

4. ***Classroom Context*** by Phyllis Levine, Camille Marder, Mary Wagner, Jose Blackorby, Michael Chorost, and Anne-Marie Guzman

The landmark federal legislation, *The No Child Left Behind Act of 2001* (NCLB) places an increased emphasis on educational accountability for results and improving achievement for all students, particularly for disenfranchised students, including those with disabilities. Individual student differences pose a variety of challenges to improving academic achievement for students receiving special education services, especially in language arts. For example, learning disabilities are frequently most evident in language arts classes. Students with emotional disturbances may have difficulty in language arts as well, but for different reasons. Each type of disability may require a different type of instruction or support.

Other factors that influence schools' efforts to improve outcomes are embedded in the context of the classroom itself, including such things as the number of students and the experience of teachers. This chapter describes several dimensions of the classrooms where elementary and middle school students with disabilities receive language arts instruction. It addresses the numbers of students and instructional staff, student reading abilities, and the educational qualifications of teachers.

Students and Instructional Staff in Language Arts Classrooms

The relationships between class size and student outcomes have received considerable attention in recent years. Proponents of smaller classes contend that they allow teachers to be more effective in reaching students, particularly in the early grades. A notable national effort is now directed toward reducing the teacher-student ratio, in part as a response to the growing focus on mandatory academic standards, and several states have passed legislation to reduce class sizes.

Lower teacher-student ratios may be particularly important for students with disabilities if they create an environment that promotes students' engagement and inclusion or that allows teachers to tailor instruction more effectively to the needs of diverse learners (Achilles & Finn, 2000; Finn et al., 2001; Harris & Graham, 1996; Slavin, 1990).

The quality of instruction within a classroom also may be influenced by how functional abilities are distributed across the students. A large class can be particularly challenging when the class includes students with a broad range of special learning needs.

Nationally, the sizes of the language arts classes of students with disabilities vary greatly across classroom settings and among students with different disability categories (Exhibit 4-1).

Exhibit 4-1
Number of Students and Instructional Staff in
Language Arts Classrooms, by Instructional Setting

	Students Receiving Primary Language Arts Instruction in:	
	General Education	Special Education
Class size:		
Average class size	22.7 (.2)	10.4 (.2)
Percentage of students with disabilities in classrooms with:		
1 to 15 total students	9.0 (1.2)	91.3 (1.3)
16 to 20 total students	22.6 (1.8)	7.1 (1.2)
21 to 25 total students	39.0 (2.1)	1.0 (.4)
More than 25 total students	29.4 (1.9)	.7 (.4)
Number of special education students in class:		
Average number	3.1 (.1)	10.4 ^(a) (.2)
Percentage of students with disabilities in classrooms with		
No special education students	21.9 ^(b) (1.8)	0.0 (.0)
1 to 4 special education students	54.9 (2.2)	8.0 (1.3)
5 to 9 special education students	17.7 (1.7)	35.4 (2.2)
10 or more special education students	5.4 (1.0)	56.6 (2.3)
Percentage of students with disabilities with any of the following in their class:		
General education teachers	98.4 (.5)	4.0 (.9)
Special education teachers	18.0 (1.6)	97.5 (.7)
Other paid staff, including:	31.0 (1.9)	60.6 (2.2)
Classroom aides	23.4 (1.8)	57.1 (2.2)
One-to-one instructional assistants	8.8 (1.2)	12.4 (1.5)
Specialists	4.0 (.8)	4.7 (1.0)
Sample size	2,672	3,117

Standard errors are in parentheses.

^(a) All students in special education classes are shown above under "class size" and again in this section of the exhibit.

^(b) General education teachers may report that they have no special education students in their classrooms because students have been declassified and/or because the teachers are not aware that particular students receive special education.

- Students with disabilities whose primary language arts placement is general education attend classes with an average of 23 students. Approximately one in five are in classrooms with 15 or fewer students; more than two in five are in classrooms with more than 20 students.
- Students with disabilities whose primary language arts placement is general education attend general education classes in which two other students, on average, receive some form of special education, according to teacher reports.¹ Approximately one in five students (22%) have teachers who are not aware that any students in their classroom receive special education services. Almost one in four are in classrooms with at least five students who receive some form of special education—18% are in classes with five to nine such students, and 5% are in classes with 10 or more such students.
- Students with disabilities whose primary language arts placement is special education attend classes with an average of 10 students, all of whom receive some form of special education. Approximately one in 12 are in classrooms with fewer than five students; more than half are in classrooms with at least 10 students.
- Almost all students with disabilities in general education language arts classes (98%) have a general education teacher in their classroom, whereas almost all (97%) students in special education language arts classes have a special education teacher present in the classroom.
- Approximately one in five students with disabilities in general education classes (18%) have a special education teacher, as well as a general education teacher, present in the classroom.
- Thirty-one percent of students with disabilities in general education language arts classes and 61% of students with disabilities in special education language arts classes have one or more paid staff besides teachers in the classroom.
- For the most part, in both general and special education settings, paid staff other than teachers in the classroom serve as classroom aides. About one in four students with disabilities in general education language arts classes (23%) and more than half of students with disabilities in special education language arts classes (57%) have at least one aide in the classroom.

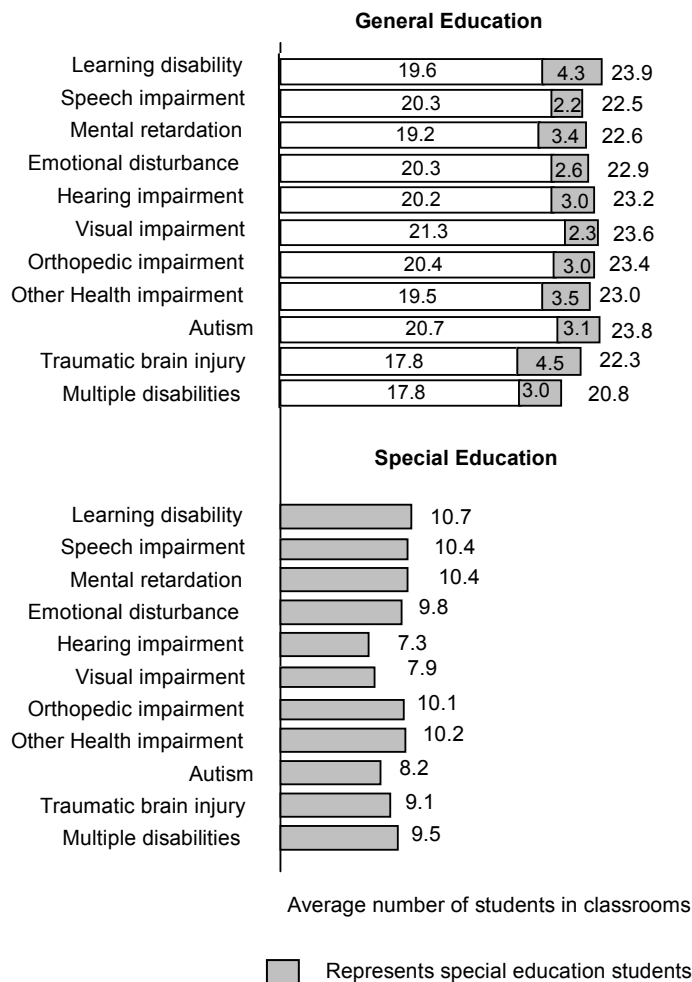
¹ This number appears to be an understatement of the number of students who receive some form of special education. Teachers' reports are most likely the result of some students being declassified and teachers not being aware that others receive special education, particularly when they receive services outside of the teacher's classroom. The latter possibility should be borne in mind when interpreting these findings.

- Approximately one in 10 (9%) students with disabilities in general education language arts classes, and about one in eight students in special education language arts classes (12%) have one or more one-to-one instructional assistants in the classroom.
- Few students in either setting have other types of specialists in the classroom.

Students and Instructional Staff in Classrooms: Disability Category Differences

- For students attending general education language arts classes, neither total class size nor the number of students teachers report are receiving special education differs across the disability categories (Exhibit 4.2).
- Regardless of their disability, on average, students in special education language arts classes have between eight and 11 students in their classroom. The only difference in class sizes between any two groups is that students

Exhibit 4-2
Average Number of Students in Language Arts
Classes, by Instructional Setting
and Disability Category



with hearing impairments attend smaller classes than students with learning disabilities or mental retardation (7.4 students on average vs. 10.7 and 10.5 students on average).

- The percentage of students with most disabilities in general education language arts classroom who have a special education teacher in their classroom ranges from 10% for students with speech impairments to approximately 20% for students with emotional disturbances, orthopedic impairments, other health impairments, or multiple disabilities, and to approximately 25% for learning disabilities, mental retardation, or autism (Exhibit 4-3). The implication of these findings is that general education teachers have primary responsibility for educating these children while they are in their classrooms.

Exhibit 4-3
Staffing in Language Arts Classrooms,
by Instructional Setting and Disability Category

Percentage of students with type of staff in their classroom:	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities
General education											
Special education teacher	27.5 (3.4)	10.3 (1.9)	25.6 (6.0)	20.0 (3.8)	13.4 (3.2)	13.8 (3.1)	19.2 (3.4)	19.7 (3.8)	25.0 (5.3)	50.6 (9.7)	19.5 (10.1)
A classroom aide, one-to-one instructional assistant, or other specialist	30.7 (3.5)	29.9 (2.9)	36.9 (6.6)	24.9 (4.1)	37.3 (4.6)	29.4 (4.1)	41.7 (4.3)	31.9 (4.4)	65.9 (5.9)	36.4 (9.4)	77.4 (10.7)
Special education											
General education teacher	3.9 (1.5)	3.6 (3.0)	3.3 (1.2)	4.2 (1.6)	5.6 (2.2)	13.5 (5.2)	5.2 (2.2)	7.6 (2.8)	2.4 (1.2)	3.2 (2.7)	4.1 (1.7)
A classroom aide, one-to-one instructional assistant, or other specialist	47.0 (3.9)	70.3 (7.5)	74.7 (2.8)	74.4 (3.6)	65.7 (3.8)	72.7 (5.4)	79.4 (3.9)	64.7 (5.1)	86.0 (2.7)	65.3 (7.2)	85.8 (3.1)
Sample size											
General education	348	485	99	206	280	304	329	274	201	77	53
Special education	329	75	474	294	408	181	246	208	401	134	341

Standard errors are in parentheses.

- In sharp distinction to the other disability categories, approximately 50% of children with traumatic brain injuries in general education classrooms have special education teachers in their classrooms.
- The percentage of students with most types of disabilities in general education language arts classes who have a paid staff member other than a teacher in their classrooms ranges from 29% to 42%. Youth with emotional disturbances are the least likely to have a paid staff member other than a teacher in their classrooms (25%), and youth with autism or multiple disabilities are the most likely (66% and 77%, respectively).

Students and Staff in Classrooms: Grade-Level Differences

- Students with disabilities in general education language arts classes in the first through third grades tend to have fewer students in their classrooms than students in the higher grades—an average of 21 students, compared with 24 students (Exhibit 4-4).
- The average number of students who receive special education in the general education language arts classrooms of students with disabilities increases over the grade levels. First- through third-grades classes include an average of two students who receive special education; fourth- and fifth-grade classes include an average of three; and classes in sixth grade and above include an average of four.
- Students with disabilities in general education language arts classes in the fourth grade and higher are much more likely than students in the first through third grades to have a special education teacher in their classroom. Whereas 9% in first through third grades have special education teachers in their classrooms, 21% in fourth and fifth grades, and 25% in sixth grade and above do so.

Exhibit 4-4
Students and Staff in Language Arts Classrooms,
by Instructional Placement and Demographic Characteristics

		Grade Level			Household Income			Race/Ethnicity					
			First through Third	Fourth and Fifth	Sixth and Above	\$25,000 or Less	\$25,001 to \$50,000	More than \$50,000	White	African American	Hispanic	Asian/ Pacific Islander	
		Ungraded											
General education													
<i>Average number</i> of students in the classroom		20.7 (.3)	23.5 (.4)	24.1 (.4)	21.9 (.5)	22.9 (.5)	23.4 (.4)	22.8 (.3)	22.6 (.7)	22.4 (.7)	24.3 (2.3)		
<i>Average number</i> of special education students in the classroom	--	2.1 (.2)	3.3 (.2)	4.3 (.3)	3.3 (.3)	3.0 (.3)	3.0 (.2)	3.3 (.2)	3.3 (.4)	3.2 (.4)	2.9 (.9)		
<i>Percentage of students with:</i>													
A special education teacher in the classroom	--	8.6 (2.0)	20.6 (2.8)	25.4 (3.3)	19.6 (3.6)	18.2 (3.3)	15.8 (2.8)	20.5 (1.9)	15.6 (4.3)	9.9 (3.8)	10.1 (12.6)		
A classroom aide, one-to-one instructional assistant, or other specialist in the classroom		39.8 (3.6)	32.5 (3.3)	21.2 (3.1)	35.5 (4.4)	30.3 (4.0)	28.2 (3.5)	28.4 (2.1)	31.9 (5.5)	40.4 (6.3)	55.0 (20.7)		
Special education													
<i>Average number</i> of special education students	8.9 (.4)	9.5 (.4)	9.6 (.4)	10.9 (.3)	7.2 (.3)	6.4 (.3)	4.8 (.3)	5.8 (.2)	7.9 (.4)	6.5 (.5)	4.7 (1.4)		
<i>Percentage of students with:</i>													
A general education teacher in the classroom	.2 (.6)	4.9 (2.0)	4.6 (1.7)	3.4 (1.4)	2.2 (2.2)	4.2 (2.0)	5.4 (2.5)	5.5 (1.7)	1.7 (1.2)	1.3 (1.5)	.0 (.0)		
A classroom aide, one-to-one instructional assistant, or other specialist in the classroom	87.3 (4.3)	70.4 (4.3)	61.4 (3.9)	51.0 (3.7)	66.6 (3.8)	56.9 (5.0)	65.3 (5.3)	59.1 (2.8)	61.2 (4.3)	61.5 (6.5)	91.4 (12.5)		
Sample size													
General education	--	848	928	762	525	578	859	1,916	329	249	48		
Special education	328	742	904	984	975	659	614	1,723	789	409	48		

Standard errors are in parentheses.

- Students with disabilities in general education language arts classes in the first through fifth grades are more likely than students in the sixth grade and above to have a classroom aide, one-to-one instructional assistant, or other specialist in their classroom. More than 30% of students in the first through fifth grades have such staff members in their classrooms, compared with 21% of students in the sixth grade and above.
- Students in special education language arts classes in the first through fifth grades have an average of 10 students in their classrooms, whereas students in the same type of classes in the sixth grade and above have an average of 11 students in their classrooms.
- For students in special education language arts classrooms, the grade levels do not differ in the likelihood of having a general education teacher in the classroom; however, the likelihood of having a paid staff member other than a teacher decreases in higher grades. In the first through third grades, 70% of students have such staff members, whereas in the sixth grade and above, 51% do so. The students most likely to have such staff members are students in ungraded classes; 87% have a paid staff member other than a teacher in their classrooms.

Students and Staff in the Classrooms: Demographic Differences

- For students with disabilities in general education classes, class size increases with income (22 students in classes with household incomes of \$25,000 or less, compared with 23 students in classes with income above \$50,000); however, the average number of special education students remains about the same.
- In special education settings, class size decreases with income (seven students in classes with household incomes of \$25,000 or less compared with five students in classes with incomes above \$50,000.)
- Students from the three household income groups do not differ in terms of the staff in their classrooms.
- The only difference among students with disabilities of the various races/ethnicities in general education language arts classes is that Hispanic students are less likely than white students to have a special education teacher in the classroom. Whereas 20% of white students have such teachers in their classrooms, 10% of Hispanic students do.
- Among students with disabilities in special education language arts classes, the only difference among the various races/ethnicities is that Asian/Pacific Islander students are more likely than white students to have a classroom aide, one-to-one instruction assistant, or other specialist in the classroom. Whereas 60% of white students have such teachers in their classrooms, 91% of Asian/Pacific Islander students do.

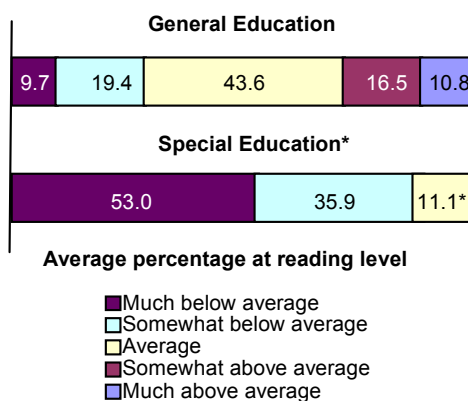
Reading Performance of Students in Language Arts Classrooms

A key component of classroom context is the diversity of ability levels represented among students in the class. A broad mix of students' abilities in a given class can require educators to use different types of instructional approaches to accommodate diverse student needs.

Reading ability is a fundamental aspect of students' overall skill set and paramount for school success. However, students with disabilities typically lag behind their peers in the language arts, especially in reading (Barr, 1986; Blackorby et al., 2004; Elbaum et al., 1999; Gersten & Dimino, 1989). SEELS teachers were asked to report the reading levels of students in their class. Teachers estimated the proportion of students in their language arts class who performed “much above average”, “somewhat above average”, “average”, “somewhat below average”, or “much below average”.

- Students in general education classrooms have peers whose reading abilities closely match the normal distribution (Exhibit 4-5). Forty-four percent of students in language arts classes attended by students with disabilities are rated by their teachers as having average reading abilities, approximately one-fourth (27%) are rated as having reading abilities that are above average or much above average, and almost one-third (30%) are rated as having abilities that are below average or much below average.

Exhibit 4-5
Average Teacher Ratings of Reading Levels of
Language Arts Classes of Students with
Disabilities, by Instructional Setting



Due to their small proportions in the special education setting, the categories of “much above average” (1.1) and “somewhat above average” (1.7) have been combined with the “average” (8.3) category.

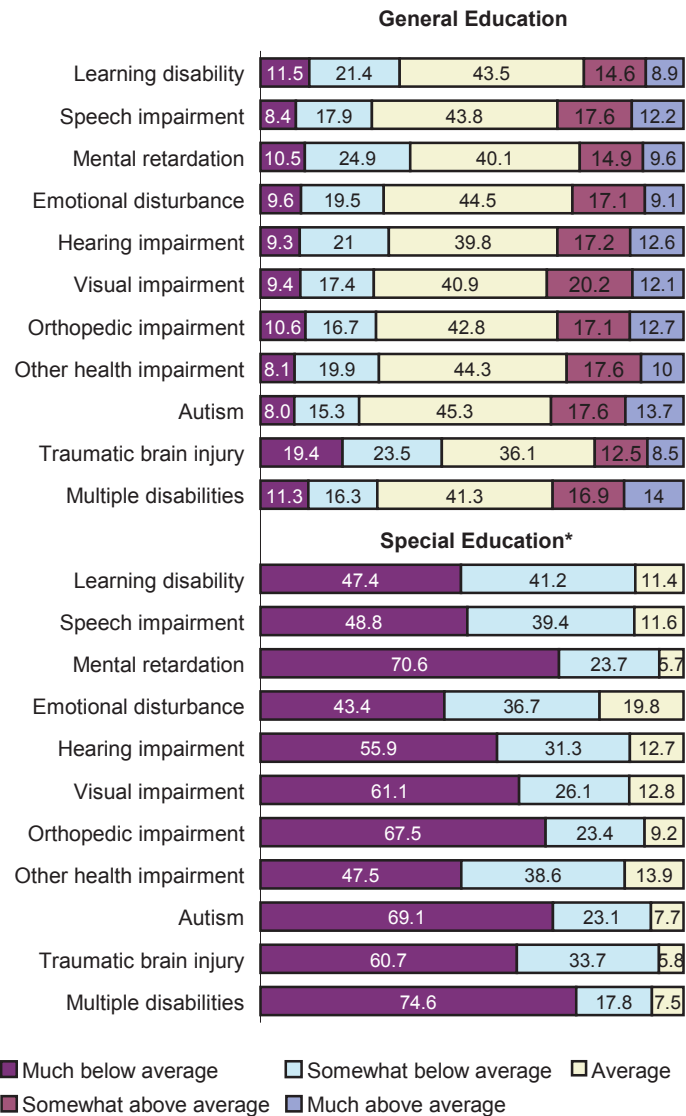
- Students receiving language arts instruction in special education settings have many more classmates with below-average reading abilities than students with disabilities in general education classes. Only 10% are rated by their teachers as having average reading abilities, whereas approximately

one-third (35%) are rated as having below-average reading abilities, and approximately half (53%) are rated as having abilities that are much below average. None are rated as having above-average abilities.

Classroom Reading Ability Level: Disability Category Differences

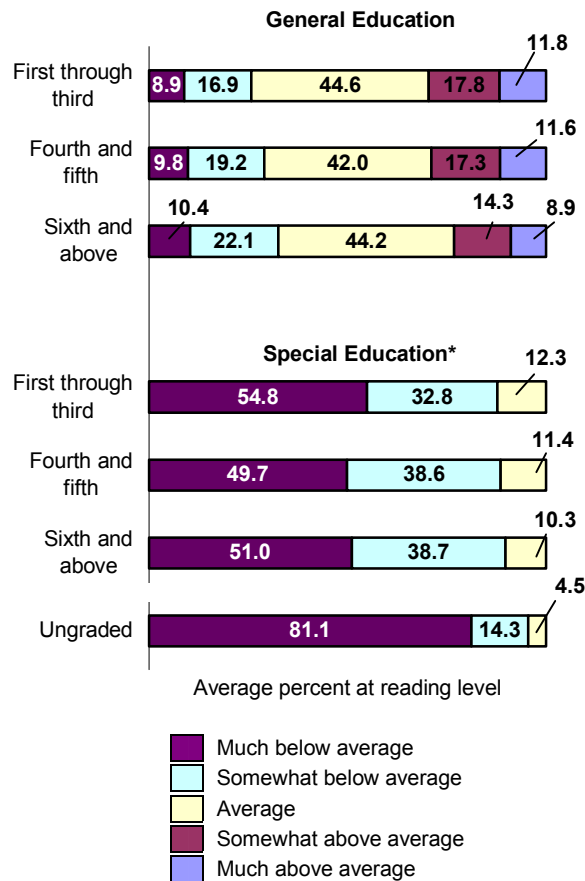
- In general education classes, students with different disabilities vary relatively little in terms of the reading abilities of their language arts classes. On average, between 65% and 77% of the reading levels of these students' classmates are rated by teachers as average or above average (Exhibit 4-6). An exception is students with traumatic brain injuries; on average, 57% of their classmates' reading levels are rated as average or above average.
- Students in special education classes are rated as having markedly lower reading abilities. Few students in any disability category have any classmates whose reading levels are rated as above average. However, there is a considerable range in the percentages of students' classmates with average reading abilities. For example, whereas approximately one in 17 students in the classrooms of students with mental retardation are rated as having average reading levels, approximately one in 10 students in the classrooms of students with orthopedic impairments or learning disabilities and one in five students in the classrooms of students with emotional disturbance are rated as having these levels.

Exhibit 4-6
Average Teacher Ratings of Reading Levels of Language
Arts Classes of Students with Disabilities,
by Disability Category and Setting



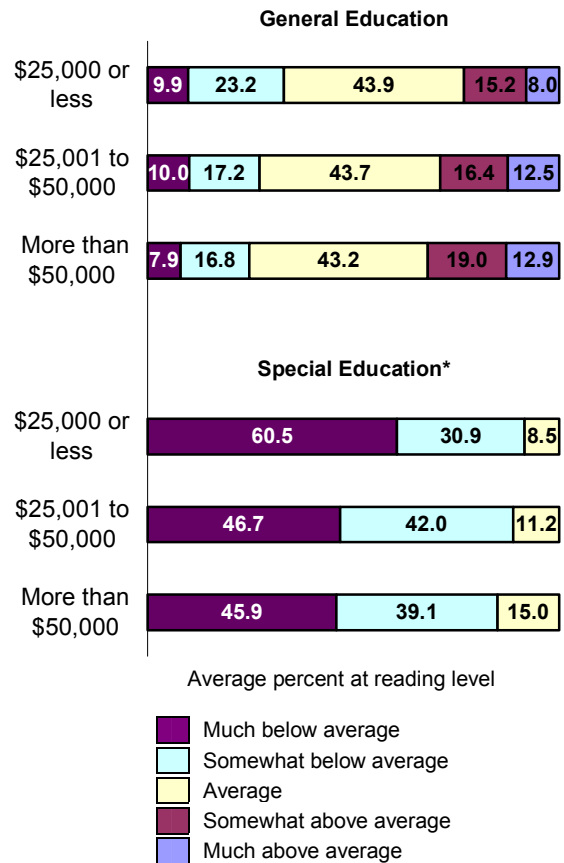
*Due to their small proportions in the special education setting, the categories of "much above average" (<3.0) and "somewhat above average" (<1.9) have been combined with the "average" (<15.0) category.

Exhibit 4-7
Average Teacher Ratings of Reading Levels of
Language Arts Classes of Students with
Disabilities, by Grade Level and Setting



*Due to their small proportions in the special education setting, the categories of "much above average" (<1.3) and "somewhat above average" (<2.2) have been combined with the "average" category (<9.5).

Exhibit 4-8
Average Teacher Ratings of Reading Levels of
Language Arts Classes of Students with
Disabilities, by Household Income
and Instructional Setting



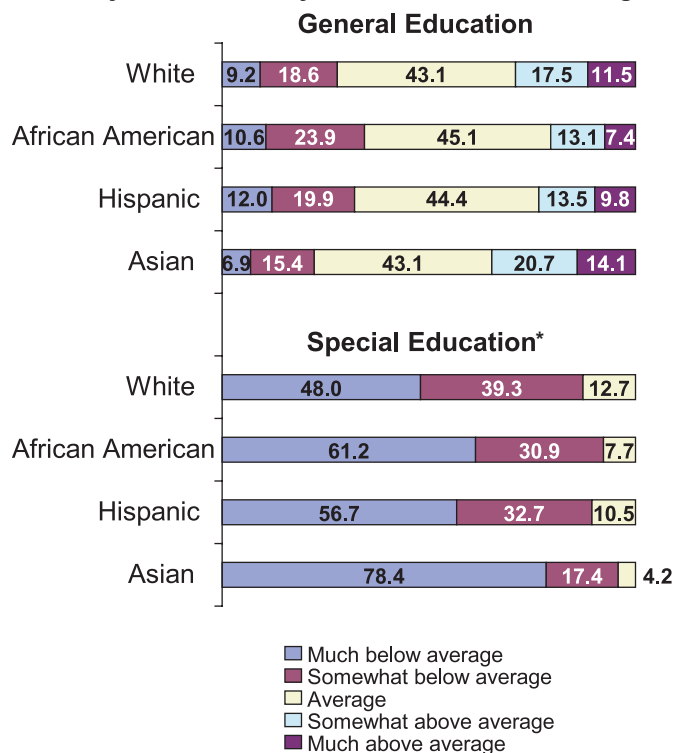
*Due to their small proportions in the special education setting, the categories of "much above average" (<1.9) and "somewhat above average" (<2.4) have been combined with the "average" category (<11.0).

Classroom Reading Ability Levels: Grade-Level Differences

- General education language arts teachers of students with disabilities are more likely to rate the reading ability of their classes as average or above average in the first through third grades than in the sixth grade and above. Whereas, teachers of first through third graders with disabilities indicate that 74% of the students in their classrooms have average or above-average reading skills, teachers of students above the fifth grade indicate that 67% of the students in their classrooms have average or above-average reading skills (Exhibit 4-7).
- In special education settings, there are no significant differences in the average percentages of students in language arts classrooms who read at

various levels across the grade levels; however, ungraded classes tend to have lower levels of ability than classes at any grade level.

Exhibit 4-9
Average Teacher Ratings of Reading Levels of
Language Arts Classes of Students with Disabilities,
by Race/Ethnicity and Instructional Setting



*Due to their small proportions in the special education setting, the categories of “much above average” (<1.5) and “somewhat above average” (<2.1) have been combined with the “average” category (<9.4).

Classroom Reading Ability Levels: Demographic Differences

- In general education classes, students from the lowest income households tend to be in language arts classes with comparatively low reading levels (Exhibit 4-8). On average, teachers indicate that one-fourth of students in the classes of students with disabilities from high-income families are below-average readers, whereas they indicate that one-third of students in the classes of students with disabilities from low-income families are below-average readers.
- Although the average percentages of average or above-average readers in special education language arts classrooms do not differ for students with various levels of household income, the average percentages of students whose reading skills are “much below average” do differ. On average, 61% of the students in the classrooms of students with disabilities whose family incomes are less than \$25,000 have much-below-average reading skills, whereas 47% of the students in the classrooms of students with disabilities whose family incomes are between \$25,000 and \$50,000, and 46% of

students in the classrooms of students with disabilities whose family incomes exceed \$50,000 have much-below-average reading skills.

- In general education settings, African-American students are more likely than white students to have more below-average readers in their classrooms (Exhibit 4-9)—on average 38% of the students in the classroom, compared with 28% of the students.
- Among students receiving instruction in special education settings, compared with white students, African-American and Asian/Pacific Islander students have more classmates whose reading ability is assessed as much below average (63% and 78%, respectively, vs. 48%).

Teacher Profiles: Type of Certificate, Preparation Program, and Level of Education

NCLB emphasizes the need to have qualified teachers in every classroom who are appropriately prepared to teach students with diverse needs. Teacher preparation programs are seeking to respond to the legislative imperatives, particularly with regard to raising performance standards for new teachers (Carlson et al., 2002). Studies have shown that teachers who have fulfilled stringent preparation requirements and acquired appropriate credentials are more effective in the classroom, compared with teachers who do not have teaching certificates or who hold an emergency credential, with regard to such things as curriculum planning, individualizing instruction for students with diverse needs, and developing creative instructional practices that benefit the class (Brownell & Pajares, 1999; Darling-Hammond, 2000a). The lack of universal standardized credentials and inconsistent certification requirements across states creates confusion, as well as immense variation in teacher quality (Darling-Hammond, 2000a, 2000b).

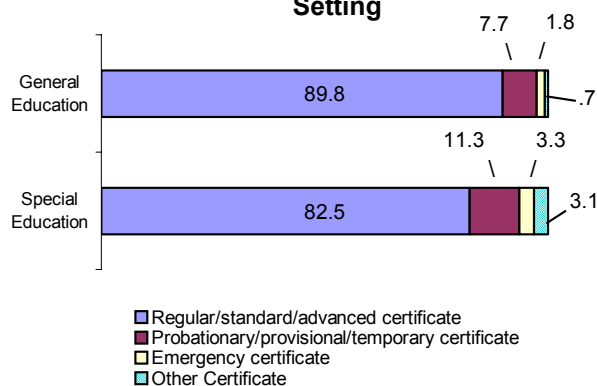
In this section, the certification and educational backgrounds of teachers who provide language arts instruction to students with disabilities are described.

Teacher Certification Across Instructional Settings

- Regardless of their language arts setting, the large majority of students with disabilities have teachers who hold a typical teaching certification (i.e., regular, standard, or advanced; Exhibit 4-10). However, students in general education languages arts settings are somewhat more likely than students in special education language arts settings to have fully credentialed teachers.
- The pattern of certification for language arts teachers of students with disabilities in special education settings generally mirrors that of national estimates from the Study of Personnel Needs in Special Education² (SPeNSE; Carlson et al., 2002).

² The OSEP-sponsored Study of Personnel Needs in Special Education (SPeNSE) provides in-depth information on the characteristics of teachers and staff who serve students with disabilities. Information is available at www.spense.org.

Exhibit 4-10
Certification of Language Arts Teachers of
Students with Disabilities, by Instructional
Setting



Teacher Certification: Disability Category Differences

- Among students with disabilities in general education language arts classes, between 85% and 95% have teachers with regular or advanced certificates (Exhibit 4-11).
- Among students with disabilities in special education language arts classes, between 85 and 92% of those with mental retardation, hearing, visual, or other health impairments, or traumatic brain injuries have teachers with regular or advanced certificates.
- Consistent with SPeNSE findings (Carlson et al., 2002), a comparatively smaller proportion of students with emotional disturbances in special education settings have language arts teachers without regular or advanced certificates. Students with learning disabilities, or speech or orthopedic impairments also are among the least likely to have teachers with regular or advanced certificates.

Teacher Certification: Grade-Level Differences

- In general education settings, students with disabilities in the early elementary grades are more likely than students in the middle school grades to be taught language arts by teachers who hold standard certificates. Approximately 93% of students in general education language arts classes have teachers who hold regular or advanced credentials, whereas 86% of students in the sixth grade and above have language teachers with such credentials.

Exhibit 4-11
Certification of Language Arts Teachers of Students with Disabilities,
by Disability Category and Instructional Setting

	Learning Disability	Speech/ Language Impair- ment	Mental Retar- dation	Emotional Disturbance	Hearing Impair- ment	Visual Impair- ment	Ortho- pedic Impair- ment	Other Health Impair- ment	Autism	Traumatic Brain Injury	Multiple Disabili- ties
General Education											
Percentage of students whose language arts instructor holds a:											
Regular/standard/ advanced certificate	88.3 (2.4)	90.1 (1.9)	92.2 (3.8)	89.9 (2.9)	91.7 (2.6)	89.3 (2.8)	88.9 (2.7)	95.3 (2.0)	94.7 (2.8)	86.3 (6.6)	84.9 (9.2)
Probationary/ provisional/temporary certificate	8.7 (2.1)	7.3 (1.6)	6.0 (3.3)	9.0 (2.7)	7.2 (2.5)	9.2 (2.6)	7.7 (2.3)	3.5 (1.8)	5.3 (2.8)	13.7 (6.6)	15.1 (9.2)
Emergency certificate	2.5 (1.2)	1.7 (0.8)	.0 (.0)	1.2 (1.0)	0.6 (0.7)	0.8 (0.8)	2.7 (1.4)	0.9 (0.9)	.0 (.0)	.0 (.0)	.0 (.0)
Special Education											
Percentage of students whose language arts instructor holds a:											
Regular/standard/ advanced certificate	81.3 (2.9)	81.5 (5.9)	84.7 (2.2)	77.4 (3.3)	90.7 (2.4)	85.1 (4.9)	79.6 (3.8)	91.8 (2.9)	83.8 (2.7)	88.3 (4.7)	88.1 (2.97)
Probationary/ provisional/temporary certificate	10.6 (2.3)	13.4 (5.1)	10.6 (1.9)	16.7 (3.0)	5.8 (1.9)	5.2 (3.0)	8.9 (2.7)	5.9 (2.5)	10.4 (2.3)	6.8 (3.7)	9.6 (2.5)
Emergency certificate	3.7 (1.4)	4.3 (3.1)	2.9 (1.0)	2.8 (1.3)	1.0 (0.8)	6.0 (3.3)	7.2 (2.4)	0.6 (0.8)	3.5 (1.4)	3.5 (2.7)	1.0 (0.8)
Sample size											
General education	343	478	94	202	276	303	323	269	197	78	52
Special education	352	88	517	308	423	202	269	227	458	145	367

Standard errors are in parentheses.

- In special education settings, students in ungraded classrooms are more likely than their middle school peers to receive instruction from a teacher with a standard certificate; 91% of the former compared with 80% of the latter have teachers with standard certificates.

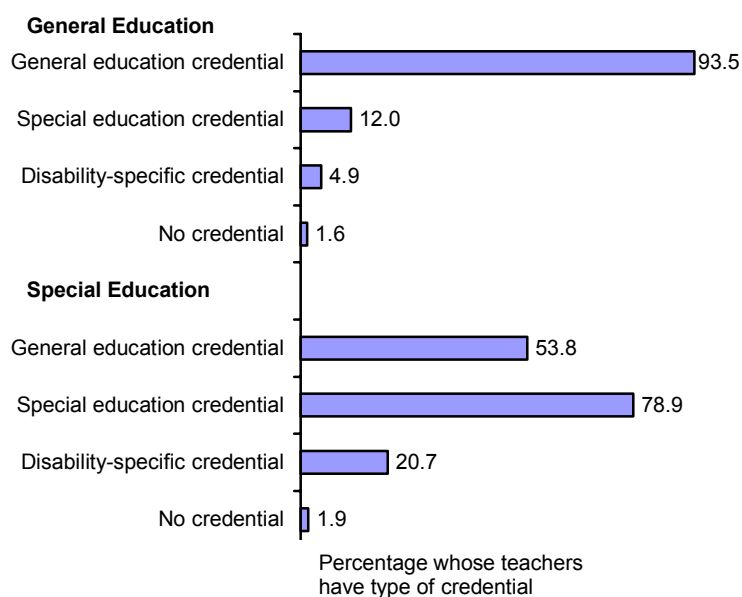
Teacher Certification: Demographic Differences

- In special education settings, students from lower income families are more likely than students from higher income families to be taught by an instructor with a provisional, probationary, or temporary certificate (15% vs. 7%). In addition, African American students are less likely than white students to be taught by teachers holding regular certificates (76% vs. 85%), and students in urban communities are less likely than their peers in suburban communities to be instructed by teachers holding regular certificates (77% vs. 85%).

Type of Certificate Held by Language Arts Teachers of Students with Disabilities

- Teachers of students with disabilities largely have teaching certificates consistent with the settings in which they provide language arts instruction (Exhibit 4-12). Teachers of students in general education settings tend to have general education certificates, whereas teachers in special education classrooms tend to have credentials to teach special education.

Exhibit 4-12
Type of Certificate* Held by Language Arts Teachers of Students with Disabilities



* A teacher may hold more than one type of credential.

- Approximately 94% of students in general education settings have teachers of language arts with a general education credential, approximately 12% have teachers with a special education credential, and about 5% have teachers with a disability-specific credential.
- Consistent with SPeNSE (Carlson et al., 2002), more than half of teachers who provide language arts instruction in special education settings have general education credentials, with umbrella special education certifications more common than certificates designed for teaching students with specific disabilities.
- Fewer than 2% of students with disabilities in either general education or special education settings have language arts teachers who are uncertified.

Type of Teacher Certificate: Disability Category Differences

- In general education settings, regardless of disability category, about nine in 10 students with disabilities in general education language arts classes are taught by teachers who have general education teaching certification (Exhibit 4-13). More variation occurs in the percentages of students whose language arts teacher has a special education credential. Between 6% and 25% of students with most disabilities have teachers with such credentials; fewer than 10% of students with speech or visual impairments have teachers with such credentials, whereas more than 20% of students with autism or multiple disabilities have teachers with such credentials.
- In special education settings, a considerable range occurs in the percentages of teachers who have general education credentials. Percentages of students whose language arts teachers have such credentials range from 43% (students with multiple disabilities or autism) to 63% (students with speech or visual impairments).
- Between 50% and 90% of students with most types of disabilities in special education settings have language arts teachers with special education credentials, and between 18% and 46% have language arts teachers with credentials that are specific to teaching students with a particular disability.

Exhibit 4-13
Type of Certificate Held by Language Arts Teachers,
by Disability Category and Instructional Setting

	Learning Disability	Speech/ Language Impairment	Mental Retardation	Emotional Disturbance	Hearing Impairment	Visual Impairment	Orthopedic Impairment	Other Health Impairment	Autism	Traumatic Brain Injury	Multiple Disabilities
General Education											
Percentage of students whose language arts instructor holds a:											
General education credential	90.6 (2.2)	95.8 (1.3)	92.6 (3.6)	91.1 (2.7)	94.8 (2.1)	96.5 (1.6)	93.0 (2.2)	93.9 (2.3)	90.2 (3.7)	90.6 (5.6)	89.1 (8.2)
Special education credential	18.7 (3.0)	5.8 (1.5)	17.6 (5.2)	19.8 (3.8)	15.9 (3.5)	7.3 (2.3)	12.1 (2.8)	16.0 (3.5)	21.7 (5.1)	19.2 (7.6)	25.4 (11.4)
Disability-specific credential	6.6 (1.9)	3.5 (1.1)	6.4 (3.4)	4.1 (1.9)	7.8 (2.5)	5.4 (2.0)	7.4 (2.3)	6.6 (2.4)	5.2 (2.7)	5.0 (4.2)	6.4 (6.4)
Special Education											
Percentage of students whose language arts instructor holds a:											
General education credential	55.0 (3.7)	62.9 (7.3)	48.6 (3.1)	54.6 (4.0)	48.2 (4.0)	63.1 (6.5)	55.3 (4.6)	48.6 (5.2)	42.9 (3.6)	55.8 (7.2)	42.5 (4.1)
Special education credential	79.2 (3.0)	79.9 (6.0)	80.7 (2.4)	72.5 (3.5)	50.0 (4.0)	70.5 (6.2)	81.1 (3.7)	78.2 (4.3)	81.5 (2.8)	82.9 (5.5)	89.9 (2.5)
Disability-specific credential	17.8 (2.9)	21.2 (6.2)	24.1 (2.6)	27.1 (3.5)	45.7 (4.0)	36.5 (6.5)	19.3 (3.7)	23.3 (4.4)	17.8 (2.8)	17.7 (5.5)	13.2 (2.8)
Sample size											
General education	343	488	98	203	279	305	325	270	200	78	51
Special education	356	88	519	313	434	205	274	227	471	146	377

Standard errors are in parentheses.

- Students with autism or multiple disabilities in special education settings are the least likely to have language arts teachers who held general education certificates (43%) and are among the most likely to have language arts teachers with special education certificates (82% and 89%, respectively).
- Students with hearing impairments in special education settings are the least likely to have language arts teachers with a blanket special education credential (50%) and the most likely to have language arts teachers with a disability-specific certificate (46%).

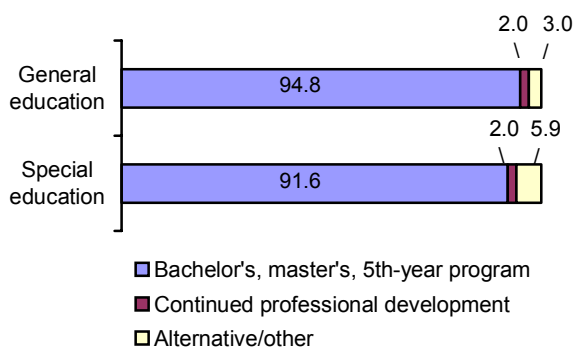
Type of Teacher Certificate: Demographic Differences

- The only demographic differences in the types of teachers' certificates concern race/ethnicity.
- In general education settings, African-American students with disabilities are less likely than white students to have teachers with general education credentials (45% vs. 57%).
- In special education settings, Hispanic students are less likely than white students to have teachers with special education credentials (fewer than 1% vs. 6%).

Teacher Preparation Programs

- Consistent with national estimates, the vast majority of students with disabilities have teachers who received their certificates through a bachelor's, master's, or fifth-year program, regardless of setting and with no meaningful differences across disability categories (Exhibit 4-14). Only 5% of students with disabilities in general education settings and 8% in special education settings have language arts teachers who received their preparation through alternative or continuing professional development programs.

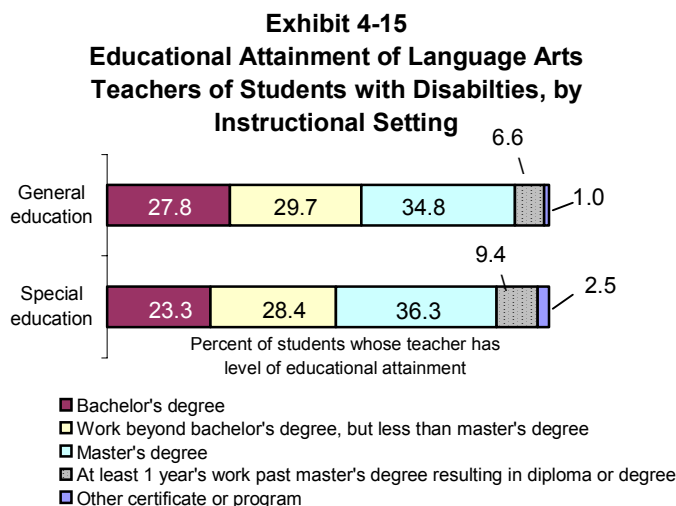
Exhibit 4-14
Type of Preparation Program of
Language Arts Teachers of
Students with Disabilities



- Among students with disabilities in general education settings, regardless of disability category, at least 93% have language arts teachers who received their degree through a bachelor's, master's, or fifth-year program.
- Among students with disabilities in special education settings, between 89% and 98% of students with most types of disabilities have teachers who received their degree through a bachelor's, master's, or fifth-year program. The exception is students with traumatic brain injury, only 84% of whom have language arts teachers who received their degrees through such programs; 16% of these students have teachers who received their degrees through alternative or continuing professional development programs.
- There are no grade-level differences in teacher preparation programs.

Teacher's Education

- Regardless of setting, more than 90% of students with disabilities have language arts teachers who earned their certificate or license through bachelor's, master's degrees or fifth-year programs; 3% received their certificates through alternative programs such as “fast-track programs” that do not require education degrees but allow certification based on other credentials; and 2% received their certificates through continuing professional development.
- Regardless of educational setting, the most common educational level among students' language arts teachers is a master's degree, with bachelor's degrees and fifth-year programs somewhat less common, and degrees beyond the master's degree much less common.
- In general education settings, there are few differences in the level of teachers' educational attainment across disability categories (Exhibit 4-16). One exception is that teachers of students with multiple disabilities are more likely than teachers of several other groups to have attained a master's degree or higher (e.g., 66% vs. 29% for students with orthopedic impairments).



- In special education settings, between 43% and 48% of students with most types of disabilities have teachers who have at least a master's degree. Exceptions are students with orthopedic impairments, 40% of whom have teachers with this level of educational attainment, and students with speech impairments or hearing impairments, more than 55% of whom have teachers with this level of educational attainment.
- There are no meaningful differences among demographic groups in the educational levels of their teachers.

Exhibit 4-16
Educational Attainment of Language Arts Teachers,
by Instructional Setting and Disability Category

	Learning Disability	Speech/ Language Impair- ment	Mental Retar- dation	Emotional Disturbance	Hearing Impair- ment	Visual Impair- ment	Orthopedic Impairment	Other Health Impair- ment	Autism	Traumatic Brain Injury	Multiple Disabili- ties
Percentage of students whose language arts instructors hold a master's degree or higher in:											
General education	41.6 (3.7)	40.4 (3.1)	45.9 (6.9)	41.6 (4.7)	46.0 (4.7)	43.9 (4.5)	38.7 (4.2)	45.7 (4.7)	46.6 (6.2)	34.9 (9.1)	65.5 (12.5)
Special education	43.7 (3.7)	56.4 (7.5)	43.1 (3.0)	44.5 (3.9)	56.8 (4.0)	48.2 (6.8)	40.0 (4.5)	43.7 (5.2)	45.9 (3.6)	48.1 (7.3)	52.5 (4.2)
Sample size											
General education	343	488	98	203	279	305	325	270	200	78	51
Special education	356	88	519	313	434	205	274	227	471	146	377

Standard errors are in parentheses.

Summary

General education classes are larger than special education classes. They average 23 students, including an average of three who receive special education services. This contrasts with an average class size of 10 for special education classes. Most teachers in general education classes have a general education certificate, although almost one in five students with disabilities who receive their language arts instruction in general education classrooms also have a special education teacher in their classrooms. Teachers in general education classes are more likely than their peers in special education classes to have regular, standard, or advanced certificates. Students with disabilities in general education classes are less than half as likely as students in special education classes to have classroom aides assisting their teachers.

Almost three-fourths of the students in general education classes are rated by teachers as having at least average reading ability; in contrast, 90% of students in special education classes are rated as below-average readers.

Differences among various groups of students are notable, even when they share the same instructional setting. For example, among students who receive

language arts instruction in special education settings, students with mental retardation or multiple disabilities are in classes with more students with very poor reading abilities, whereas students with speech impairments, learning disabilities, or emotional disturbance who share a special education placement are in classes with fewer very poor readers. Among students who take their language arts in special education settings, those with speech or hearing impairments are more likely than many other groups of students to have teachers with at least a master's degree.

Grade-level differences are apparent in several aspects of classrooms. Among students for whom language arts instruction is in general education settings, middle-school-age students are in larger classes than younger students. Although they are more likely to have special education teachers in the general education classrooms, they are less likely to have classroom aides. They also are less likely to have teachers with standard certificates. In addition, their reading abilities are more likely to be rated by their teachers as below average.

Among students whose language arts is delivered in special education settings, students in lower grades have fewer students in their classrooms and are more likely to have a paid staff member besides the teacher in the classroom. Students in ungraded classrooms are the most likely of all students to have a paid staff member other than the teacher in the classroom and the most likely to be in classrooms where the average reading ability level is much below average.

Demographic differences also occur. For example, in general education classes, students with disabilities from upper-income households tend to be in larger classes than their lower-income peers, whereas in general education classes, the reverse is true. Nonetheless, in both settings, classroom reading ability levels tend to be lowest in the classrooms of students from low-income families.

Few differences emerge among the racial/ethnic groups. However, in general education settings, compared with white students, Hispanic students are less likely to have a special education teacher in the classroom, and African-American students are more likely to be in classrooms with relatively low ability levels in reading. In special education settings, Asian/Pacific Islander students are more likely than white students to have a paid staff member other than a teacher in the classroom. In addition, these students and African-American students are more likely than white students to be in classrooms in which the preponderance of students have reading ability levels that teachers rate as much below average.

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