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Demographic and School Characteristics of Students Receiving Special Education in the Elementary Grades

This Issue Brief examines the demographic and school characteristics of students receiving special education in the elementary school grades. Prior studies have documented the number of children receiving special education services in each year during the elementary school years by gender, race/ethnicity, and disability (see, e.g., Office of Special Education and Rehabilitative Services (OSERS) 2003). However, little is known about the grade distribution of students by other demographic and school characteristics (such as the student's poverty status and the school's control (private/public), urbanicity, region, and poverty concentration).¹

Data recently released by the National Center for Education Statistics (NCES) Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K) allow a study of the demographic and school characteristics of students receiving special education in several grades between kindergarten and grade 5. Through the ECLS-K, NCES has followed a nationally representative sample of school children since the 1998–99 school year, when the children were in kindergarten, through the 2003–04 school year, when most of the children were in fifth grade. Special education data were collected in spring 1999 (kindergarten), spring 2000 (first grade), spring 2002 (third grade), and spring 2004 (fifth grade).²

At each time point, ECLS-K's main school contact, referred to as the School Coordinator, provided information on whether a student received special education services. The School Coordinator also identified the student's primary service provider (i.e., the person with primary responsibility for providing the student's special education services), who identified the student's primary disability.³ Additional information was collected on the student and the student's school, including the student's sex, race/ethnicity, and poverty status (poor or nonpoor)⁴ and the school's control (public or private), urbanicity (central city, urban fringe/large town, or small town/rural), region, and poverty concentration (higher poverty schools are those with 50 percent or more students eligible for the National School Lunch Program; lower poverty schools are those with fewer than 50 percent of students eligible).

This Issue Brief provides a detailed description of the proportion of elementary school students receiving special education in kindergarten, first grade, third grade, and fifth grade; the primary disabilities of these students; and the variation in these measures across a range of demographic

and school characteristics.⁵ Table 1 presents the percentages of the student cohort receiving special education in the specified grades (as reported by the School Coordinator), by primary disability (as identified by the primary special education provider). Table 2 presents the percentages of students receiving special education in the specified grades by other demographic characteristics (sex, race/ethnicity, and poverty status) and school characteristics (school control, urbanicity, region, and poverty concentration). Table 2 also reports findings separately for students identified as having a learning disability or a speech or language impairment as their primary disability. Other primary disabilities did not have sufficient sample size to report separately.

Students Receiving Special Education, by Grade and Primary Disability

During the 1998–99 school year, 4.1 percent of all kindergartners received special education services (table 1). The percentage of the cohort receiving special education increased in each subsequent grade analyzed: 5.4 percent of students in first grade, 9.4 percent in third grade, and 11.9 percent in fifth grade.

In kindergarten, the most commonly identified primary disability was a speech or language impairment (2.3 percent of students). In first grade, the most commonly identified primary disabilities were a speech or language impairment (1.8 percent) and a specific learning disability (1.2 percent). In third and fifth grades, the most commonly identified primary disability was a specific learning disability (3.3 and 6.5 percent, respectively). The percentage of the student cohort with a specific learning disability as a primary disability increased across each grade, from 0.5 percent in kindergarten to 6.5 percent in fifth grade.

Except for these two most common primary disabilities, no other disability had a prevalence of more than 1 percent in any grade. However, some other disabilities did show changes in prevalence over time. The percentages of students with an identified health impairment, mental retardation, or a serious emotional disturbance were greater in fifth grade than in kindergarten.

Characteristics of Students Receiving Special Education

Sex. Among the kindergarten class of 1998–99, the percentage of boys receiving special education (5.3 percent) was greater

Table 1. Percentage of the kindergarten class of 1998–99 receiving special education in various grades, by sex and disability: 1998–99, 1999–2000, 2001–02, and 2003–04

Primary disability	Kinder- garten	Grade 1	Grade 3	Grade 5
All disabilities	4.14	5.36	9.36	11.89
Autism	0.06 !	0.07 !	0.11	0.16 !
Blind/visual impairment	#	#	#	#
Deaf/blind	#	#	#	#
Deaf/hard of hearing	0.03 !	0.02	0.06 !	0.04 !
Development delay	0.33	0.46	0.14 !	#
Health impairment	0.09	0.11	0.39	0.88
Specific learning disability	0.48	1.22	3.26	6.49
Mental retardation	0.12	0.35	0.41	0.94
Multiple impairments	0.07 !	0.06 !	0.11 !	0.07 !
Physical impairment	0.08 !	0.10 !	0.09 !	0.19 !
Serious emotional disturbance	0.06 !	0.14	0.33	0.73
Speech or language impairment	2.27	1.80	1.42	1.35
Traumatic brain injury	#	#	#	#
Missing primary disability	0.55	1.01	2.98	0.85

Rounds to zero.

! Interpret data with caution. Standard error is more than one-third as large as the estimate.

NOTE: Detail may not sum to totals because of rounding. Not all apparent differences in this table are statistically significant. Standard errors are available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2007005>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), "Special Education Teacher/Service Provider Questionnaire," spring 1999, spring 2000, spring 2002, and spring 2004.

than that of girls (2.9 percent) (table 2). The percentage of boys receiving special education was also greater than that of girls in each of the other grades sampled.

Race/ethnicity. The percentage of students receiving special education showed little variation across racial/ethnic categories. However, the percentage of White, non-Hispanic students receiving special education in kindergarten (4.6 percent) was greater than the percentage of Hispanic students or students in the other/more than one race category (3.3 and 2.8 percent, respectively). In addition, a greater percentage of White, non-Hispanic students than Hispanic students received special education in first grade (5.8 vs. 4.0 percent).

Student poverty status. The percentage of poor students receiving special education was greater than that of nonpoor students in each grade. Moreover, higher percentages of poor students in each grade were identified as having a specific learning disability as their primary disability.

School poverty concentration and school control. A greater percentage of students attending higher poverty schools than lower poverty schools received special education in both kindergarten (5.6 vs. 3.9 percent) and third grade (10.2 vs. 8.4 percent), though there were no statistically significant differences in grades 1 or 5. In each grade, the percentage of public school students receiving special education services was greater than the percentage of private school students.

Urbanicity. Central city schools reported lower percentages of students receiving special education than did schools in other settings in some grades. For example, lower percentages of children in central city schools than in urban fringe/large town

schools received special education in kindergarten and first grade (3.0 vs. 4.8 percent and 3.1 vs. 5.5 percent, respectively). Also, in each of the grades sampled, lower percentages of children in central city schools than in small town/rural schools received special education (3.0 vs. 5.0 percent in kindergarten, 3.1 vs. 8.8 percent in first grade, 8.3 vs. 10.7 percent in third grade, and 10.5 vs. 14.6 percent in fifth grade).

Region. By region, students in the West were less likely than students in the Northeast and South to receive special education in kindergarten (2.0 vs. 6.2 and 5.3 percent, respectively), first grade (2.2 vs. 5.6 and 7.5 percent), and third grade (6.3 vs. 11.1 and 10.7 percent). A smaller percentage of students in the Midwest than in the Northeast and the South received special education in kindergarten (2.6 vs. 6.2 and 5.3 percent, respectively). In fifth grade there were no statistically significant differences across regions in the percentage of students receiving special education—in all regions the estimate ranged between 11 and 13 percent.

Conclusion

For the cohort of students beginning kindergarten in 1998, specific learning disabilities and speech or language impairments were the most prevalent primary disabilities over the grades studied. The percentage of the student cohort receiving special education grew from 4.1 percent in kindergarten to 11.9 percent of students in fifth grade. Higher percentages of boys than girls and of poor students than nonpoor students received special education. Also, greater percentages of students in higher poverty rather than lower poverty schools received special education in kindergarten and third grade. Higher percentages of students in the South and Northeast than in the West received special education in three of the four grades. And, higher percentages of students in small town/rural schools than in central city schools received special education in each of the four grades. Finally, in each grade studied, public schools reported higher percentages of students receiving special education than did private schools.

This Issue Brief does not follow individual students over time through the elementary grades to determine if the same students received special education across years and if the primary disability for which students received special education services changed across years. However, the ECLS-K would support such a longitudinal analysis. The ECLS-K follows children through the cohort's eighth grade year.

References

- Holt, E.W., McGrath, D.J., and Herring, W.L. (2007). *Timing and Duration of Student Participation in Special Education in the Primary Grades*. U.S. Department of Education. Washington, DC: National Center for Education Statistics.
- Office of Special Education and Rehabilitative Services (OSERS). (2003). *Twenty-fifth Annual Report to Congress on the Implementation of the Individuals With Disabilities Education Act*. U.S. Department of Education. Washington, DC: Author

Table 2. Percentage of the kindergarten class of 1998–99 receiving special education in various grades, by primary disability and student and school characteristics: 1998–99, 1999–2000, 2001–02, and 2003–04

Student or school characteristic	Kindergarten			Grade 1			Grade 3			Grade 5		
	All disabilities	SLI ¹	LD ²	All disabilities	SLI ¹	LD ²	All disabilities	SLI ¹	LD ²	All disabilities	SLI ¹	LD ²
All students	4.14	2.27	0.48	5.36	1.80	1.22	9.36	1.42	3.26	11.89	1.35	6.49
Student characteristics												
Sex												
Male	5.29	2.90	0.59	6.60	2.18	1.47	12.62	1.83	4.43	14.82	1.65	8.53
Female	2.90	1.61	0.36	4.05	1.40	0.95	5.88	0.97	2.01	8.75	1.04	4.31
Race/ethnicity												
White, non-Hispanic	4.60	2.62	0.45	5.83	2.02	1.36	9.64	1.62	3.40	12.45	1.32	6.66
Black, non-Hispanic	4.21	1.81	0.58	5.46	1.52	0.70	9.31	1.00	2.69	11.94	1.64	5.47
Hispanic	3.26	1.95	0.54	3.98	1.45	1.19	8.66	0.86	3.36	11.35	1.35	7.22
Other/more than one race, non-Hispanic	2.79	1.56	0.32	4.72	1.64	1.30	9.19	2.25	3.17	9.35	0.99	5.92
Poverty ³												
Poor	5.82	2.77	1.02	6.96	1.89	1.91	13.14	1.38	4.27	18.26	2.90	8.39
Nonpoor	3.71	2.18	0.32	4.85	1.90	0.83	8.01	1.37	2.95	9.60	0.94	5.72
School characteristics												
School control												
Public	4.62	2.54	0.54	5.94	1.95	1.38	10.21	1.54	3.58	12.89	1.52	7.00
Private	1.35	0.75	0.11	1.38	0.75	0.12	2.53	0.44	0.58	4.65	0.11	2.87
Urbanicity												
Central city	2.97	1.36	0.38	3.12	0.74	0.53	8.25	1.04	2.52	10.47	1.42	6.54
Urban fringe/large town	4.77	3.02	0.44	5.52	2.26	0.99	9.77	1.54	3.49	11.07	1.13	5.77
Small town/rural	5.01	2.45	0.74	8.83	2.74	2.85	10.75	1.83	4.24	14.65	1.97	7.02
Region												
Northeast	6.19	3.24	0.72	5.56	1.38	1.29	11.15	0.92	4.13	12.68	1.45	7.13
Midwest	2.62	1.20	0.47	4.61	0.81	0.92	8.82	1.51	3.72	12.74	1.12	8.03
South	5.34	3.08	0.58	7.51	2.96	1.71	10.69	1.87	3.26	11.90	1.53	5.21
West	1.97	1.21	0.10	2.24	1.18	0.62	6.26	0.92	2.08	10.81	1.25	6.85
Poverty concentration ⁴												
Higher poverty	5.62	2.94	0.79	7.00	2.35	2.15	10.23	1.43	3.68	12.21	1.46	6.24
Lower poverty	3.86	2.16	0.35	5.91	2.14	1.08	8.36	1.66	3.52	12.77	1.49	7.24

¹ Interpret data with caution. Standard error is more than one-third as large as the estimate.

² Speech or language impairment.

³ Specific learning disability.

⁴ Children in families whose incomes are at or below the poverty threshold are classified as poor; those in families with incomes above the poverty threshold are classified as nonpoor.

⁵ Higher poverty schools are those with 50 percent or more students eligible for the National School Lunch Program; lower poverty schools are those with fewer than 50 percent of students eligible.

NOTE: Not all apparent differences in this table are statistically significant. Standard errors are available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2007005>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), "Special Education Teacher/Service Provider Questionnaire," spring 1999, spring 2000, spring 2002, and spring 2004.

Endnotes

¹ Holt, McGrath, and Herring (2007) reported the student and school characteristics of special education students for combinations of grades but not for single grades or grades past third grade.

² Data on special education were not collected in the second grade or fourth grade years. The ECLS-K sample includes 21,260 kindergartners, 16,636 first-graders, 14,393 third-graders, and 11,820 fifth-graders for whom special education data are available. The analysis weighted cases using the C2CW0, C4CW0, C5CW0, and C6CW0 weighting variables for kindergarten, first grade, third grade, and fifth grade, respectively.

³ All students with an identified primary disability must first have been identified as receiving special education services by the School Coordinator. Although students may have received services for more

than one disability only students' primary disability, as identified by the student's primary service provider, is addressed in this Issue Brief.

⁴ Data on household income and the number of people living in the household are combined with estimates of the poverty threshold published by the U.S. Bureau of the Census to classify children as "poor" or "nonpoor." Children in families whose incomes are at or below the poverty threshold are classified as poor; those in families with incomes above the poverty threshold are classified as nonpoor.

⁵ This Issue Brief refers to children by the grade of the overall ECLS-K cohort at the time, although not all children in the analytic sample were enrolled in the grade. In spring 2000, 94 percent of the children in the analytic sample were in first grade; in spring 2002, 88 percent were in third grade; in spring 2004, 86 percent were in fifth grade.

The Issue Brief series presents information on education topics of current interest. All estimates shown are based on samples and are subject to sampling variability. All differences discussed are statistically significant at the .05 level as measured by two-tailed Student's *t* tests and Wald tests; this means a difference is discussed only if the probability that it is due to chance (i.e., sampling variability) is less than 1 in 20. No adjustments were made for multiple comparisons. In the design, conduct, and data processing of National Center for Education Statistics (NCES) surveys, efforts are made to minimize the effects of nonsampling errors, such as item nonresponse, measurement error, data processing error, or other systematic error. For more information on the Early Childhood Longitudinal Study, please visit <http://nces.ed.gov/ecls>.

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