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U.S. Department of Education
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NCES 2006–042

Homeschooling in the United States: 2003
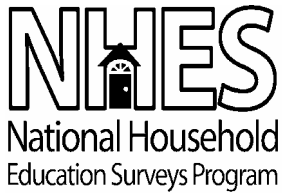
Statistical Analysis Report

Homeschooling in the United States: 2003

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February 2006

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Princiotta, D. and Bielick, S. (2006). *Homeschooling in the United States: 2003*, (NCES 2006-042) U.S. Department of Education. National Center for Education Statistics, Washington, DC: 2005.

Executive Summary

This report represents the latest survey information from the National Center for Education Statistics on the prevalence of homeschooling in the United States. *Homeschooling in the United States: 2003* uses the Parent and Family Involvement Survey of the 2003 National Household Education Surveys Program (NHES) to estimate the number and percentage of homeschooled students in the United States in 2003 and to describe the characteristics of these students and their families. It reports on the race and ethnicity, income level, and educational attainment of students' parents; compares the characteristics of homeschoolers to those of public and private schooled students; examines how homeschooling rates have changed between 1999 and 2003 for different segments of the student population; and describes parents' primary reasons for homeschooling their children, as well as the resources and curricular tools homeschooled students use in their education. Children were considered to be homeschooled if their parents reported them being schooled at home instead of at a public or private school, if their enrollment in public or private schools did not exceed 25 hours a week, and if they were not being homeschooled solely because of a temporary illness.

Interviews were conducted with the parents of 11,994 students ages 5 through 17 with a grade equivalent of kindergarten through 12th grade. Of these students, 239 were homeschooled. The NHES is designed to collect data on a wide range of educational indicators and types of students, including, but not limited to, homeschooling. Therefore, readers should note that the number of questions asked of homeschoolers and the number of homeschoolers represent only a small portion of the NHES collection. The overall response rates for the survey were 54 percent in 2003 and 65 percent in 1999. When the sample is weighted, it represents the approximately 50 million students ages 5 through 17 with a grade equivalent of kindergarten through 12th grade in the United States in 2003.

The results of the 2003 NHES survey reveal that the weighted estimate of the number of students being homeschooled in the United States in the spring of 2003 was 1,096,000, a figure which represents a 29 percent increase from the estimated 850,000 students who were being homeschooled in the spring of 1999 (table 1). In addition, the estimated homeschooling rate—the percentage of the student population being homeschooled—rose from 1.7 percent in 1999 to 2.2 percent in 2003. In this latest survey, parents were asked whether any of a set of reasons for

homeschooling applied to them. Parents were then asked which one of the applicable reasons they considered to be their most important reason for homeschooling—31 percent of homeschooled children had parents who cited concern about the environment of other schools, such as safety, drugs, or negative peer pressure, as the most important reason for homeschooling and 30 percent had parents who said the most important reason was to provide religious or moral instruction (table 4). While these were the two most common responses, another 16 percent of homeschooled students had parents who said dissatisfaction with the academic instruction available at other schools was their most important reason for homeschooling.

Many of the 2003 survey findings concerning homeschooling rates by student and family characteristics paralleled those found in 1999. In 2003, as in 1999, the homeschooling rate for White students (2.7 percent) was higher than for Black students (1.3 percent) or Hispanic students (0.7 percent) (table 2). The homeschooling rate was also higher for students in families with three or more children in the household than for students in families with fewer children, higher for students in two-parent households than for students in one-parent households, and higher for students in two-parent households with only one parent participating in the labor force than for students with other parent labor force participation patterns. A multivariate analysis was conducted to determine whether these relationships held when controlling for all other demographic factors investigated in this report. In the multivariate analysis, most of the relationships held, but differences were not detectable between White and Black students and between students in two-parent households and students in one-parent households.

Between 1999 and 2003, homeschooling rates increased for a number of groups. Homeschooling rates increased from 0.9 to 1.7 percent among students with parents who have a high school diploma or less, from 2.0 to 2.7 percent among White students, from 1.6 to 2.4 percent among students in grades 6–8; and from 0.7 to 1.4 percent among students in single-parent households where the parent was in the labor force.

Finally, the 2003 report also investigates the sources homeschoolers used to obtain curricula or books for home education. A majority of homeschooled students had parents who used one or more of the following sources of curricula or books for their children's home education: a public library (78 percent); a homeschooling catalog, publisher, or individual specialist (77 percent); a retail bookstore or other store (69 percent); and an education publisher that was not affiliated with homeschooling (60 percent) (table 5). Some students also used

distance learning media. Forty-one percent of students who were being homeschooled in 2003 had engaged in some sort of distance learning (figure 3 and table 6).

As with results from any sample survey, the numbers and percentages discussed in this report are estimates of the actual numbers and percentages of homeschooled students in the population. NHES data, like all survey data, are subject to sampling error. Comparisons in the text are tested for statistical significance to ensure that the differences are larger than might be expected due to sampling error. All differences described are significant at the .05 level. Typically, NHES reports focus on statistically significant differences of at least 5 percentage points. However, this report presents estimates of a low-frequency event, the homeschooling rate. Because the homeschooling rate is less than 5 percent for almost all subpopulations, it is not possible to have a difference of greater than 5 percentage points, therefore, all statistically significant differences in the homeschooling rate between subpopulations are discussed.

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Background

The nationwide household sampling approach undertaken by the National Center for Education Statistics (NCES) was initiated partly in response to the need for consistent empirical information on the prevalence of homeschooling in the United States and the characteristics of these homeschoolers. The household sampling frame utilized by the National Household Education Surveys Program (NHES), although subject to coverage error, avoids many of the problems inherent in the use of incomplete sample frames, such as customers of curricular providers, membership lists, and administrative records of homeschoolers. The NHES is designed to collect data on a wide range of educational indicators and types of students, including, but not limited to homeschooling. Therefore, readers should note that the number of questions asked of homeschoolers and the number of homeschoolers represent only a small portion of the NHES collection. The report based on NCES's first comprehensive survey of homeschoolers nationwide, *Homeschooling in the United States: 1999*, showed approximately 850,000 students nationwide were being homeschooled, representing 1.7 percent of U.S. students ages 5 to 17 in grades K–12. Among other findings the survey showed that the racial composition of homeschoolers differed from that of nonhomeschoolers—75 percent of homeschooled students were White, non-Hispanic, compared with 65 percent of nonhomeschooled students.

Estimated Number of Homeschooled Students in the United States

Both the number and the proportion of students in the United States who were being homeschooled increased between 1999 and 2003. Approximately 1.1 million students (1,096,000) were being homeschooled in the United States in the spring of 2003, an increase from the estimated 850,000 students who were being homeschooled in the spring of 1999 (Bielick, Chandler, and Broughman 2001) (figure 1 and table 1). In addition, the percentage of the entire student population who were being homeschooled increased from 1.7 percent in 1999 to 2.2 percent in 2003 (table 2).

Estimates in this report are based on interviews conducted with the parents of 11,994 students ages 5 through 17 with a grade equivalent of kindergarten through 12th grade. Of these

students, 239 were homeschooled. All estimates are weighted to approximate population totals. When the sample is weighted, it represents the approximately 50 million students ages 5 through 17 with a grade equivalent of kindergarten through 12th grade in the United States in 2003, 1.1 million of whom are estimated to have been homeschooled.

Figure 1. Estimated number and 95 percent confidence interval for number of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade: 1999 and 2003

Number of homeschooled students
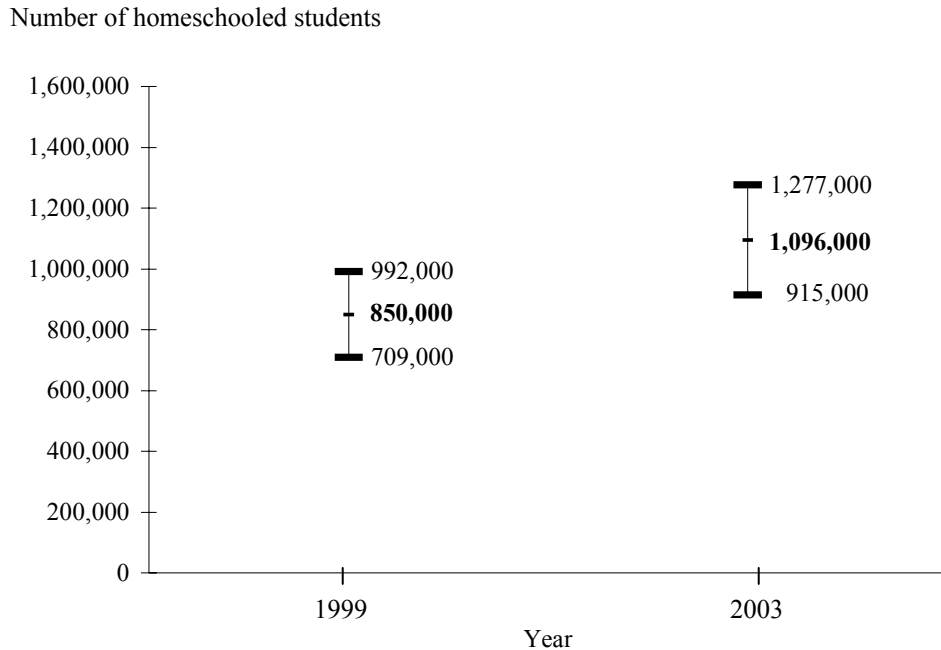
NOTE: Excludes students enrolled in public or private school for more than 25 hours a week and students who were homeschooled only because of temporary illness. The numbers in bold are the estimated number of homeschooled students in the United States. The numbers above and below the bolded numbers are the upper and lower boundaries of the 95 percent confidence interval around the estimates.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent Survey of the 1999 National Household Education Surveys Program (NHES); Parent and Family Involvement in Education Survey of the 2003 NHES.

As with results from any sample survey, the numbers and percentages discussed in this report are estimates of the actual numbers and percentages of homeschooled students in the population. Although 1,096,000 is the best estimate available from the 2003 NHES, another similar sample survey might produce a different estimate. A 95 percent confidence interval defines a range of values around an estimate, within which 95 percent of the estimates from all possible similar sample surveys are expected to fall. The 95 percent confidence interval for the

number of students who were homeschooled in spring 2003 is 915,000 to 1,277,000. The best estimate provided here, 1,096,000, is the midpoint of that interval. Typically, NHES reports focus on statistically significant differences of at least 5 percentage points. However, this report presents estimates of a low-frequency event, the homeschooling rate, which is the percentage of the student population being homeschooled. Because the homeschooling rate is less than 5 percent for almost all subpopulations, it is not possible to have a difference of greater than 5 percentage points, therefore, all statistically significant differences in the homeschooling rate between subpopulations are discussed.

In this report, homeschoolers include students whose parents reported them as being schooled at home instead of at a public or private school for at least part of their education and if their part-time enrollment in public or private schools did not exceed 25 hours a week. Students who were schooled at home only because of a temporary illness were not included as homeschoolers.[1] As shown in table 1, in both 1999 and 2003, about four out of five homeschoolers (82 percent) were homeschooled only, while about one out of five homeschoolers (18 percent) were enrolled in public or private schools part time.

Table 1. Number and percentage distribution of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, by school enrollment status: 1999 and 2003

| School enrollment status | Homeschooled students | | | |
| | 1999 | | 2003 | |
	Number	Percent	Number	Percent
Total	850,000	100.0	1,096,000	100.0
Homeschooled only	697,000	82.0	898,000	82.0
Enrolled in school part-time	153,000	18.0	198,000	18.0
Enrolled in school for less than 9 hours a week	107,000	12.6	137,000	12.5
Enrolled in school for 9 to 25 hours a week	46,000	5.4	61,000	5.6

NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled only because of temporary illness. Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent Survey of the 1999 National Household Education Surveys Program (NHES); Parent and Family Involvement in Education Survey of the 2003 NHES.

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[1] An illness is no longer considered temporary if it lasts 6 months or more.

Homeschooling Rates by Student and Family Characteristics

One way to examine homeschooling in the United States is to look at homeschooling rates—percentages of student populations being homeschooled. As discussed above, the overall homeschooling rate in the United States in 2003 was 2.2 percent, which represents an increase from the 1.7 percent homeschooling rate in 1999. In 1999, the percentage of students who were homeschooled varied for different student subpopulations: White students were more likely to be homeschooled than were Black or Hispanic students; students in households with three or more children were more likely to be homeschooled than were students in households with fewer children; students in two-parent households were more likely to be homeschooled than were students in households with one parent or guardian, especially if only one parent in two-parent households was in the labor force; and students who had at least one parent with postsecondary education were more likely to be homeschooled compared to students whose parents' highest educational attainment was a high school diploma or less (Bielick, Chandler, & Broughman 2001).

As shown in table 2, many findings regarding homeschooling rates in 2003 were similar to those found in 1999. In 2003, the homeschooling rate for White students (2.7 percent) was higher than for Black students (1.3 percent) or Hispanic students (0.7 percent). The homeschooling rate for students in households with three or more children in the household (3.1 percent) was higher than for students in households with two children (1.5 percent) or one child (1.4 percent). Students in two-parent households were more likely to be homeschooled than were students in one-parent households (2.5 percent compared to 1.5 percent). In 2003, the homeschooling rate was 5.6 percent for students in two-parent households where only one parent was participating in the labor force. In contrast, the homeschooling rate was 1.1 percent for students in two-parent households where both parents were in the labor force.

Table 2. Number and percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, by various characteristics: 1999 and 2003

	1999			2003		
Characteristic	Number of students[1]	Number home-schooled	Percent home-schooled	Number of students[1]	Number home-schooled	Percent home-schooled
Total	50,188,000	850,000	1.7	50,707,000	1,096,000	2.2
Grade equivalent[2]						
K–5	24,428,000	428,000	1.8	24,269,000	472,000	1.9
Kindergarten	3,790,000	92,000	2.4	3,643,000	98,000	2.7
Grades 1–3	12,692,000	199,000	1.6	12,098,000	214,000	1.8
Grades 4–5	7,946,000	136,000	1.7	8,528,000	160,000	1.9
Grades 6–8	11,788,000	186,000	1.6	12,472,000	302,000	2.4
Grades 9–12	13,954,000	235,000	1.7	13,958,000	315,000	2.3
Race/ethnicity						
White, non-Hispanic	32,474,000	640,000	2.0	31,584,000	843,000	2.7
Black, non-Hispanic	8,047,000	84,000	1.0	7,985,000	103,000	1.3
Hispanic	7,043,000	77,000	1.1	8,075,000	59,000	0.7
Other	2,623,000	49,000	1.9	3,063,000	91,000	3.0
Sex						
Female	24,673,000	434,000	1.8	24,888,000	527,000	2.1
Male	25,515,000	417,000	1.6	25,819,000	569,000	2.2
Number of children in the household						
One child	8,226,000	120,000	1.5	8,033,000	110,000	1.4
Two children	19,883,000	207,000	1.0	20,530,000	306,000	1.5
Three or more children	22,078,000	523,000	2.4	22,144,000	679,000	3.1
Number of parents in the household						
Two parents	33,007,000	683,000	2.1	35,936,000	886,000	2.5
One parent	15,454,000	142,000	0.9	13,260,000	196,000	1.5
Nonparental guardians	1,727,000	25,000	1.4	1,511,000	14,000	0.9
Parents' participation in the labor force						
Two parents–both in labor force	22,880,000	237,000	1.0	25,108,000	274,000	1.1
Two parents–one in labor force	9,628,000	444,000	4.6	10,545,000	594,000	5.6
One parent in labor force	13,907,000	98,000	0.7	12,045,000	174,000	1.4
No parent in labor force	3,773,000	71,000	1.9	3,008,000	54,000	1.8

See notes at end of table.

Table 2. Number and percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, by various characteristics: 1999 and 2003—continued

Characteristic	1999			2003		
	Number of students[1]	Number home-schooled	Percent home-schooled	Number of students[1]	Number home-schooled	Percent home-schooled
Household Income						
$25,000 or less	16,776,000	262,000	1.6	12,375,000	283,000	2.3
25,001–50,000	15,220,000	278,000	1.8	13,220,000	311,000	2.4
50,001–75,000	8,576,000	162,000	1.9	10,961,000	264,000	2.4
75,001 or more	9,615,000	148,000	1.5	14,150,000	238,000	1.7
Parents' highest educational attainment						
High school diploma or less	18,334,000	160,000	0.9	16,106,000	269,000	1.7
Voc/tech degree or some college	15,177,000	287,000	1.9	16,068,000	338,000	2.1
Bachelor's degree	8,269,000	213,000	2.6	9,798,000	274,000	2.8
Graduate/professional school	8,407,000	190,000	2.3	8,734,000	215,000	2.5
Urbanicity[3]						
Urban	37,415,000	575,000	1.5	40,180,000	794,000	2.0
Rural	12,773,000	275,000	2.2	10,527,000	302,000	2.9
Region						
Northeast	10,220,000	114,000	1.1	9,220,000	168,000	1.8
South	17,366,000	355,000	2.0	17,232,000	445,000	2.6
Midwest	12,040,000	166,000	1.4	11,949,000	238,000	2.0
West	10,560,000	215,000	2.0	12,305,000	245,000	2.0

[1] Number of students refers to all students in public and private schools and homeschooled students.

[2] Students whose grade-equivalent was "ungraded" were excluded from the grade analysis. The percent of students with an "ungraded" grade equivalent was 0.02 percent in 2003 and 0.03 percent in 1999.

[3] Urbanicity is based on a U.S. Census classification of places. Urban is a place with at least 50,000 people. Rural is a place not classifed as urban.

NOTE: Detail may not sum to totals because of rounding. Number and percent of homeschoolers excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled due to a temporary illness.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent Survey of the 1999 National Household Education Surveys Program (NHES); Parent and Family Involvement in Education Survey of the 2003 NHES.

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Only a handful of subpopulations demonstrated a change in homeschooling rate between 1999 and 2003 that were measurably different. The homeschooling rate for students with parents whose highest educational attainment was a high school diploma or less increased from 0.9 percent in 1999 to 1.7 percent in 2003. Other subpopulations that demonstrated an increase in homeschooling between 1999 and 2003 were White, non-Hispanic students (an increase from 2.0 percent to 2.7 percent), students in grades 6 through 8 (an increase from 1.6 percent to 2.4 percent), and students in single-parent households where the parent was in the labor force (an increase from 0.7 percent to 1.4 percent).

The Characteristics of Homeschooled and Nonhomeschooled Students

Another way to examine how student, family, and household characteristics are related to homeschooling is to compare the characteristics of homeschooled students to different populations of students. Data from the Parent Survey of the 1999 NHES showed that characteristics of the homeschooled population differed from those of the non-homeschooled population. In 1999, compared to nonhomeschooled students, homeschooled students were more likely to be White, to have families with three or more children in the household, to have two parents (especially when only one parent was in the labor force), and to have parents whose highest level of educational attainment was a bachelor's degree or higher. In 1999, compared to nonhomeschooled students, homeschooled students were less likely to be Black, to be Hispanic, to be in a three-or-more-child family, and to have parents whose highest level of educational attainment was a high school diploma or less (Bielick, Chandler, and Broughman 2001).

Table 3 provides a comparison of homeschoolers to non-homeschoolers, both public schooled students and private schooled students, by student, family, and household characteristics. Most of the percentage distributions of homeschooled students among the characteristics listed in table 3 are not detectably different between 1999 and 2003; therefore the following discussion focuses on 2003 data. Homeschooled students are a unique subset of the entire student population, and there are a number of ways that the characteristics of homeschooled students differed from both public and private schooled students in 2003.

Students' grade or grade equivalent

No differences were detected between the percentage distributions of homeschooled students and public schooled students across grade; however private schooled students were more likely than homeschooled students and public schooled students to be in kindergarten through grade 5.

Students' race/ethnicity and sex

In 2003, homeschooled students were more likely to be White (77 percent) and less likely to be Black (9 percent) than were public schooled students (61 and 16 percent, respectively). Homeschooled students were less likely to be Hispanic (5 percent) than either public or private schooled students (17 and 10 percent, respectively).

Table 3. Percentage distribution of all students, homeschooled students, and nonhomeschooled students, ages 5 through 17 with a grade
equivalent of kindergarten through 12th grade, by various characteristics: 1999 and 2003

Characteristic	1999				2003			
	All students	Home-schooled[1]	Public schooled	Private schooled	All students	Home-schooled[1]	Public Schooled	Private schooled
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Grade equivalent[2]								
K– 5	48.7	50.4	47.8	56.6	47.9	43.3	47.4	52.4
Kindergarten	7.6	10.8	7.0	12.1	7.2	9.0	7.0	8.6
Grades 1–3	25.3	23.5	25.1	27.5	23.9	19.7	23.6	26.8
Grades 4–5	15.8	16.0	15.7	17.0	16.8	14.7	16.8	17.1
Grades 6–8	23.5	21.9	23.7	22.4	24.6	27.8	24.7	23.2
Grades 9–12	27.8	27.7	28.6	20.9	27.5	28.9	27.9	24.3
Race/ethnicity								
White, non-Hispanic	64.7	75.3	63.1	76.8	62.3	77.0	60.9	70.5
Black, non-Hispanic	16.0	9.9	16.8	10.0	15.7	9.4	16.3	12.7
Hispanic	14.0	9.1	14.9	7.3	15.9	5.3	16.9	10.5
Other	5.2	5.8	5.2	5.8	6.0	8.3	5.9	6.3
Sex								
Female	49.2	51.0	48.9	50.7	49.1	48.1	49.1	49.4
Male	50.8	49.0	51.1	49.3	50.9	51.9	50.9	50.6
Number of children in the household								
One child	16.4	14.1	16.3	17.8	15.8	10.1	15.8	17.0
Two children	39.6	24.4	39.9	39.6	40.5	28.0	40.6	42.4
Three or more children	44.0	61.6	43.8	42.6	43.7	62.0	43.6	40.6
Number of parents in the household								
Two parents	65.8	80.4	64.4	75.6	70.9	80.8	69.5	80.0
One parent	30.8	16.7	32.0	22.7	26.2	17.9	27.3	18.4
Nonparental guardians	3.4	2.9	3.6	1.7	3.0	1.3	3.2	1.6
Parents' participation in the labor force								
Two parents–both in labor force	45.6	27.9	45.5	49.5	49.5	25.0	49.3	56.3
Two parents–one in labor force	19.2	52.2	17.9	25.2	20.8	54.2	19.7	22.9
One parent in labor force	27.7	11.6	28.8	20.4	23.8	15.9	24.7	17.4
No parent in labor force	7.5	8.3	7.8	4.9	5.9	4.9	6.3	3.4

See notes at end of table.

Table 3. Percentage distribution of all students, homeschooled students, and nonhomeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, by various characteristics: 1999 and 2003—continued

Characteristic	1999				2003			
	All students	Home-schooled[1]	Public schooled	Private schooled	All students	Home-schooled[1]	Public Schooled	Private schooled
Household Income								
$25,000 or less	33.4	30.9	35.6	14.8	24.4	25.8	26.2	9.4
25,001–50,000	30.3	32.7	30.6	27.5	26.1	28.4	26.9	18.5
50,001–75,000	17.1	19.1	16.8	19.4	21.6	24.1	21.5	22.1
75,001 or more	19.2	17.4	17.0	38.3	27.9	21.7	25.3	50.0
Parents' highest educational attainment								
High school diploma or less	36.5	18.9	39.0	17.8	31.8	24.5	34.2	13.1
Voc/tech degree or some college	30.2	33.7	31.0	23.2	31.7	30.8	32.6	24.5
Bachelor's degree	16.5	25.1	15.2	26.6	19.3	25.0	17.8	30.9
Graduate/professional school	16.8	22.3	14.9	32.4	17.2	19.6	15.4	31.5
Urbanicity[3]								
Urban	74.5	67.6	73.2	87.2	79.2	72.4	77.9	91.1
Rural	25.5	32.4	26.8	12.8	20.8	27.6	22.1	8.9
Region								
Northeast	20.4	13.4	19.9	25.8	18.2	15.3	17.4	24.8
South	34.6	41.8	34.7	32.2	34.0	40.6	34.8	26.3
Midwest	24.0	19.5	23.8	26.2	23.6	21.8	22.8	30.2
West	21.0	25.3	21.5	15.8	24.3	22.3	25.0	18.7

[1] Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled due to a temporary illness.

[2] Students whose grade-equivalent was "ungraded" were excluded from the grade analysis. The percent of students with an "ungraded" grade equivalent was 0.02 percent in 2003 and 0.03 percent in 1999.

[3] Urbanicity is based on a U.S. Census classification of places. Urban is a place with at least 50,000 people. Rural is a place not classifed as urban.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent Survey of the 1999 National Household Education Surveys Program (NHES); Parent and Family Involvement in Education Survey of the 2003 NHES.

Female and male students were equally represented among the homeschool, public schooled, and private schooled populations.

Number of children living in the household

In 2003, homeschooled students were more likely than public or private schooled students to be living in families with three or more children (62 percent compared to 44 and 41 percent, respectively). Compared to public or private schooled students, homeschooled students were less likely to be an only child in the household or to be in a household with two children.

Number of parents living in the household

Homeschooled students and private schooled students were more likely than public schooled students to live in two-parent households (81 percent and 80 percent, compared with 69 percent, respectively) and less likely to live in single-parent households (18 percent for both homeschooled and private schooled students, compared with 27 percent for public schooled students).

Parents' labor force participation

Homeschooled students were more likely than public and private schooled students to have only one of two parents in the labor force. Fifty-four percent of homeschooled students lived in two-parent families where one parent was not in the labor force, compared to 23 percent of private schooled students and 20 percent of public schooled students. Conversely, about 25 percent of homeschooled students lived in two-parent families where both parents were in the labor force, compared to 56 percent of private schooled students and 49 percent of public schooled students. Homeschooled and private schooled students were less likely than public schooled students to live in one-parent homes where the parent was in the labor force (16 and 17 percent compared to 25 percent).

Household income

Both homeschooled students and public schooled students were less likely than private schooled students to be part of households with annual incomes above $75,000 and more likely to

be part of households with annual incomes of $25,000 or less. Twenty-two percent of homeschooled students and 25 percent of public schooled students lived in households with annual incomes above $75,000, compared with 50 percent of private schooled students. Twenty-six percent of both homeschooled and public schooled students lived in households with annual incomes of $25,000 or less, compared with 9 percent of private schooled students.

Parents' highest educational attainment

Twenty-five percent of homeschooled students had parents whose highest educational attainment was a high school diploma or less; this figure is lower than that for public schooled students (34 percent) but higher than that for private schooled students (13 percent). Homeschooled students were also less likely than private schooled students to have parents whose highest educational attainment was graduate or professional coursework beyond a bachelor's degree (20 percent compared to 31 percent).

Urbanicity

Urbanicity refers to the classification of households as urban or rural. Urban is a place with at least 50,000 people. Rural is a place not classified as urban.[2] In 2003, about 72 percent of homeschooled students lived in urban places and 28 percent lived in rural places. Compared to private schooled students, homeschooled students were less likely to live in urban places, and more likely to live in rural places. There were no differences detected in the urbanicity of homeschooled and public schooled students.

U.S. region

In 2003, homeschooled students were distributed across the Northeast, South, Midwest, and West much like public schooled students were. The apparent gap between the percentage of homeschooled students who were in the South and the percentage of public schooled students who were in the South was not detectably different.

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[2] More information on the urbanicity variable is included in the methodology and technical notes section.

Parents' Reasons for Homeschooling

In the earlier Parent survey conducted as part of the 1999 NHES, parents were posed an open-ended question asking them to list their reasons for homeschooling. Parents provided a broad range of reasons for homeschooling their children, which were coded into 16 different categories. In 1999, three reasons for homeschooling were the most frequently cited: 49 percent of homeschooled students had parents who cited the ability to give their child a better education, 38 percent had parents who cited religious reasons, and 26 percent had parents who cited a poor learning environment at school (Bielick, Chandler, & Broughman 2001).

While the 1999 survey was able to provide a context for why parents were homeschooling their children, it had two main limitations. First, when faced with an open-ended question, parents may not have recalled or responded with all of the reasons for homeschooling that were applicable to their situation. Second, parents were not specifically asked to report their primary reason for homeschooling. Questionnaire items in the 2003 collection were designed to address these limitations. The 2003 survey presented parents with a series of questions asking them whether particular reasons for homeschooling applied to them (table 4). Parents were then asked which of those applicable reasons was their most important reason for homeschooling.

Table 4. Number and percentage of homeschooled students whose parents reported particular reasons for homeschooling as being applicable to their situation and as being their most important reason for homeschooling: 2003

Reasons for homeschooling	Applicable[1]		Most important	
	Number	Percent	Number	Percent
Concern about environment of other schools[2]	935,000	85.4	341,000	31.2
Dissatisfaction with academic instruction at other schools	748,000	68.2	180,000	16.5
To provide religious or moral instruction	793,000	72.3	327,000	29.8
Child has a physical or mental health problem	174,000	15.9	71,000	6.5
Child has other special needs	316,000	28.9	79,000	7.2
Other reasons[3]	221,000	20.1	97,000	8.8

[1]Percentages do not sum to 100 percent because respondents could choose more than one reason.

[2]These include safety, drugs, or negative peer pressure.

[3]Parents homeschool their children for many reasons that are often unique to their family situation. "Other reasons" parents gave for home schooling include: It was the child's choice; to allow parents more control over what child was learning; and flexibility.

NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled only because of a temporary illness.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

The reason for homeschooling that was most frequently cited as being applicable was concern about the environment of other schools including safety, drugs, or negative peer pressure. Eighty-five percent of homeschooled students were being homeschooled, in part, because of their parents' concern about the environment of other schools. The next two reasons for homeschooling most frequently cited as applicable were to provide religious or moral instruction (72 percent) and dissatisfaction with academic instruction at other schools (68 percent).

Figure 2.   Percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, whose parents reported various reasons as their most important reason for homeschooling: 2003

Reasons for homeschooling

Reason	Percent
Concern about environment of other schools [1]	31
To provide religious or moral instruction	30
Dissatisfaction with academic instruction at other schools	16
Other reasons [2]	9
Child has a physical or mental health problem	7
Child has other special needs	7

Percent

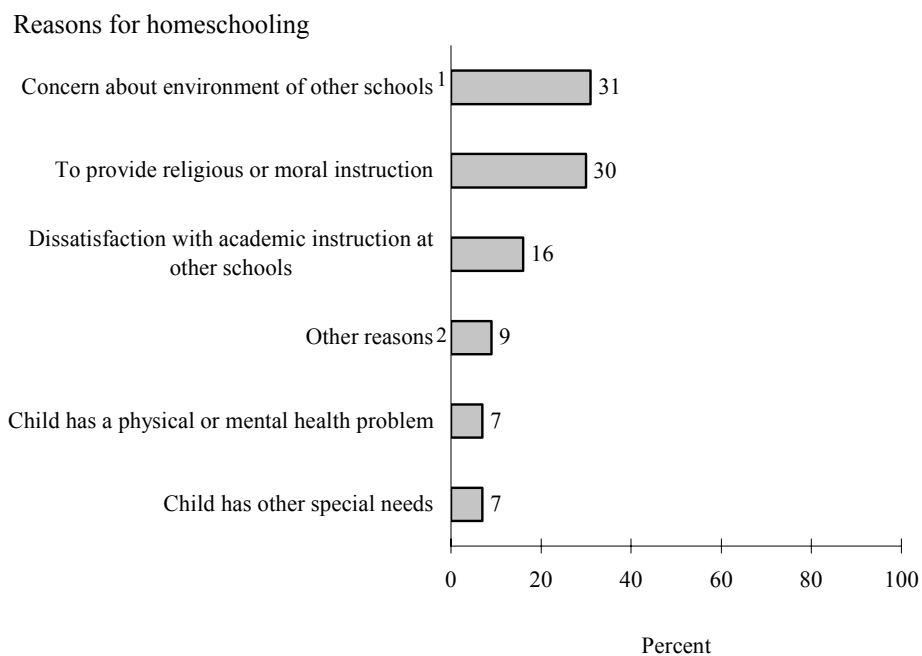[1]These include safety, drugs, or negative peer pressure.
[2]Parents homeschool their children for many reasons that are often unique to their family situation. "Other reasons" parents gave for homeschooling in the PFI-NHES:2003 include: It was the child's choice; to allow parents more control over what child was learning; and flexibility.
NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled only because of a temporary illness.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

Parents were asked which of the reasons they homeschooled was the most important reason. Figure 2 and table 4 show the most important reasons students were being homeschooled in 2003, as reported by parents of homeschooled students. Concern about the environment of other schools and to provide religious or moral instruction were the top two most important

reasons cited. About a third of students had parents who cited concern about the environment of other schools as their most important reason for homeschooling (31 percent). Approximately another third of homeschooled students had parents who were homeschooling primarily to provide religious or moral instruction (30 percent). Sixteen percent of homeschooled students had parents whose primary reason for homeschooling was dissatisfaction with the academic instruction available at other schools, making this the third most common primary reason for homeschooling.

Sources of Curriculum or Books

Parents of homeschooled students obtain curriculum or books from a wide variety of sources. Table 5 shows that a majority of homeschooled students had parents who used one or more of the following sources of curriculum or books for their children's home education: a public library (78 percent); a homeschooling catalog, publisher, or individual specialist (77 percent); a retail bookstore or other store (69 percent); and an education publisher that was not affiliated with homeschooling (60 percent). Approximately half of homeschooled students used curriculum or books from homeschooling organizations. Thirty-seven percent of homeschooled students used curriculum or books from a church, synagogue or other religious institution and 23 percent used a curriculum or books from their local public school or district.

Table 5. Number and percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, whose parents reported using various sources of curriculum or books: 2003

Sources of curriculum or books	Number	Percent
Public library	854,000	77.9
Homeschooling catalog, publisher, or individual specialist	843,000	76.9
Retail bookstore or other store	753,000	68.7
Education publisher not affiliated with homeschooling	653,000	59.6
Homeschooling organization	539,000	49.2
Church, synagogue, or other religious organization	400,000	36.5
Other sources	284,000	26.0
Local public school or district	248,000	22.6
Private school	184,000	16.8

NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled due to a temporary illness. Percentages do not sum to 100 percent because respondents could choose more than one source of curriculum or books.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

Use of Distance Learning

As discussed in the previous section, parents of homeschooled students use a variety of sources for curricula and books. Another resource for parents is distance learning media. Distance learning is defined in the NHES as a course where some or all of the instruction for the course is provided using some kind of technology, while the person taking the course is at a different place from the instructor. Figure 3 and table 6 show various distance learning media asked about in the survey and the number and percentage of homeschooled students whose home education involved using each type of media.

Figure 3. Percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, who engaged in distance learning using various media: 2003

Percent
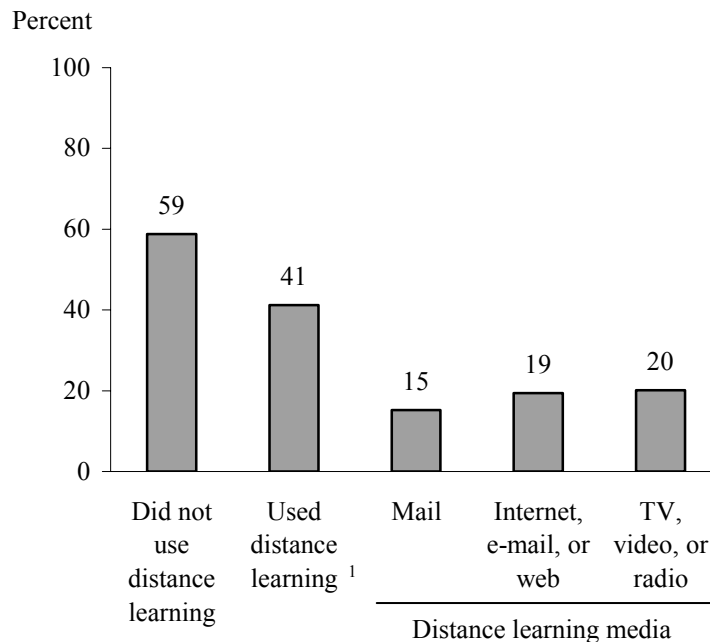
[1] Includes mail, internet, email, or web and TV, video or radio categories. Detail does not sum to total because students could use more than one form of distance learning.
NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled due to a temporary illness.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

Table 6. Number and percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, who engaged in distance learning using various media: 2003

| Distance Learning Media	Number	Percent
Total	451,000	41.2
Mail	167,000	15.2
Internet, e-mail, or web	212,000	19.4
TV, video, or radio	220,000	20.1

NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled due to a temporary illness. Detail does not sum to total because students could use more than one form of distance learning.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

Forty-one percent of students who were homeschooled in 2003 engaged in some sort of distance learning measured in the survey. Approximately 20 percent of homeschooled students took a course or received instruction provided by television, video or radio. About 19 percent of homeschooled students had taken a course or received instruction provided over the Internet, e-mail, or the World Wide Web. An estimated 15 percent of homeschooled students took a correspondence course by mail designed specifically for homeschoolers. The apparent differences between the percentage of students engaging in a correspondence course by mail and the percentages of students engaged in distance learning via the other two media categories were not detectably different. This may be due to large standard errors resulting from a relatively small sample size.

A Multivariate Analysis of Homeschooling

The previous discussion of homeschooling rates in 2003 (see table 2) demonstrated a number of bivariate relationships between homeschooling and student, family, or household characteristics. For example, White students were more likely to be homeschooled than Black or Hispanic students, and students in households with three or more children were more likely to be homeschooled than were students with fewer siblings. Bivariate relationships are important because they describe homeschooling rates among different segments of the population.

It is also worthwhile, however, to use multivariate analysis to test relationships among several variables simultaneously. Multivariate analysis can provide answers to questions about homeschooling, like, "How is a child's race/ethnicity associated with homeschooling, holding other factors, such as income, constant?" Table 7 presents results from a multivariate logistic regression analysis in the form of odds ratios (beta coefficients and standard errors are available in table A7). Reference categories, which are listed first for each variable in table 7, have an odds ratio of one. For each variable, if a category has an odds ratio greater than one, then students in that category are more likely to be homeschooled than students in the reference category. For example, a category with an odds ratio of 2 means that the odds of a student in that category being homeschooled are twice that of the student in the reference category. If a category has an odds ratio that is less than one, then students in that category have lower odds of being homeschooled than students in the reference category. Asterisks (*) are used to denote findings that are statistically significant at the level of 0.05.

A number of the bivariate findings discussed previously persisted when using multivariate analysis. After controlling for the student, family, and household characteristics listed in table 7, the following relationships were evident: White students were about 4 times more likely to be homeschooled than were Hispanic students; students in households with three or more children were about 2 times more likely to be homeschooled than were students with no siblings; and students in two-parent households where one parent was in the labor force were about 5 times more likely to be homeschooled than were students in two-parent households where both parents were in the labor force.

Table 7. Odds ratios for logistic regression analysis of homeschooling on various characteristics, students ages 5 through 17 with a grade equivalent of kindergarten through 12th grade: 2003

Characteristics and intercept	Odds ratio[1]
Intercept	0.006 *
Grade equivalent[2]	
(Grades K– 5)	1.000
Grades 6–8	1.374 *
Grades 9–12	1.395
Race/ethnicity	
(White, non-Hispanic)	1.000
Black, non-Hispanic	0.538
Hispanic	0.230 *
Other	1.165
Sex	
(Female)	1.000
Male	1.059
Number of children in the household	
(One child)	1.000
Two children	1.043
Three or more children	1.952 *
Number of parents in the household	
(Two parents)	1.000
One parent	0.425
Nonparental guardians	0.326
Parents' participation in the labor force	
(Two parents–both in labor force)	1.000
Two parents–one in labor force	5.324 *
One parent in labor force	3.563
No parent in labor force	3.663
Household Income	
($25,000 or less)	1.000
25,001–50,000	0.838
50,001–75,000	0.731
75,001 or more	0.400 *

See notes at end of table.

Table 7. Odds ratios for logistic regression analysis of homeschooling on various characteristics, students ages 5 through 17 with a grade equivalent of kindergarten through 12th grade: 2003—continued

Characteristics and intercept	Odds ratio[1]
Parents' highest educational attainment	
(High school diploma or less)	1.000
Voc/tech degree or some college	1.345
Bachelor's degree	1.895
Graduate/professional school	1.741
Urbanicity[3]	
(Urban)	1.000
Rural	1.186
Region	
(Northeast)	1.000
South	1.439
Midwest	1.007
West	1.095

* $p < 0.05$

[1] By design, the reference category, shown in (parentheses), odds ratio is 1.

[2] Students whose grade-equivalent was "ungraded" were excluded from the analysis. The percent of students with an "ungraded" grade equivalent was 0.02 percent in 2003 and 0.03 percent in 1999.

[3] Urbanicity is based on a U.S. Census classification of places. Urban is a place with at least 50,000 people. Rural is a place not classifed as urban.

NOTE: This analysis excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled only because of temporary illness. For each variable, if a category has an odds ratio greater than one, then students in that category are more likely to be homeschooled than students in the reference category. If a category has an odds ratio that is less than one, then students in that category have lower odds of being homeschooled than students in the reference category. The odds ratio for the intercept shows the odds of being homeschooled relative to the odds of not being homeschooled.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

Three bivariate associations discussed earlier were not detected after controlling for the other factors listed in table 7. Differences between White and Black students, students in two parent households and students in one-parent households, and parent educational attainment found in the bivariate tests, were not detected in the multivariate analysis.

Summary and Future Research

The report based on NCES's first comprehensive survey of homeschoolers nationwide, *Homeschooling in the United States: 1999*, showed approximately 850,000 students nationwide were being homeschooled, representing 1.7 percent of U.S. students ages 5 to 17 in grades K–12. Among other findings the survey showed that the racial and ethnic composition of homeschoolers differed from that of nonhomeschoolers—75 percent of homeschooled students were White, non-Hispanic, compared with 65 percent of nonhomeschooled students.

 This report provides the latest information from the National Center for Education Statistics (NCES) on the state of homeschooling in the United States. The report shows an increase in the number and percentage of homeschooled students between 1999 and 2003, from 850,000 or 1.7 percent of the school-age population in 1999 to 1.1 million or 2.2 percent in 2003. Although there was an increase in the number and percentage of homeschoolers, the individual, family and household characteristics of homeschoolers, including race and ethnicity, remained fairly consistent between 1999 and 2003. Parents' most important reasons for homeschooling were concern about the environment of other schools and to provide religious or moral instruction. New data on homeschoolers' use of distance learning showed that 41 percent of homeschoolers had engaged in some form of distance learning asked about in the 2003 survey.

NCES plans to collect and report data about homeschooled students with future Parent and Family Involvement in Education Surveys (PFI), scheduled to occur on a four-year cycle. The next PFI is scheduled for 2007 as part of the National Household Education Surveys Program (NHES). The PFI surveys continue to provide a comprehensive set of information that may be used to estimate the number and characteristics of homeschoolers in the United States.

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Appendix A:
Standard Error Tables

Table A1. Standard errors for table 1, number and percentage distribution of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, by school enrollment status: 1999 and 2003

| | Homeschooled students | | | |
| | 1999 | | 2003 | |
School enrollment status	Number	Percent	Number	Percent
Total	71,000	†	92,000	†
Homeschooled only	64,000	2.94	87,000	3.56
Enrolled in school part-time	27,000	2.94	41,000	3.56
Enrolled in school for less than 9 hours a week	25,000	2.81	37,000	3.25
Enrolled in school for 9 to 25 hours a week	13,000	1.50	20,000	1.85

† Not applicable.

NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled only because of temporary illness. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent Survey of the 1999 National Household Education Surveys Program (NHES); Parent and Family Involvement in Education Survey of the 2003 NHES.

Table A2.　Standard errors for table 2, number and percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, by various characteristics: 1999 and 2003

Characteristic	1999			2003		
	Number of students	Number home-schooled	Percent home-schooled	Number of students	Number home-schooled	Percent home-schooled
Total	73,000	71,000	0.142	89,000	92,000	0.182
Grade equivalent[1]						
K– 5	20,000	48,000	0.197	25,000	55,000	0.228
Kindergarten	20,000	20,000	0.518	25,000	24,000	0.645
Grades 1–3	6,000	37,000	0.290	#	33,000	0.275
Grades 4–5	1,000	22,000	0.283	#	30,000	0.353
Grades 6–8	3,000	28,000	0.237	6,000	45,000	0.360
Grades 9–12	70,000	33,000	0.238	82,000	47,000	0.335
Race/ethnicity						
White, non-Hispanic	168,000	62,000	0.191	187,000	77,000	0.245
Black, non-Hispanic	102,000	25,000	0.309	46,000	34,000	0.424
Hispanic	86,000	18,000	0.250	35,000	21,000	0.261
Other	114,000	17,000	0.652	161,000	31,000	1.017
Sex						
Female	239,000	46,000	0.186	278,000	58,000	0.233
Male	234,000	44,000	0.172	287,000	62,000	0.243
Number of children in the household						
One child	154,000	20,000	0.244	218,000	22,000	0.276
Two children	211,000	27,000	0.135	319,000	45,000	0.220
Three or more children	241,000	65,000	0.295	363,000	80,000	0.360
Number of parents in the household						
Two parents	204,000	68,000	0.207	315,000	83,000	0.231
One parent	209,000	25,000	0.163	319,000	43,000	0.324
Nonparental guardians	86,000	14,000	0.823	100,000	11,000	0.739
Parents' participation in the labor force						
Two parents–both in labor force	241,000	40,000	0.174	373,000	44,000	0.176
Two parents–one in labor force	194,000	54,000	0.552	297,000	74,000	0.674
One parent in labor force	220,000	22,000	0.157	268,000	40,000	0.330
No parent in labor force	162,000	19,000	0.480	171,000	24,000	0.779

See notes at end of table.

Table A2. Standard errors for table 2, number and percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, by various characteristics: 1999 and 2003—continued

Characteristic	1999			2003		
	Number of students	Number home-schooled	Percent home-schooled	Number of students	Number home-schooled	Percent home-schooled
Household Income						
$25,000 or less	117,000	45,000	0.267	54,000	56,000	0.452
25,001–50,000	233,000	37,000	0.236	270,000	50,000	0.372
50,001–75,000	189,000	26,000	0.298	282,000	51,000	0.461
75,001 or more	211,000	27,000	0.276	262,000	46,000	0.328
Parents' highest educational attainment						
High school diploma or less	217,000	27,000	0.146	272,000	52,000	0.315
Voc/tech degree or some college	215,000	37,000	0.245	323,000	58,000	0.361
Bachelor's degree	182,000	36,000	0.420	277,000	47,000	0.484
Graduate/professional school	207,000	40,000	0.460	238,000	44,000	0.512
Urbanicity[2]						
Urban	185,000	51,000	0.154	187,000	77,000	0.217
Rural	113,000	40,000	0.310	56,000	58,000	0.550
Region						
Northeast	104,000	30,000	0.296	43,000	53,000	0.578
South	122,000	48,000	0.276	55,000	67,000	0.388
Midwest	114,000	29,000	0.240	61,000	44,000	0.370
West	97,000	36,000	0.338	40,000	42,000	0.344

\# Rounds to zero

[1] Students whose grade-equivalent was "ungraded" were excluded from the grade analysis.

[2] Urbanicity is based on a U.S. Census classification of places. Urban is a place with at least 50,000 people. Rural is a place not classifed as urban.

NOTE: Detail may not sum to totals because of rounding. Number and percent of homeschoolers excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled due to a temporary illness.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent Survey of the 1999 National Household Education Surveys Program (NHES); Parent and Family Involvement in Education Survey of the 2003 NHES.

Table A3. Standard errors for table 3, percentage distribution of all students, homeschooled students, and nonhomeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, by various characteristics: 1999 and 2003

Characteristic	1999				2003			
	All students	Home-schooled[1]	Public schooled	Private schooled	All students	Home-schooled[1]	Public Schooled	Private schooled
Total	†	†	†	†	†	†	†	†
Grade equivalent[2]								
K–5	0.07	3.75	0.16	1.26	0.08	3.06	0.21	1.39
Kindergarten	0.04	2.31	0.12	0.94	0.04	2.06	0.10	0.75
Grades 1–3	0.04	3.61	0.15	1.16	0.04	2.50	0.17	1.34
Grades 4–5	0.02	2.34	0.13	1.08	0.03	2.30	0.14	0.98
Grades 6–8	0.04	2.83	0.13	0.97	0.04	3.43	0.16	1.12
Grades 9–12	0.10	3.21	0.16	1.06	0.12	3.83	0.22	1.32
Race/ethnicity								
White, non-Hispanic	0.32	3.36	0.36	1.06	0.34	3.88	0.40	1.54
Black, non-Hispanic	0.20	2.80	0.24	0.76	0.08	2.87	0.15	1.14
Hispanic	0.17	2.06	0.19	0.57	0.07	1.92	0.16	0.87
Other	0.23	2.01	0.25	0.68	0.32	2.80	0.35	0.90
Sex								
Female	0.47	3.27	0.51	1.32	0.55	3.52	0.59	1.58
Male	0.47	3.27	0.51	1.32	0.55	3.52	0.59	1.58
Number of children in the household								
One child	0.30	2.53	0.33	0.91	0.43	1.97	0.44	1.20
Two children	0.42	3.06	0.45	1.41	0.63	3.74	0.67	1.47
Three or more children	0.48	3.97	0.53	1.56	0.72	4.35	0.74	1.95
Number of parents in the household								
Two parents	0.41	3.26	0.45	1.36	0.59	3.55	0.66	1.46
One parent	0.41	2.91	0.45	1.33	0.63	3.61	0.71	1.47
Nonparental guardians	0.17	1.70	0.19	0.27	0.20	1.01	0.22	0.40
Parents' participation in the labor force								
Two parents–both in labor force	0.48	3.92	0.54	1.56	0.72	3.72	0.72	2.28
Two parents–one in labor force	0.39	4.27	0.40	1.40	0.59	4.73	0.61	1.71
One parent in labor force	0.44	2.53	0.47	1.23	0.53	3.30	0.60	1.42
No parent in labor force	0.32	2.21	0.34	0.74	0.34	2.16	0.36	0.62

See notes at end of table.

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Table A3. Standard errors for table 3, percentage distribution of all students, homeschooled students, and nonhomeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, by various characteristics: 1999 and 2003—continued

Characteristic	1999				2003			
	All students	Home-schooled[1]	Public schooled	Private schooled	All students	Home-schooled[1]	Public Schooled	Private schooled
Household Income								
$25,000 or less	0.22	4.31	0.25	1.20	0.09	4.32	0.21	1.18
25,001–50,000	0.47	4.00	0.47	1.39	0.53	4.06	0.57	1.29
50,001–75,000	0.38	2.62	0.39	1.21	0.55	4.46	0.59	1.48
75,001 or more	0.42	2.65	0.42	1.40	0.52	3.79	0.60	1.90
Parents' highest educational attainment								
High school diploma or less	0.43	2.88	0.46	1.15	0.54	4.24	0.60	1.24
Voc/tech degree or some college	0.43	3.85	0.48	1.19	0.62	4.60	0.68	1.35
Bachelor's degree	0.36	3.49	0.33	1.28	0.55	3.92	0.57	1.51
Graduate/professional school	0.41	4.17	0.40	1.20	0.47	3.67	0.52	1.56
Urbanicity[3]								
Urban	0.22	3.81	0.28	1.03	0.10	4.91	0.21	1.19
Rural	0.22	3.81	0.28	1.03	0.10	4.91	0.21	1.19
Region								
Northeast	0.21	3.35	0.26	1.10	0.08	4.51	0.21	1.60
South	0.23	4.36	0.27	1.18	0.10	4.96	0.21	1.41
Midwest	0.23	3.13	0.28	1.27	0.10	3.81	0.31	2.02
West	0.20	3.77	0.25	0.95	0.08	3.77	0.19	1.20

† Not applicable.

[1] Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled due to a temporary illness.

[2] Students whose grade-equivalent was "ungraded" were excluded from the grade analysis.

[3] Urbanicity is based on a U.S. Census classification of places. Urban is a place with at least 50,000 people. Rural is a place not classifed as urban.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent Survey of the 1999 National Household Education Surveys Program (NHES); Parent and Family Involvement in Education Survey of the 2003 NHES.

Table A4. Standard errors for table 4, number and percentage of homeschooled students whose parents reported particular reasons for homeschooling as being applicable to their situation and as being their most important reason for homeschooling: 2003

Reasons for homeschooling	Applicable		Most important	
	Number	Percent	Number	Percent
Concern about environment of other schools[1]	86,000	2.410	55,000	3.973
Dissatisfaction with academic instruction at other schools	74,000	4.537	36,000	3.120
To provide religious or moral instruction	87,000	4.005	54,000	4.269
Child has a physical or mental health problem	40,000	3.317	19,000	1.690
Child has other special needs	57,000	4.324	25,000	2.113
Other reasons[2]	48,000	4.008	22,000	2.071

[1]These include safety, drugs, or negative peer pressure.

[2]Parents homeschool their children for many reasons that are often unique to their family situation. "Other reasons" parents gave for home schooling include: It was the child's choice; to allow parents more control over what child was learning; and flexibility.

NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled only because of a temporary illness.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

Table A5. Standard errors for table 5, number and percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, whose parents reported using various sources of curriculum or books: 2003

Sources of curriculum or books	Number	Percent
Public library	82,000	3.321
Homeschooling catalog, publisher, or individual specialist	80,000	3.895
Retail bookstore or other store	81,000	4.054
Another education publisher	72,000	4.492
Homeschooling organization	68,000	4.765
Church, synagogue, or other religious organization	62,000	4.708
Other sources	41,000	3.009
Local public school or district	39,000	3.351
Private school	39,000	3.397

NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled due to a temporary illness.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

Table A6. Standard errors for table 6, percentage of homeschooled students, ages 5 through 17 with a grade equivalent of kindergarten through 12th grade, who engaged in distance learning using various media: 2003

Distance Learning Media	Standard error
Total	5.00
Mail	2.91
Internet, e-mail, or web	3.76
TV, video, or radio	3.29

NOTE: Excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled due to a temporary illness.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

Table A7.   Beta coefficients and standard errors for table 7, logistic regression analysis of homeschooling on various
characteristics: 2003

Characteristics and intercept	Beta	Standard error	Effect size
Intercept	-5.08 *	0.491	-2.81
Grade equivalent[1]			
(Grades K– 5)	†	†	†
Grades 6–8	0.32 *	0.161	0.18
Grades 9–12	0.33	0.193	0.18
Race/ethnicity			
(White, non-Hispanic)	†	†	†
Black, non-Hispanic	-0.62	0.367	-0.34
Hispanic	-1.47 *	0.439	-0.81
Other	0.15	0.422	0.08
Sex			
(Female)	†	†	†
Male	0.06	0.158	0.03
Number of children in the household			
(One child)	†	†	†
Two children	0.04	0.257	0.02
Three or more children	0.67 *	0.263	0.37
Number of parents in the household			
(Two parents)	†	†	†
One parent	-0.86	1.187	-0.47
Nonparental guardians	-1.12	1.448	-0.62
Parents' participation in the labor force			
(Two parents–both in labor force)	†	†	†
Two parents–one in labor force	1.67 *	0.233	0.92
One parent in labor force	1.27	1.144	0.70
No parent in labor force	1.30	0.998	0.72

See notes at end of table.

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Table A7.   Beta coefficients and standard errors for table 7, logistic regression analysis of homeschooling on various characteristics: 2003—continued

Characteristics and intercept	Beta	Standard error	Effect size
Household Income			
($25,000 or less)	†	†	†
25,001–50,000	-0.18	0.284	-0.10
50,001–75,000	-0.31	0.334	-0.17
75,001 or more	-0.92 *	0.333	-0.51
Parents' highest educational attainment			
(High school diploma or less)	†	†	†
Voc/tech degree or some college	0.30	0.319	0.16
Bachelor's degree	0.64	0.336	0.35
Graduate/professional school	0.55	0.334	0.31
Urbanicity[2]			
(Urban)	†	†	†
Rural	0.17	0.300	0.09
Region			
(Northeast)	†	†	†
South	0.36	0.416	0.20
Midwest	-0.07	0.418	-0.04
West	0.09	0.420	0.05

* $p<0.05$

† Not applicable.

[1] Students whose grade-equivalent was "ungraded" were excluded from the analysis.

[2] Urbanicity is based on a U.S. Census classification of places. Urban is a place with at least 50,000 people. Rural is a place not classifed as urban.

NOTE: This analysis excludes students who were enrolled in school for more than 25 hours a week and students who were homeschooled only because of temporary illness. Effect size is calculated by dividing the log odds beta coefficient by 1.81.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Parent and Family Involvement in Education Survey of the 2003 National Household Education Surveys Program (NHES).

Appendix B: Methodology and Technical Notes

The National Household Education Surveys Program (NHES) is a telephone survey data collection program conducted by the U.S. Department of Education's National Center for Education Statistics (NCES). Data collections have taken place from January through early May in 1991 and January through April in 1993, 1995, 1996, 1999, 2001, and 2003. When appropriately weighted, each sample is nationally representative of all persons in the target population in the 50 states and District of Columbia. The samples were selected using random-digit-dialing (RDD) methods, and the data were collected using computer-assisted telephone interviewing (CATI) technology.

Data from the 1999 and 2003 administrations of the NHES were used in this report. A screening interview administered to a member of the household age 18 or older was used to determine whether any children of the appropriate age lived in the household, to collect information on each child, and to identify the appropriate parent or guardian to respond for the sampled child. If one or two eligible children resided in the household, a parent interview was conducted about each child. If more than two eligible children resided in the household, generally two were sampled for extended interviews. Each interview was conducted with the parent or guardian most knowledgeable about the care and education of each sampled child, that parent or guardian being the child's mother or female guardian in about 80 percent of the cases in both years. This report is based on a subset of the total sample, specifically children ages 5 to 17 with a grade equivalent of kindergarten to grade 12. The unweighted number of homeschooled students used in this analysis is 275 for 1999 and 239 for 2003. The unweighted number of nonhomeschooled students was 16,833 in 1999 and 11,755 in 2003.

Response Rates

Screening interviews were administered to all households and were completed with 57,278 households in 1999 and 32,049 households in 2003, yielding screener response rates of 74 percent and 65 percent, respectively. During the screener, children were identified and sampled for the parent interview. Parent interviews were completed for 88 percent of the sampled children in 1999 and 83 percent of sampled children in 2003. The response rate for the entire sample is calculated by taking the product of the proportion of completed screeners and the proportion of completed parent interviews for sampled children—65 percent in 1999 (.74*.88=.65) and 54 percent in 2003 (.65*.83=.54).

The estimated response rate for homeschooled students in 1999 was 63 percent compared to 65 percent for nonhomeschooled students. In 2003, the estimated response rate for homeschooled students was 51 percent, compared to 54 percent for nonhomeschooled students. A response bias analysis comparing weights adjusted for nonresponse to those not adjusted for nonresponse showed no evidence of bias among key NHES estimates and subgroups (U.S. Department of Education, forthcoming).

Item nonresponse (the failure to complete some items in an otherwise completed interview) was very low. The item nonresponse rates for most variables in this report were less than 2 percent, except for household income, which was about 10 percent in both survey years. All items with missing responses (i.e., don't know, refused, or not ascertained) were imputed using an imputation method called a hot-deck procedure (Kalton and Kasprzyk 1986). As a result, no missing values remain in the data.

Data Reliability

NHES estimates are subject to two types of errors, sampling and nonsampling errors. Nonsampling errors are errors made in the collection and processing of data. Sampling errors occur because the data are collected from a sample rather than a census of the population.

Nonsampling Errors

Nonsampling error is the term used to describe variations in the estimates that may be caused by population coverage limitations and data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems like unit and item nonresponse, the differences in respondents' interpretations of the meaning of the questions, response differences related to the particular time the survey was conducted, the tendency for respondents to give socially desirable responses, and mistakes in data preparation.

In general, it is difficult to identify and estimate either the amount of nonsampling error or the bias caused by this error. For each NHES survey, efforts were made to prevent such errors from occurring and to compensate for them where possible. For instance, during the survey design phase, cognitive interviews were conducted to assess respondents' knowledge of the topics, comprehension of questions and terms, and the sensitivity of items. The design phase also entailed extensive staff testing of the CATI instrument and a pretest in which several hundred interviews were conducted.

An important nonsampling error for a telephone survey is failure to include persons who

do not live in households with home telephones. The NHES only samples households with home telephones (i.e. fixed, or land-line, telephones for home use). As of 2000, approximately 5 percent of households in the United States did not have a home telephone.[3] Weighting adjustments using characteristics related to telephone coverage were used to reduce the bias in the estimates associated with children who do not live in households with telephones. Weighting adjustments were also used to adjust for nonresponse and for the oversampling of households with Blacks and Hispanics. Finally, the person-level weights are developed using a cross between race/ethnicity of the child and household income categories; a cross between Census region and urbanicity; and, a cross between home tenure (own or rent) and age or grade of child.

Sampling Errors

The sample of households with home telephones selected for each NHES survey is just one of many possible samples that could have been selected from all households with telephones. Therefore, estimates produced from each NHES survey may differ from estimates that would have been produced from other samples. This type of variability is called sampling error because it arises from using a sample of households with telephones rather than all households with telephones.

The standard error is a measure of the variability due to sampling when estimating a statistic; standard errors for estimates presented in this report were computed using a jackknife replication method. Standard errors can be used as a measure of the precision expected from a particular sample. The probability that the sample estimate would differ from a complete census count by less than 1 standard error is about 68 percent. The chance that the difference would be less than 1.65 standard errors is about 90 percent; and that the difference would be less than 1.96 standard errors, about 95 percent.

Standard errors for all of the estimates presented in this report are available in tabular form in appendix A. These standard errors can be used to produce confidence intervals. For example, an estimated 1.7 percent of students were homeschooled in 1999. This percentage has an estimated standard error of 0.14 percent. Therefore, the estimated 95 percent confidence interval for this statistic is 1.42 to 1.97 percent (1.7 +/- 1.96*0.14). That is, in 95 out of 100 samples using the same sample design, the estimated participation rate rounded to the nearest tenth, should fall between 1.4 and 2.0 percent.

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[3] Special tabulations from the Current Population Survey, 2000.

Statistical Tests

The tests of significance used in this analysis are based on two-tailed Student's *t* statistics. All differences cited in this report are significant at the 0.05 level of significance. In addition, tests for effect size were used for most distributions. Except for the comparison of homeschooling rates, which are used to describe a unique subset of the population and are central to the analysis, differences of less than 5 percent are not reported. For the logistic regression, effect size was calculated by dividing the log odds beta coefficient by 1.81 (Chinn 2000). Logistic regression findings that are significant at the 0.05 level of significance with an effect size of 0.2 and greater are reported.

Glossary

Many of the variables used in the analysis for this report were derived from other variables in the public-use data files. In most cases, variables that had more than four response categories were collapsed into four or fewer categories to accommodate the small number of sampled homeschoolers. This procedure of collapsing response categories ensured that the number of sampled homeschoolers was appropriate for statistical analysis.

Homeschooling

In this report, students are defined as being homeschooled if: 1) their parents reported them being schooled at home instead of a public or private school, 2) their enrollment in a public or private school did not exceed 25 hours a week if they were being homeschooled part-time, and 3) they were not being homeschooled solely because of a temporary illness.[4] The construction of this measure combines answers from the questions listed below with answers to questions about reasons for homeschooling. The definition of homeschooling used in this report was intended to include rather than exclude students based on the data available to identify homeschooled students. Researchers wishing to apply different criteria to define homeschooled students may produce different results.

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[4] The 25-hour cut-off translates to about 80 percent of the average school week, according to the 1999–2000 Schools and Staffing Survey. In 1999, about 1 percent of students who were homeschooled part time were excluded from the homeschooled student category because of the 25-hour cut-off. In 2003, no sampled students who were homeschooled part time were excluded from the homeschooled student category because of the 25-hour cut-off.

PB2.   *Some parents decide to educate their children at home rather than send them to school. Is (CHILD) being schooled at home?*
        Yes (GO TO PB3)
        No

PB3.   *So (CHILD) is being schooled at home instead of at school for at least some classes or subjects?*
        Yes (Go to PB4)
        No

PB4.   *Is (CHILD) getting all of (his/her) instruction at home, or is (he/she) getting some at school and some at home?*
        All at home
        Some at school & some at home (GO TO PB5)

PB5.   *How many hours each week does (CHILD) usually go to a school for instruction? Please do not include time spent in extracurricular activities.*
        Hours: ____

Grade equivalent

If students were enrolled in school for 9 or more hours per week, parents were asked to identify what grade or year their child was attending. If students were homeschooled and not attending school for 9 or more hours per week, or if parents responded that students were ungraded or in special education, then parents were asked to identify their child's grade equivalent. In this report, a student's grade equivalent is either the actual grade the student was enrolled in or the student's grade equivalent. One measure of grade equivalent used in the report had three categories: kindergarten to grade 5, grades 6 to 8, and grades 9 to 12. Another measure had five categories to show more detail in the kindergarten to grade 5 category: kindergarten, grades 1 to 3, grades 4 to 5, grades 6 to 8, and grades 9 to 12. In 2003, 0.02 percent of students had a grade equivalent of "ungraded." This statistic was 0.03 percent in 1999.

Race and ethnicity

Parents were asked to identify the race and ethnicity of sampled children. In 1999 and 2003, race was a mutually exclusive variable. Hispanic ethnicity was determined separately. The categories of race and ethnicity used in this report are Black, non-Hispanic, meaning the child was identified as Black but not Hispanic; White, non-Hispanic, meaning the child was identified as White but not Hispanic; Hispanic, meaning the child was identified as Hispanic and of any race; and Other, meaning the child was not identified as Hispanic and not identified as Black or White.

Number of children in the household

The number of children in the household was derived by adding the sampled child (one) to the total number of other children in the household. This report collapsed the number of children into three categories: One child, meaning the sampled child was the only child in the household; two children, meaning the household contained the sampled child and another child; and three or more children, meaning the household contained the sampled child plus two or more other children.

Number of parents in the household

Parents include birth, adoptive, step or foster parents in the household. If two such parents were in the household, the number of parents living in the household was two. If one such parent was in the household, the number of parents living in the household was one. If no such parents were in the household, the number of parents was none and any adult responsible for the sampled child was referred to as a nonparent guardian.

Parents' participation in the labor force

Parents include birth, adoptive, step or foster parents in the household or nonparent guardians in the household. Parents were considered to be in the labor force if they were working full-time (35 hours or more per week) or part-time (less than 35 hours per week) or if they were actively looking for work during the time of the interview. If parents did not meet these criteria, they were classified as not in the labor force.

Household income

Household income is reported as a range. These ranges were collapsed into the following four categories for this report.

$25,000 or less
$25,001 to 50,000
$50,001 to 75,000
$75,001 or more

Parents' highest educational attainment

Parents' highest educational attainment is a composite variable that indicates the highest level of education for the students' parents (birth, adoptive, or step) or nonparent guardians who reside in the household. The variable used in this report has four attainment categories: High school diploma or less, which includes high school equivalency degrees; Voc/tech degree or some

college which includes associates degrees; Bachelor's degree; and Graduate/professional school which includes some graduate coursework in addition to degree completion.

Urbanicity

This variable categorizes the household ZIP Code as urban or rural. The definitions for these categories are taken from the 1990 and 2000 Census of Population. An urban place comprises densely settled territory that has a minimum population of 50,000 people. The specific density and distance requirements are defined in the Federal Register, Vol. 67, No. 84. Areas not classified as urban are classified as rural. Since a ZIP Code can cut across geographic areas, the urbanicity variable is classified into the category that has the largest number of persons. For example, if a ZIP Code has 5,000 persons in the category "urban", and 1,200 persons in the category "rural", it is classified as "urban."

Region

This variable identifies the Census region in which the subject child lives. The variable was created by linking states and telephone area codes of sampled numbers and then grouping the states into regions. The following states and the District of Columbia are in each Census region:

Northeast: Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont
South: Alabama, Arkansas, District of Columbia, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia
Midwest: Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota, Wisconsin
West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, Wyoming

U.S. Department of Education
ED Pubs
8242-B Sandy Court
Jessup, MD 20794-1398