney, L. G. (1999). The impact of inclusion on students with and without disabilities and their educators. *Remedial and special education*, 20(2), 114–127.
- Stainback, S., and Stainback, W. (1996). Rationale for inclusive schools. In S. Stainback & W. Stainback (Eds.), *Inclusion: A guide for educators*. Baltimore: Paul H. Brookes Publishing.
- Staub, D., & Peck, C. A. (1994). What are the outcomes for nondisabled students? *Educational Leadership*, 52(4), 36–40.
- Waldron, N. L. (1997). Inclusion. In G. G. Bear, K. M. Minke, & A. Thomas (Eds.), *Children's needs II: Development, problems and alternatives*. Bethesda, MD: National Association of School Psychologists.
- Walther-Thomas, C. S., Bryant, M., & Land, S. (1996). Planning for effective co-teaching: The key to successful inclusion. *Remedial and Special Education*, 17(4), 225–264.