



## National Center for Education Statistics

The National Center for Education Statistics (NCES) fulfills a congressional mandate to collect and report “statistics and information showing the condition and progress of education in the United States and other nations in order to promote and accelerate the improvement of American education.”

### *EDUCATION STATISTICS QUARTERLY*

#### **Purpose and goals**

At NCES, we are convinced that good data lead to good decisions about education. The *Education Statistics Quarterly* is part of an overall effort to make reliable data more accessible. Goals include providing a quick way to

- identify information of interest;
- review key facts, figures, and summary information; and
- obtain references to detailed data and analyses.

#### **Content**

The *Quarterly* gives a comprehensive overview of work done across all parts of NCES. Each issue includes short publications, summaries, and descriptions that cover all NCES publications and data products released during a 3-month period. To further stimulate ideas and discussion, each issue also incorporates

- a message from NCES on an important and timely subject in education statistics; and
- a featured topic of enduring importance with invited commentary.

A complete annual index of NCES publications appears in the fourth issue of each volume. Publications in the *Quarterly* have been technically reviewed for content and statistical accuracy.

#### **General note about the data and interpretations**

Many NCES publications present data that are based on representative samples and thus are subject to sampling variability. In these cases, tests for statistical significance take both the study design and the number of comparisons into account. NCES publications only discuss differences that are significant at the 95 percent confidence level or higher. Because of variations in study design, differences of roughly the same magnitude can be statistically significant in some cases but not in others. In addition, results from surveys are subject to

nonsampling errors. In the design, conduct, and data processing of NCES surveys, efforts are made to minimize the effects of nonsampling errors, such as item nonresponse, measurement error, data processing error, and other systematic error.

For complete technical details about data and methodology, including sample sizes, response rates, and other indicators of survey quality, we encourage readers to examine the detailed reports referenced in each article.

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## NOTE FROM NCES

*Val Plisko, Associate Commissioner,  
Early Childhood, International, and Crosscutting Studies Division*

### **Tracking Students From the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99**

The National Center for Education Statistics sponsors its program on early childhood longitudinal studies in collaboration with other federal agencies to track children's cognitive development and growth from their earliest years of childhood through their subsequent schooling. As one who has followed the achievement gaps and differential progress of various groups of students from elementary through secondary school, I am struck by the fact that such differences are present consistently by fourth grade. This constant is evident in the National Assessment of Educational Progress fourth-grade scores and in U.S. fourth-grade scores in international mathematics, science, and reading assessments. The Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), now offers ample proof that such differences are obvious much earlier, indeed as early as kindergarten entry. Subsequent tracking of this cohort of kindergartners through first and third grades continues to show that while all children make considerable progress in the early grades, children who begin with an advantage maintain that advantage and may even widen the gap as they acquire more advanced skills faster than children who have one or more risk factors in their lives. It is also the case that children who start kindergarten with family risk factors tend to make fewer subject area gains than children without risk factors.

Clearly, the findings show a tremendous range in performance across third-graders. While almost all children by the end of third grade could recognize words and solve simple addition and subtraction problems, fewer than half (46 percent) were able to use background knowledge combined with sentence cues to understand the use of homonyms and only 42 percent demonstrated an understanding of place value in integers to the hundreds place. Twenty-nine percent were able to make interpretations beyond what was stated in text (e.g., make connections between problems in a narrative and similar life problems), and 16 percent could use rate and measurement to solve word problems.

ECLS-K is one of the first nationally representative studies to portray a full picture of early childhood development and educational experiences. Moreover, by collecting information from parents, teachers, and school officials, it also can sketch out the features in children's families, schools, and wider communities that may relate to children's educational progress and success. In this way, it can suggest not only conditions that put students at risk of school failure, but also opportunities that enable students to be successful.



The main study (kindergarten cohort) began in the fall of 1998 with a nationally representative sample of approximately 23,000 kindergartners from over 1,000 kindergarten programs. These children have been followed longitudinally through fifth grade, and plans are under way to continue to track their academic progress into eighth grade and beyond. The data from the 2005 collection will be eagerly anticipated in the coming years as the students move into middle school and adolescence.

The summary included in this edition of the *Quarterly* highlights children's gains in reading and mathematics over their first 4 years of school, from the start of kindergarten to the point when most of the children are finishing third grade. It also describes children's achievement status in reading, mathematics, and science at the end of third grade. It shows as well information on children's perceptions of their competence and interests in school subjects, their relationships with peers, and any problem behaviors they might exhibit. Comparisons are made in relation to children's sex, race/ethnicity, number of family risk factors, kindergarten program type, and the types of schools (i.e., public or private) they attended in the first 4 years of school. It is the fourth in a series of reports from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99.



# FEATURED TOPIC: EARLY CHILDHOOD LONGITUDINAL STUDY

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## Early School Experiences

### From Kindergarten Through Third Grade: Children's Beginning School Experiences

—Amy Rathbun and Jerry West

**This article was originally published as the Executive Summary of the Statistical Analysis Report of the same name. The sample survey data are from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K).**

Children begin kindergarten with many different levels of reading and mathematics skills and make significant gains in their reading and mathematics achievement over the first 2 years of school (West, Denton, and Germino Hausken 2000; West, Denton, and Reaney 2001; Denton and West 2002). The knowledge and skills children acquire in kindergarten and first grade can serve as a foundation for their later educational success. It is important to explore children's growth and development as they move from the beginning of kindergarten through the elementary school years.

This is the fourth report in a series that provides descriptive information about young children's school experiences, based on data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K). Sponsored by the National Center for Education Statistics (NCES), part of the U.S. Department of Education's Institute of Education Sciences,<sup>1</sup> ECLS-K selected a nationally representative

<sup>1</sup> Several other federal agencies provide support for this study, including the Economic Research Service of the U.S. Department of Agriculture, the Head Start Bureau of the Administration on Children, Youth, and Families of the U.S. Department of Health and Human Services, the National Institute for Child Health and Human Development, and the Office of Special Education Programs, the Office of English Language Acquisition, and the Policy and Programs Studies Service within the U.S. Department of Education.

sample of kindergartners in the fall of 1998 and is following these children through the spring of fifth grade. The study collects information directly from the children and their families, teachers, and schools. The full ECLS-K base-year sample is composed of 22,782 children who attended 1,277 schools with kindergarten programs during the 1998–99 school year.

The first ECLS-K report, *America's Kindergartners* (West, Denton, and Germino Hausken 2000), provided a national picture of the knowledge and skills of entering kindergartners. In the second report, *The Kindergarten Year* (West, Denton, and Reaney 2001), children's gains and status in reading and mathematics were explored during their first year of school. The third report in this series, *Children's Reading and Mathematics Achievement in Kindergarten and First Grade* (Denton and West 2002), described children's reading and mathematics achievement in the spring of kindergarten and the spring of first grade.

This fourth report highlights children's gains in reading and mathematics over their first 4 years of school, from the start of kindergarten to the point when most of the children are finishing third grade.<sup>2</sup> The report also describes children's achievement in reading and mathematics at the end of third grade, both in terms of their overall achievement in the two subject areas and in terms of their specific reading and mathematics knowledge and skills. It examines whether differences in reading and mathematics achievement that were identified for certain groups of children in kindergarten and first grade persist 2 or 3 years later. Specifically, comparisons are made by children's sex, race/ethnicity, and number of family risk factors.<sup>3</sup> Achievement is also compared for children with different early school experiences (i.e., attended full-day vs. half-day kindergarten programs, attended public vs. private vs. both school types from kindergarten through third grade).

Information on two new ECLS-K direct child assessments conducted in the spring of 2002 is included. In the third-

grade year, children were administered a science assessment for the first time in place of the general knowledge assessment, which was used in the kindergarten and first-grade years. In addition, third-graders completed a self-description questionnaire (SDQ) on their perceptions of their competence and interests in reading, mathematics, and school in general. They also rated their popularity with peers and competence in peer relationships, and reported on any internalizing and externalizing problem behaviors that they might exhibit. The SDQ provides the first direct information from the ECLS-K children about how they feel about their school experiences.

The purposes of this report are to describe the academic gains children have made from kindergarten through third grade, their achievement status at the end of third grade, and their perceptions about their school experiences. Two types of analyses were used to achieve these purposes. In addition to comparing the overall mean estimates and scores for different groups of children (i.e., bivariate analyses), more complex multivariate analyses (i.e., ordinary least squares regression) were conducted to describe the relationships of different child, family, and early school experience characteristics (e.g., race/ethnicity, number of risk factors, kindergarten program type) with children's achievement and perceptions, while controlling for the other characteristics. One of the limitations of mean comparisons is that they describe children's achievement gains and status for different groups of children without taking into account other factors that may also be related to achievement differences. For instance, family risk factors are related to children's achievement (West, Denton, and Reaney 2001), though the average number of these factors varies by children's race/ethnicity (Zill and West 2001). Bivariate results are included in the report to describe overall, unadjusted mean values for subgroups in the population. Findings from the regression analyses follow the bivariate results within each section of the report and further explain whether bivariate differences hold when other risk factors are taken into account.

This is a descriptive report. Readers should not draw causal inferences from the regression results in this report, since apparent relationships can change based on the particular independent variables examined. The small set of independent variables used in this report's regression analyses were included with the specific purpose of clarifying the descriptive results observed in the multiple bivariate comparisons.

<sup>2</sup> This report refers to data collected in the spring of 2002 as third-grade data and the sampled children as third-graders, although not all children in the analytic sample used for this report were enrolled in third grade. In the spring of 2002, about 89 percent of children in the analytic sample were in third grade, 10 percent were in second grade, and about 1 percent were enrolled in other grades (e.g., first or fourth grade). Analyses are limited to those children who were assessed in English in all rounds. Approximately 68 percent of Hispanic children and 78 percent of Asian/Pacific Islander children were assessed in English in the fall and spring of kindergarten and in the spring of first grade (Denton and West 2002).

<sup>3</sup> Family risk factors included living below the federal poverty level, primary home language was non-English, mother's highest education was less than a high school diploma/GED, and living in a single-parent household. Values range from 0 to 4, depending on the number of risk factors present.



## Research Questions

The report uses data from ECLS-K to address the following questions:

- What knowledge and skills do children demonstrate in the spring of third grade? How have these changed since they first started school? Do children's knowledge and skills and the gains they have made over time differ by certain child, family, and school characteristics?
- How do third-graders perceive themselves and their relations with other children? Is their academic achievement at the end of third grade related to their perceptions?

The findings in this report are based on children in the ECLS-K sample who entered kindergarten for the first time in 1998 and were administered the direct cognitive assessments in English in fall 1998, spring 1999, spring 2000, and spring 2002.

## Changes Over Time for the ECLS-K Children

Over the first 4 years of school, young children may encounter different early learning experiences. From the start of kindergarten to the end of third grade, many children had changed schools at least one time.<sup>4</sup> For instance, in the spring of 2002, about half of the children remained in the same school they had attended in kindergarten, 39 percent had made one school change, and 10 percent had changed schools two or more times since the start of kindergarten. Some children also changed the type of school they attended. Eighty-one percent of the children had attended public schools for the duration of the study, and 9 percent always attended private schools. Ten percent changed the type of school they attended at least once between kindergarten and the end of third grade. Also, in the spring of 2002, about 89 percent of first-time kindergartners were in third grade, 10 percent were in second grade, and about 1 percent were enrolled in other grades (e.g., first or fourth grade).

## Overall Gains in Reading and Mathematics Knowledge and Skills From Kindergarten to Third Grade

The ECLS-K reading and mathematics assessments were designed to reflect children's knowledge and skills in both subjects over the duration of the study. The reading assessment captured information on children's basic literacy

<sup>4</sup> It is possible that a few students may have switched from one school to another in second grade, then switched back again to the original school at the start of third grade. Since data were not collected in second grade, it is not possible to identify when such instances occurred.

skills, vocabulary, and comprehension. The mathematics assessment measured children's conceptual understanding of numbers, shapes, patterns, mathematical operations, and processes for problem solving. From the start of kindergarten to the end of third grade, children's reading scale scores, a measure of their overall reading achievement, increased an average of 81 points, and their mathematics scale scores increased about 63 points. Children's spring third-grade reading scale scores were about 8.4 standard deviations higher than their fall kindergarten scores, and their spring third-grade mathematics scale scores were about 7.3 standard deviations higher than their fall kindergarten scores. Thus, one standard deviation in the reading score amounts to a 9.6-point difference in the reading scale score, and one standard deviation in the mathematics score amounts to an 8.6-point difference in the mathematics scale score. It is important to note that the data points represented in the figures and tables in this report cover different time spans (i.e., the kindergarten school year, the full calendar year between spring of kindergarten and spring of first grade, and 2 full calendar years between spring of first grade and spring of third grade). Thus, increases in achievement over time must be interpreted relative to the amount of time between assessments.

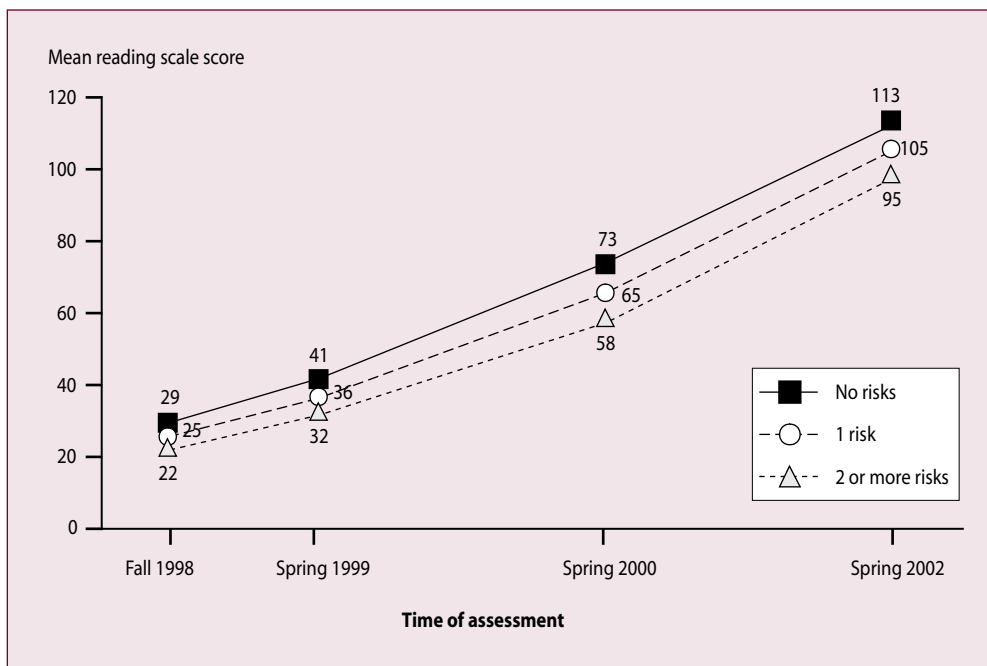
Between the start of kindergarten and the end of third grade, the reading and mathematics achievement gaps across certain groups of children widened. Black children had made smaller gains in reading and mathematics by the end of third grade than White, Hispanic, and Asian/Pacific Islander children.<sup>5</sup> As the number of children's family risk factors (e.g., living in a single-parent household, living below the federal poverty level) increased, children tended to gain less in both subject areas than children with fewer family risk factors (figures A and B). Children's gains in their first 4 years of school did not differ substantively, however, by their sex, the type of kindergarten program they attended (i.e., half-day or full-day), or the type of school they attended (i.e., public school all 4 years, private school all 4 years, both public and private school attendance).

## Overall Reading, Mathematics, and Science Knowledge and Skills in Third Grade

Consistent with the patterns of differences found in children's achievement gains, children's reading, mathematics, and science status in third grade varied by their race/ethnicity and their number of family risk factors. After controlling for the other child, family, and school characteristics,

<sup>5</sup> White refers to White, non-Hispanic and Black refers to Black, non-Hispanic for the remainder of this article.

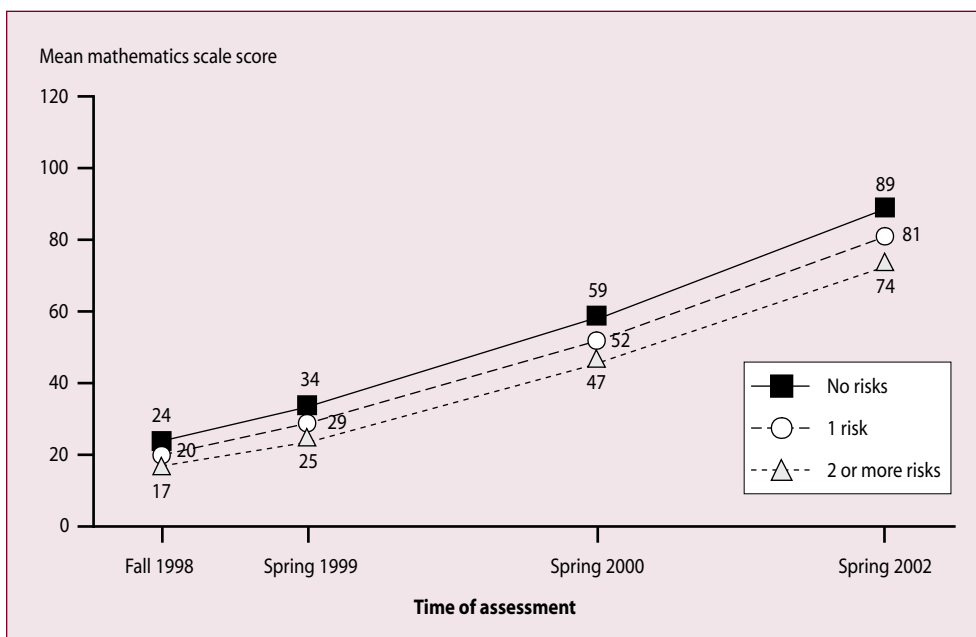
**Figure A. Mean reading scale scores for fall 1998 first-time kindergartners, by time of assessment and number of family risk factors: Fall 1998, spring 1999, spring 2000, and spring 2002**



NOTE: Family risk factors included living below the federal poverty level, primary home language was non-English, mother's highest education was less than a high school diploma/GED, and living in a single-parent household. Values range from 0 to 4. Estimates reflect the sample of children assessed in English in all assessment years. The ECLS-K assessment was not administered in 2001, when most of the children were in second grade.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), Longitudinal Kindergarten-First Grade Public-Use Data File and Third Grade Restricted-Use Data File, fall 1998, spring 1999, spring 2000, and spring 2002.

**Figure B. Mean mathematics scale scores for fall 1998 first-time kindergartners, by time of assessment and number of family risk factors: Fall 1998, spring 1999, spring 2000, and spring 2002**



NOTE: Family risk factors included living below the federal poverty level, primary home language was non-English, mother's highest education was less than a high school diploma/GED, and living in a single-parent household. Values range from 0 to 4. Estimates reflect the sample of children assessed in English in all assessment years. The ECLS-K assessment was not administered in 2001, when most of the children were in second grade.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), Longitudinal Kindergarten-First Grade Public-Use Data File and Third Grade Restricted-Use Data File, fall 1998, spring 1999, spring 2000, and spring 2002.

Black third-graders had lower achievement scores than White, Hispanic, and Asian/Pacific Islander children in all three subjects, and Hispanic third-graders had lower overall achievement scores in science compared with White children (figure C). Those with more family risk factors had lower mean achievement scores in all subjects than those with fewer family risk factors. In addition, third-graders who had always attended private schools from kindergarten through third grade had higher reading achievement scores than those who had always attended public schools. Children's third-grade achievement did not differ substantially by their sex.

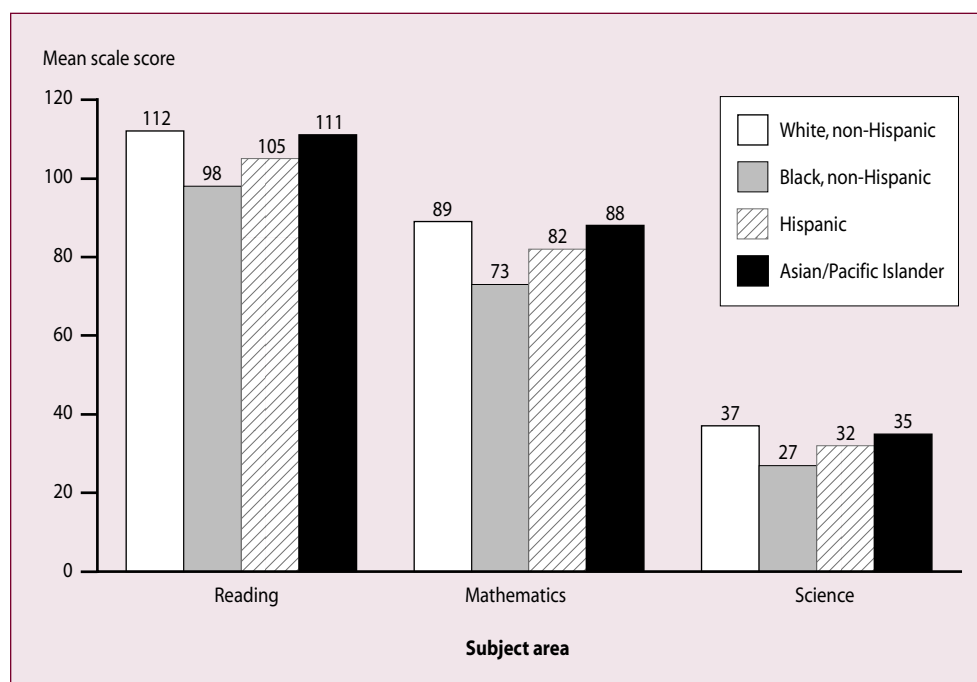
### Specific Reading and Mathematics Knowledge and Skills in Third Grade

In addition to assessing children's overall reading and mathematics achievement, ECLS-K provides more specific information on the knowledge and skills that children have acquired in both subjects by the end of third grade. By the end of third grade, almost all children could identify the ending sounds of words, name sight words, and recognize

words in context. They could also demonstrate mathematics concepts of ordinality (e.g., identify ordinal positions of objects) and solve simple addition and subtraction problems. Seventy-eight percent could make literal inferences based on text (e.g., recognize the comparison being made in a simile) and solve simple multiplication and division problems. Forty-six percent were able to use cues to derive meaning from text (e.g., use background knowledge combined with sentence cues to understand the use of homonyms), and 42 percent demonstrated an understanding of place value in integers to the hundreds place. Twenty-nine percent were able to make interpretations beyond what was stated in text (e.g., make connections between problems in a narrative and similar life problems), and 16 percent could use rate and measurement to solve word problems.

Many of the patterns of differences in children's overall achievement gains and third-grade status were also present when children's proficiency in specific reading and mathematics knowledge and skills was examined. After controlling for the other child, family, and early school experience

**Figure C. Mean scale scores for fall 1998 first-time kindergartners in spring of third grade, by subject area and race/ethnicity: Spring 2002**



NOTE: Estimates reflect the sample of children assessed in English in all assessment years. Although most of the children in the sample were in third grade in the spring of 2002, 10 percent were in second grade and about 1 percent were enrolled in other grades.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), Third Grade Restricted-Use Data File, spring 2002.

characteristics, Black third-graders were less likely to be proficient in more advanced reading levels (i.e., making literal inferences, deriving meaning from text, and making interpretations beyond text) and mathematics levels (i.e., multiplication and division, place value, and rate and measurement) than White, Asian/Pacific Islander, and Hispanic children. Children with more family risk factors were also less likely to be proficient in these skills than their peers with fewer family risk factors. Hispanic third-graders were less likely to be proficient in deriving meaning from text and making interpretations beyond text than White third-graders, and were less likely than White and Asian/Pacific Islander children to demonstrate mastery of place value and rate and measurement skills. In addition, children who attended public school from kindergarten through third grade were less likely to demonstrate some of the more advanced reading and mathematics skills and knowledge than those who had attended private schools for some or all of their first 4 years of school (figures D and E). Finally, although overall reading and mathematics achievement status did not differ substantively by children’s sex, girls were more likely to demonstrate proficiency in most of the advanced reading skills than boys, and were less likely to exhibit proficiency in most of the advanced mathematics skills than boys.

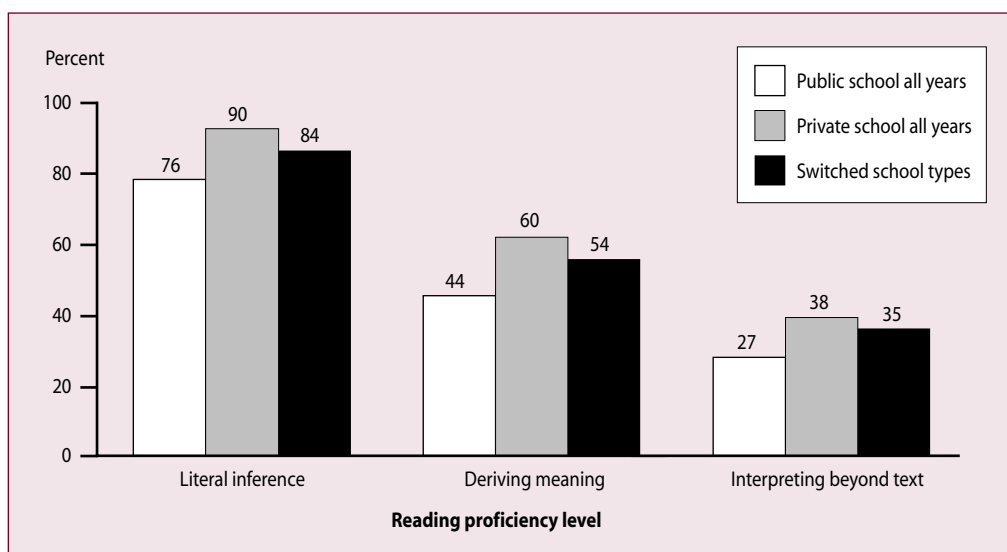
### Children’s Perceptions About Themselves and Their School Experiences

At the end of third grade, children were asked about their perceptions of their competence and interest in reading, mathematics, and school in general, and about their peer relationships and problem behaviors that they may exhibit.<sup>6</sup> On average, children indicated that they were generally interested in and enjoyed school, and that they did not perceive their schoolwork to be too difficult. Girls tended to have greater interest and perceived competence in reading than boys, a finding that persisted after controlling for children’s race/ethnicity, number of family risk factors, and their early school experiences.

On average, children also responded positively regarding their peer relationships, with most indicating that they generally made friends easily and got along well with their peers. Black third-graders were more likely to feel this way than Asian/Pacific Islander children, after controlling for other child, family, and school experience factors. Children tended to indicate that they only occasionally exhibited

<sup>6</sup> Details on the measure used to assess children’s perceptions are provided in appendix B of the complete report.

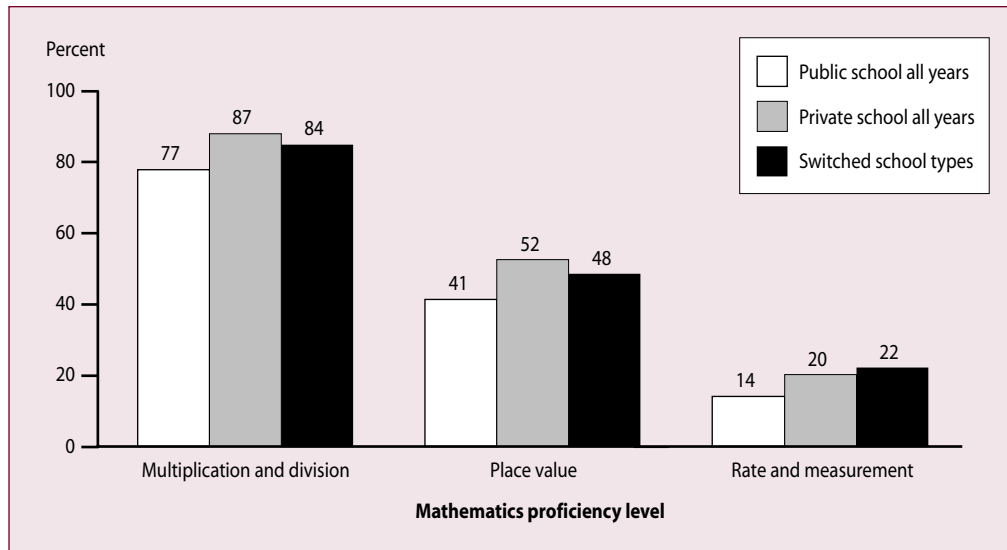
**Figure D. Percentage of fall 1998 first-time kindergartners demonstrating specific reading knowledge and skills in spring of third grade, by school type: Spring 2002**



NOTE: Estimates reflect the sample of children assessed in English in all assessment years. Although most of the children in the sample were in third grade in the spring of 2002, 10 percent were in second grade and about 1 percent were enrolled in other grades.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), Longitudinal Kindergarten-First Grade Public-Use Data File and Third Grade Restricted-Use Data File, fall 1998, spring 1999, spring 2000, and spring 2002.

**Figure E. Percentage of fall 1998 first-time kindergartners demonstrating specific mathematics knowledge and skills in spring of third grade, by school type: Spring 2002**



NOTE: Estimates reflect the sample of children assessed in English in all assessment years. Although most of the children in the sample were in third grade in the spring of 2002, 10 percent were in second grade and about 1 percent were enrolled in other grades.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), Longitudinal Kindergarten-First Grade Public-Use Data File and Third Grade Restricted-Use Data File, fall 1998, spring 1999, spring 2000, and spring 2002.

externalizing (e.g., fighting and arguing) or internalizing (e.g., anxiety, sadness, loneliness) problem behaviors. Boys indicated a higher likelihood of exhibiting externalizing behaviors than girls. Black third-graders reported more of both types of problem behaviors than White, Hispanic, and Asian/Pacific Islander third-graders. In addition, as the number of family risk factors increased for third-graders, they were more likely to report internalizing and externalizing problem behaviors (figure F).

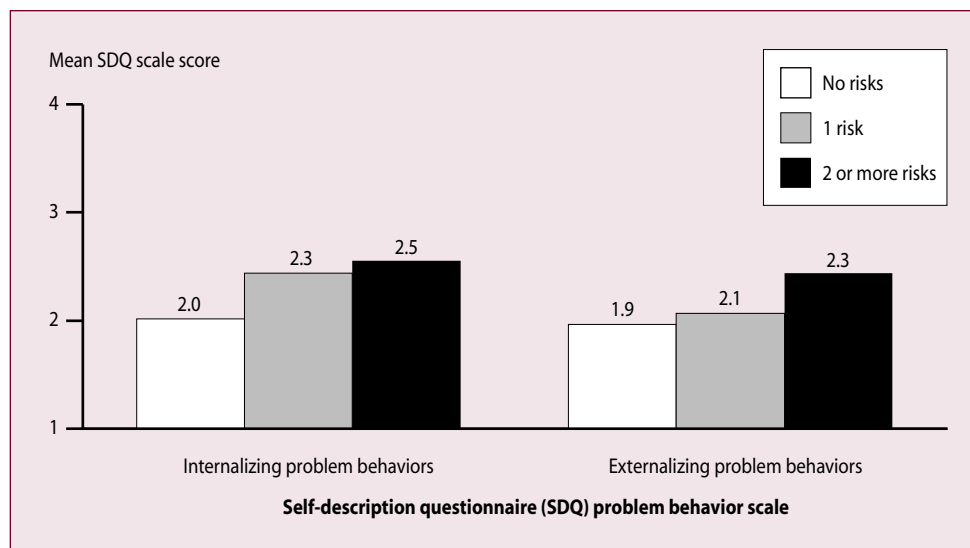
Third-graders' perceptions about their interest and competence in reading and mathematics were also associated with their achievement at the end of the school year. Those scoring in the highest third on the reading assessment in the spring of 2002 expressed greater interest and competency in reading than children scoring in the lower two-thirds. The same pattern of relationships between perceptions and achievement occurred in mathematics. The relationship between children's perceptions and achievement was subject-specific, in that there was no relationship between achievement in one subject area and perceived interest and competence in a different subject area.

## Conclusion

In summary, the findings from this report are consistent with patterns identified in earlier ECLS-K reports on children's achievement in kindergarten and first grade (Denton and West 2002; West, Denton, and Reaney 2001; West, Denton, and Germino Hausken 2000). The knowledge and skills children demonstrated at the end of third grade continued to differ in relation to their race/ethnicity and number of family risk factors. In addition, this report found that the achievement gaps between disadvantaged and more advantaged children identified at the beginning of school (West, Denton, and Germino Hausken 2000) grew wider over the first 4 years of school attendance.

In the first months of school, private school kindergartners demonstrated higher achievement status in reading and mathematics than public school kindergartners (West, Denton, and Germino Hausken 2000). These unadjusted mean differences were also found in third grade between children who attended public schools for all 4 years and those who attended private schools for part or all of the time, and were also found in terms of children's science achievement. However, when other factors (e.g., race/ethnicity and

**Figure F. Mean scale scores for fall 1998 first-time kindergartners' perceptions of problem behaviors they exhibit in spring of third grade, by number of family risk factors: Spring 2002**



NOTE: Family risk factors included living below the federal poverty level, primary home language was non-English, mother's highest education was less than a high school diploma/GED, and living in a single-parent household. Values range from 0 to 4. Scale scores on children's perceptions come from a self-description questionnaire (SDQ). Scores on the SDQ scales ranged from 1 ("not at all true") to 4 ("very true"). Estimates reflect the sample of children assessed in English in all assessment years. Although most of the children in the sample were in third grade in the spring of 2002, 10 percent were in second grade and about 1 percent were enrolled in other grades.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), Longitudinal Kindergarten-First Grade Public-Use Data File and Third Grade Restricted-Use Data File, fall 1998, spring 1999, and spring 2002.

number of risk factors) were taken into account, some of the substantive school-type achievement differences did not persist. Also, the achievement gap between public and private school children did not widen substantively over the first 4 years of school, even between those children who always attended the same types of school from kindergarten through third grade.

In earlier ECLS-K reports, findings also indicated that public school children who attended full-day (vs. half-day) kindergarten programs had higher overall achievement at the end of kindergarten in reading and mathematics, after controlling for other characteristics, and were more likely to demonstrate advanced reading skills at the end of the kindergarten year (Walston and West 2004; Denton, West, and Walston 2003). When overall kindergarten achievement was compared for full-day and half-day children from both public and private schools, however, differences in reading and mathematics achievement were not detected (West, Denton, and Reaney 2001). Findings from this report also indicate no substantive differences in reading, science, and mathematics achievement at the end of third grade related to the type of kindergarten program children had attended.

New information collected directly from children at the end of third grade indicates that, on average, they generally enjoyed reading, mathematics, and school in general, and felt competent in their schoolwork in these areas. Children's academic performance in reading and mathematics was positively related to their perceptions of their competence in the corresponding subject area. Third-graders perceived that it was easy for them to make and maintain friendships, and that they only occasionally exhibited internalizing and externalizing problem behaviors in school. However, disadvantaged children were more likely than more advantaged children to indicate that they exhibited problem behaviors.

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**Data source:** The NCES Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), fall 1998, spring 1999, spring 2000, and spring 2002.

**For technical information,** see the complete report:

Rathbun, A., and West, J. (2004). *From Kindergarten Through Third Grade: Children's Beginning School Experiences* (NCES 2004–007).

**Author affiliations:** A. Rathbun, Education Statistics Services Institute; J. West, NCES.

**For questions about content,** contact Jerry West ([jerry.west@ed.gov](mailto:jerry.west@ed.gov)).

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# Early School Development

## Invited Commentary: Examining Patterns of Development in Early Elementary School Using ECLS-K Data

—Sean F. Reardon, Associate Professor of Education, Stanford University

Longitudinal studies grow increasingly useful over time as data accumulate and patterns of individual development are illuminated. This is illustrated by the most recent National Center for Education Statistics (NCES) report on the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), *From Kindergarten Through Third Grade: Children’s Beginning School Experiences*, which reports findings from the fifth wave of data collected, in spring 2002—when most students were in the third grade—on the schooling experiences and achievement patterns of a cohort of 1998–99 kindergarten students.

ECLS-K began in the fall of 1998 with a nationally representative sample of approximately 23,000 U.S. kindergarten students. These students were assessed in fall 1998, spring 1999, fall 1999, and spring 2000, in math, reading, and general knowledge; and in spring 2002, in math, reading, and science. Their parents, teachers, and principals were also surveyed. Most recently, the ECLS-K assessment was conducted in spring 2004, when most students were in the fifth grade. This current report summarizes patterns of children’s achievement in math, reading, and science—and patterns of children’s interest in school, sense of academic competence, and problem behaviors—in third grade.

ECLS-K is one of a long line of longitudinal studies conducted by NCES to examine the associations among schooling policies and practices, family background and environment, individual characteristics, and educational and social outcomes (including educational achievement, educational attainment, and labor force outcomes). Most of these studies, however, have followed adolescent and young adult cohorts, beginning in middle school, high school, or college, and so have provided no evidence on educational patterns and processes in the early childhood and elementary school years.<sup>1</sup> ECLS-K is the first nationally representative longitudinal study focused on schooling processes and outcomes to begin with a cohort as young as kindergarten age. As such, it provides a rich source of data unmatched in any other extant dataset.

If the early childhood years—particularly those that correspond with the early elementary grades—are crucial in

shaping young children’s academic identities and skills, then it is essential that educators, policymakers, and researchers have access to reliable evidence about the educational and social factors that promote early reading and math skills, positive academic self-concepts, and strong social skills in the elementary school years. Moreover, the ability of ECLS-K to link students’ achievement trajectories to a rich set of variables describing their educational contexts and experiences provides potentially valuable evidence for educators and policymakers regarding how best to structure schooling.

### Key Findings of the ECLS-K Report

Probably the single most useful aspect of ECLS-K is that it provides detailed, high-quality longitudinal achievement data for a nationally representative sample of elementary school students. These data enable researchers to examine, in detail, students’ trajectories of cognitive development in math and reading. At present, available ECLS-K data span the first 4 years of schooling (K–3), although fifth-grade data have already been collected and are scheduled for release within the next year. Plans are being made to follow the sample through middle and high school, holding out the possibility that ECLS-K will be the first nationally representative dataset to contain longitudinal data from kindergarten through 12th grade.

The availability of longitudinal achievement data for kindergarten through third grade yields powerful descriptive evidence about the development of cognitive skills during early elementary school. Variations in the rates at which children acquire different literacy and math skills allow us to observe both the development and/or narrowing of achievement gaps among demographic subgroups and the association of achievement trajectories with education policies and practices.

### Racial/ethnic achievement gaps

One of the key findings of the ECLS-K report is that racial/ethnic gaps in math and reading skills—which prior reports have shown to be large at the start of kindergarten (Fryer and Levitt 2004; West, Denton, and Reaney 2001)—remain large through third grade. In particular, Black students, who start kindergarten with average math and reading scores well below those of White, non-Hispanic students, make smaller gains in math and reading between kindergarten and third grade than do White, Hispanic, and Asian/Pacific Islander students.

<sup>1</sup>For example, the High School and Beyond Longitudinal Study (HS&B) followed cohorts of 10th- and 12th-graders for 12 and 6 years, respectively, beginning in 1980; the National Education Longitudinal Study of 1988 (NELS:88) followed a cohort of 8th-graders for 12 years beginning in 1988; and the Baccalaureate and Beyond Longitudinal Study (B&B) has followed the educational and work experiences of bachelor’s degree completers beginning with a cohort of 1992–93 completers.



Some, but not all, of the Black-White gap in third grade can be attributed to racial differences in family socioeconomic status. Prior research using ECLS-K data has shown that the Black-White gap in math and reading at the start of kindergarten can be attributed entirely to racial differences in family socioeconomic status (Fryer and Levitt 2004; Reardon 2003); this is no longer true, however, by third grade (Fryer and Levitt 2005). Black children have, on average, lower math and reading scores in third grade than do White children from similar socioeconomic backgrounds. This finding—that the Black-White achievement gap between socioeconomically similar children is null at kindergarten entry but sizable<sup>2</sup> by third grade—suggests that schooling plays some role in producing the achievement gap.

The Black-White achievement gap has received considerable attention in the last decade (e.g., Jencks and Phillips 1998), but comparably less research has been done to understand the achievement trajectories of minority groups other than Blacks. One of the strengths of ECLS-K is its relatively large samples of Hispanic and Asian students. The ECLS-K report shows that Hispanic students' average math, reading, and science scores fall roughly midway between those of White and Black students, while Asian students, on average, have achievement levels similar to those of White students. There is, however, considerable heterogeneity in both Hispanic and Asian students' achievement trajectories, some of which is related to differences in, for example, English proficiency, country of origin, and immigrant generation (Galindo and Reardon 2004). Given the growth of the immigrant population in the United States, a better understanding of the factors that contribute to educational success for Hispanic, Asian, and other immigrant groups is essential. No nationally representative longitudinal dataset other than ECLS-K includes such large samples of immigrant students.

### School mobility

Another important topic addressed in the report is school mobility. The report indicates that 49 percent of 1998–99 first-time kindergarteners had changed schools at least once by the spring of third grade; 10 percent had changed schools two or more times in the first 4 years of schooling. Students change schools in the elementary grades for a variety of reasons, including family residential moves, school district policies (some districts have separate kindergarten and elementary grade schools, so all students must change schools at the start of kindergarten), and moves between the public and private schooling sectors. Moreover, some stu-

dents change schools between grades, while others change schools during the school year. Midyear school transitions associated with residential moves—particularly residential moves due to family income instability—are likely to have the most detrimental effect on children's achievement trajectories. While the report does not examine these issues, the substantial school mobility it documents suggests the need for a better understanding of the associations among residential mobility, school mobility, and education outcomes.

### Achievement differences between public and private schools

The report also addresses the association between patterns of achievement and public/private school enrollment. It calls attention to the finding that students enrolled in private schools from kindergarten through third grade have, on average, higher levels of literacy and math skills than students enrolled in public schools. This finding is accurate, but should not be taken to imply that private schools have a causal effect on learning, since, as the report notes in its conclusion, private school students also have higher average achievement scores when they enter kindergarten and show gains equal to those of public school students during the period from kindergarten through third grade (West, Denton, and Reaney 2001). Thus, it is likely that most, if not all, of the public/private school differences in third-grade achievement are attributable to differences in skill levels between the populations of students entering schools in each sector, rather than to differences in the average quality of public and private schools.

### Student perceptions about school

Finally, the report describes patterns of student responses to the ECLS-K self-description questionnaire (SDQ). The SDQ was administered to ECLS-K students for the first time in third grade, and measured students' perceptions about their academic competence, peer relations, and problem behaviors. Perhaps the most notable finding in this section of the report is that there are very few significant differences in students' perceptions of their competence by race or family background; in general, most students report generally positive interest and competence in school. This suggests that any racial differences in motivation and academic self-concept that are observed in high school must arise after the early elementary grades. Subsequent waves of data from ECLS-K may shed light on the evolution of academic self-concept and attitudes toward schooling through the later elementary grades and middle school.

<sup>2</sup>Fryer and Levitt (2005) estimate the Black-White gap at third grade in math and reading, net of socioeconomic characteristics, to be approximately .40 standard deviations.

Although there are few substantial group differences in self-reported academic interest or competence in third grade, the SDQ does reveal significant differences in peer relationships and problem behaviors by race. Black students reported substantially higher levels of both internalizing and externalizing problem behaviors than did White students. More investigation of these patterns is certainly warranted, as they may have deleterious effects on students' subsequent achievement.

### Concluding Remarks

In order to provide policymakers, educators, and the public with the most useful education policy analyses, education researchers should provide both (1) careful descriptive analyses of educational environments, experiences, and outcomes (think of this as “educational epidemiology,” a tool that enables researchers and policymakers to focus attention where the least is known and the most intervention is needed); and (2) research and evaluation methods that enable us to make strong causal inferences about the impacts of education practices and policies.

One of the strengths of longitudinal observational education studies such as ECLS-K is that they provide a detailed descriptive picture of the achievement trajectories and educational experiences of a nationally representative sample of a specific cohort of students. As education is a developmental enterprise, detailed longitudinal descriptive analyses of achievement trajectories and the development of academic and social behaviors are an essential part of any useful “educational epidemiology.”

The corresponding drawback of studies such as ECLS-K is that they do not readily enable researchers and policymakers to draw strong causal inferences about the effects of specific education practices and policies. The finding that students enrolled in private schools have higher achievement scores than students enrolled in public schools, for example, likely reflects simply the selection of students from more advantaged backgrounds into private schools rather than a causal effect of private schooling on achievement. That “correlation does not imply causality” must be taken seriously in all analyses of studies such as ECLS-K.

That said, it is possible to learn something about the effects of schooling practices and policies on achievement (or other schooling outcomes) by analyzing the data from longitudinal observational studies such as ECLS-K. Researchers might take advantage of natural experiments evident in the data, or use instrumental variables; matching estimators; regression discontinuity; school-, classroom-, and student-fixed effects; difference-in-difference estimators; or other econometric techniques to identify some plausibly exogenous variations in classroom, school, district, or state education practices and policies. In the absence of randomized experiments (which are often infeasible or unethical in many areas of education research), researchers can—and should—use ECLS-K and other large longitudinal observational datasets to provide whatever strong evidence can be gleaned regarding the effects of education practices and policies. This, in combination with detailed descriptive analyses of the sort provided in *From Kindergarten Through Third Grade*, will help ensure that our education practices develop in line with our best knowledge of effective practices.

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# ELEMENTARY AND SECONDARY EDUCATION

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## Library Use by Children

### The Summer After Kindergarten: Children's Activities and Library Use by Household Socioeconomic Status

—David Meyer, Daniel Princiotta, and Lawrence Lanahan

***This article was originally published as an Issue Brief. The sample survey data are from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K).***

Children enter kindergarten showing wide achievement gaps by family socioeconomic status (SES) (Coley 2002; Lee and Burkam 2002).<sup>1</sup> A number of studies suggest that achievement gaps grow during the summer months when children are away from school (Heyns 1978; Cooper et al. 1996; Alexander, Entwisle, and Olson 2001). This finding may be related to a number of factors, including differences in children's summer activities; children may differ by SES group in the extent to which they have the opportunity to

engage in activities that reinforce school learning or broadened knowledge more generally—activities such as reading, attending library programs, or visiting museums. However, we know relatively little about the extent to which children actually differ by SES group in their engagement in these kinds of activities during the summer months.

This Issue Brief provides a description of children's participation in various activities during the summer after kindergarten. Children's participation in activities is compared across a measure of SES. This Brief also takes a closer look

<sup>1</sup> Socioeconomic status is one's standing relative to others with respect to social and economic factors (such as education, occupation, and income).

at one summer activity in particular—children’s library use. The Issue Brief draws on data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), which provide nationally representative information regarding the approximately 3.9 million children enrolled in kindergarten during the 1998–99 school year. ECLS-K included a parent interview in fall 1999 that asked parents about their children’s participation in activities during the summer of 1999.<sup>2</sup>

The categorical measure of household SES used in this Issue Brief is based on a continuous, composite variable derived from parental education, parental occupation, and household income in spring 1999.<sup>3</sup> Findings are reported separately for children in households with low, middle, and high SES. Low SES signifies the bottom 20 percent of the variable’s distribution, middle SES the middle 60 percent, and high SES the top 20 percent. All findings presented in this Issue Brief are descriptive in nature and based on parent reports.<sup>4</sup>

### Participation in Activities During the Summer

Children in households with low SES were the least likely to participate in each of the nine activities listed in table 1 during the summer after their kindergarten year, while children in households with high SES were the most likely to do so. For example, 20 percent of low SES children went

<sup>2</sup>Analysis in this Issue Brief is based on data from 4,861 cases in the ECLS-K fall first-grade subsample. When these cases are weighted using the C23PW0 weighting variable, estimates are representative of the total population of children enrolled in kindergarten during the 1998–99 school year.

<sup>3</sup>More information on the SES variable is available in chapter 7 (section 7.4.2) of the *ECLS-K Base Year Public-Use Data Files and Electronic Codebook User’s Manual* (NCES 2001–029r), available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2001029r>.

<sup>4</sup>All differences discussed are statistically significant at the .05 level as measured by two-tailed Student’s *t* tests. In addition to the requirement of statistical significance, percentage point differences are only discussed if they are greater than 5 percentage points.

to art, science, or discovery museums over the summer compared to 38 percent of middle SES children and 62 percent of high SES children. Forty-five percent of low SES children went to a zoo, aquarium, or petting farm while 64 percent of middle SES children and 71 percent of high SES children did so. Some 46 percent of low SES children went to a library over the course of the summer compared to 66 percent of middle SES children and 80 percent of high SES children.

ECLS-K asked parents a series of additional questions concerning children’s library participation, including the number of visits children made to libraries over the summer, whether or not the children participated in story time at the library, and whether or not the children had a neighborhood library. Because library visits were so common for all groups of children, and because of this activity’s potential for academic enrichment (Heyns 1978), this Issue Brief explores children’s library usage in greater depth.

### Library Use by SES and Neighborhood Library Availability

Table 2 provides more detailed information on the extent and nature of children’s library use in the summer after kindergarten, in terms of average number of visits and participation in story time. While table 1 shows that low SES children were the least likely to visit a library at all over the summer and high SES children were the most likely to do so, table 2 shows that—of those children that visited a library—low SES library visitors went, on average, less often (4 times) than middle or high SES visitors (7 times each). However, among those children who visited a library over the summer, low SES and middle SES library visitors were more likely to attend story time at a library than high SES library visitors (27 percent and 26 percent compared to 20 percent).

**Table 1. Percentage of children who participated in various activities during the summer after kindergarten, by socioeconomic status (SES): 1999**

Household SES	Library	Bookstore	State or national parks	Art, science, or discovery museums	Zoo, aquarium, or petting farm	Historic sites	Concerts or plays	Vacation	Day or overnight camp
Total	64.8	53.0	55.1	38.9	61.2	39.9	24.4	75.2	20.4
Low SES	46.4	30.7	43.6	19.5	45.0	21.1	13.6	53.7	5.4
Middle SES	66.2	52.8	57.1	38.0	63.7	41.4	23.3	76.9	18.4
High SES	80.2	77.3	61.3	62.4	70.6	54.8	39.3	93.1	42.5

NOTE: All estimates are based on parental reports. Sample sizes may differ by column because cases with missing data were excluded. Household SES is a composite variable based on parental education, parental occupation, and household income in spring 1999. Low SES signifies the bottom 20 percent of the variable’s distribution, middle SES the middle 60 percent, and high SES the top 20 percent. Not all apparent differences in this table are statistically significant. Standard errors are available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004037>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), spring and fall 1999.

**Table 2. Children's library usage during the summer after kindergarten, according to neighborhood library availability, by socioeconomic status (SES): 1999**

Household SES	All children				Children with library in neighborhood			Children with no library in neighborhood		
	Percent with library in neighborhood	Percent visited library	Library visitors		Percent visited library	Library visitors		Percent visited library	Library visitors	
			Mean number of visits to library	Percent attended story time at library		Mean number of visits to library	Percent attended story time at library		Mean number of visits to library	Percent attended story time at library
Total	79.1	64.8	6.5	24.5	69.9	6.8	25.0	46.7	5.0	21.3
Low SES	64.3	46.4	4.5	27.3	55.6	4.7	26.8	30.8	3.7	28.2
Middle SES	80.5	66.2	6.8	25.6	69.7	7.1	26.5	52.8	5.2	20.1
High SES	90.7	80.2	6.9	20.0	81.1	7.0	20.5	71.8	6.0	14.9

NOTE: All estimates are based on parental reports. Sample sizes may differ by column because cases with missing data were excluded. Household SES is a composite variable based on parental education, parental occupation, and household income in spring 1999. Low SES signifies the bottom 20 percent of the variable's distribution, middle SES the middle 60 percent, and high SES the top 20 percent. Not all apparent differences in this table are statistically significant. Standard errors are available at <http://nces.ed.gov/pubsearch/pubinfo.asp?pubid=2004037>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), spring and fall 1999.

Library use also varied by parental report of neighborhood library availability. Compared to children whose parents reported having no neighborhood library, children whose parents reported a neighborhood library were more likely to visit a library at least once over the summer (70 percent compared to 47 percent). In addition, children who visited the library over the summer went more frequently if their parents reported having a neighborhood library (7 times on average compared to 5 times on average). These two relationships held for low and middle SES children. Parental report of neighborhood library availability varied by SES; low SES parents (64 percent) were less likely than middle SES parents (81 percent) to report having a neighborhood library, and both groups were less likely than high SES parents (91 percent) to do so.

Another way to examine the data in table 2 is to look at how children's library use varies by household SES while taking into account parental reports of neighborhood library availability. Among children whose parents reported no neighborhood library, low SES children were the least likely to visit the library (31 percent) while high SES children were the most likely to do so (72 percent). In addition, when no neighborhood library was reported, low SES library visitors went less frequently, on average, than middle or high SES library visitors (4 times compared to 5 and 6 times, respectively). These relationships also held among children whose parents reported having a neighborhood library. However, the difference between the percentage of low and high SES children who visited the library was smaller in neighborhoods with a library than in those without one (26 percentage point gap compared to 41 percent-

age point gap). Among children whose parents reported no neighborhood library, low SES library visitors attended story time at higher levels than high SES library visitors (28 percent compared to 15 percent).

### Conclusion

In summary, the broad picture of children's involvement in activities during the summer after their kindergarten year shows substantial differences in participation by socioeconomic status (SES). Low SES children were the least likely SES group to participate in the summer activities investigated in this Issue Brief; high SES children were the most likely to participate in these same activities.

Looking more closely at children's summer library use reveals a more complicated picture. Low SES children were the least likely SES group to go to the library, and if they did go, they went less frequently than children in the other SES groups. However, low SES library visitors attended story time at levels as high as or higher than library visitors from other SES groups. The gap between the percentage of low and high SES children who visited the library was smaller for those children whose parents reported having a neighborhood library than for those children whose parents reported no neighborhood library.

The list of summer activities investigated in this Issue Brief is by no means comprehensive, and further research could expand the list. Future research based on the Early Childhood Longitudinal Study could improve our understanding of the linkages between summer activities, socioeconomic status, and academic achievement.

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**Data source:** The NCES Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), spring and fall 1999.

**For technical information**, see the NCES Early Childhood Longitudinal Study website (<http://nces.ed.gov/ecls>).

**Author affiliations:** D. Meyer, D. Princiotta, and L. Lanahan, Education Statistics Services Institute.

**For questions about content**, contact Edith McArthur ([edith.mcarthur@ed.gov](mailto:edith.mcarthur@ed.gov)).

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# Homeschooled Students in 2003

## 1.1 Million Homeschooled Students in the United States in 2003

Daniel Princiotta, Stacey Bielick, and Chris Chapman

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Until 1999, little empirical information existed about the prevalence of homeschooling nationally (Bielick, Chandler, and Broughman 2001). In 1999 and 2003, the National Household Education Surveys Program (NHES) collected nationally representative data that can be used to estimate the number of homeschooled students in the United States. Data from the 1999 NHES showed that there were an estimated 850,000 homeschoolers in the United States—about 1.7 percent of the school-age population (Bielick, Chandler, and Broughman 2001).

This Issue Brief provides estimates of the number and percentage of homeschooled students in the United States in 2003, and compares these estimates to those from 1999. In addition, parents' primary reasons for homeschooling their children are described. Estimates of homeschooling in 2003 are based on data from the Parent and Family Involvement in Education Survey (PFI) of the 2003 NHES.

Students are defined as children ages 5 through 17 with a grade equivalent of kindergarten through grade 12 (K–12).<sup>1</sup> Interviews were conducted with the parents of 11,994 students (239 of whom were homeschooled). When weighted properly, these data represent approximately 50 million students ages 5–17 with a grade equivalent of K–12 in the United States in 2003.

Students are considered to be homeschooled if their 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. All differences discussed in this Issue Brief are statistically significant at the .05 level according to two-tailed Student's *t* tests.

### Number and Percentage of Homeschooled Students in the United States

About 1.1 million students (1,096,000) were being homeschooled in the United States in the spring of 2003 (figure 1). This represents an increase from the estimated 850,000

students who were being homeschooled in the spring of 1999. In addition, the estimated homeschooling rate—the percentage of the school-age population that was being homeschooled—increased from 1.7 percent in 1999 to 2.2 percent in 2003 (not shown in tables or figures).

As with results from any sample survey, the numbers and percentages discussed in this Issue Brief 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 (figure 1).<sup>2</sup> The best estimate provided here—1,096,000—is the midpoint of that interval.

The estimates of homeschooling discussed in this Issue Brief include students who were homeschooled only and students who were homeschooled while also enrolled in school for 25 hours or less per week. As shown in table 1, in both 1999 and 2003, about 4 out of 5 homeschoolers were homeschooled only (82 percent) while about 1 out of 5 homeschoolers were enrolled in public or private schools part time (18 percent).

### Parents' Most Important Reasons for Homeschooling Their Children

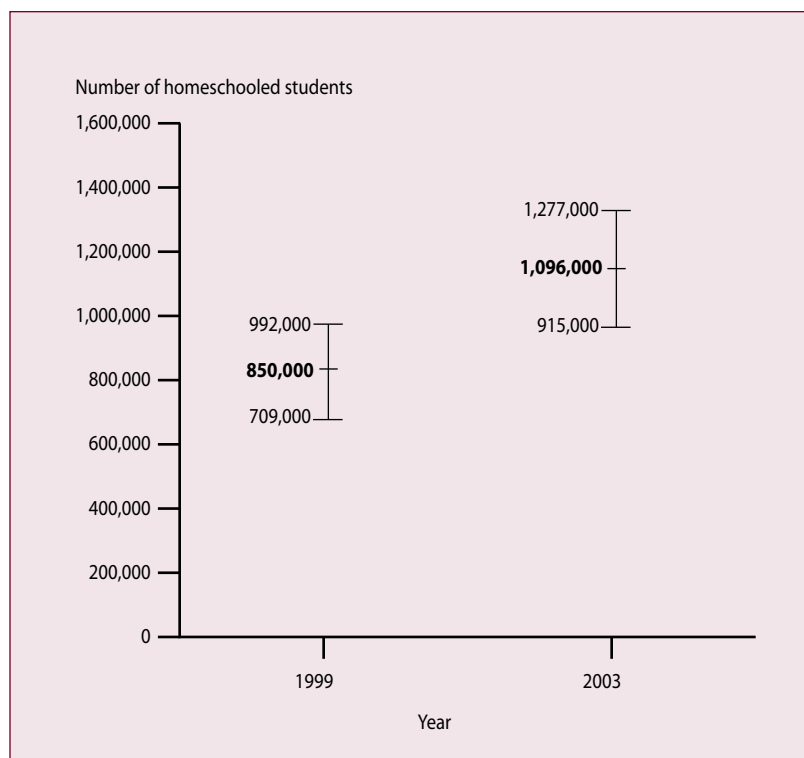
In the 2003 NHES, parents were asked whether particular reasons for homeschooling their children applied to them. Parents were then asked which one of those applicable reasons was their most important reason for homeschooling.

Thirty-one percent of homeschoolers had parents who said the most important reason for homeschooling was concern about the environment of other schools (figure 2). Thirty percent said the most important reason was to provide religious or moral instruction. The next reason was given about half as often; 16 percent of homeschooled students had

<sup>1</sup>Students who were homeschooled or enrolled in an ungraded elementary/secondary school or special education program were considered to have a grade equivalent of K–12 if their grade-level equivalent was K–12 or if their grade-level equivalent was "ungraded" and they were ages 5–17. Ages 5–17 represent the modal age range for grades K–12.

<sup>2</sup>Although the confidence intervals surrounding the estimated number of homeschooled students in the United States in 1999 and 2003 overlap somewhat, the differences between the estimates are still statistically significant. Differences between estimates with overlapping confidence intervals can be statistically significant (Schenker and Gentleman 2001).

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



NOTE: Excludes students who were enrolled in public or private school for more than 25 hours per 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.

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

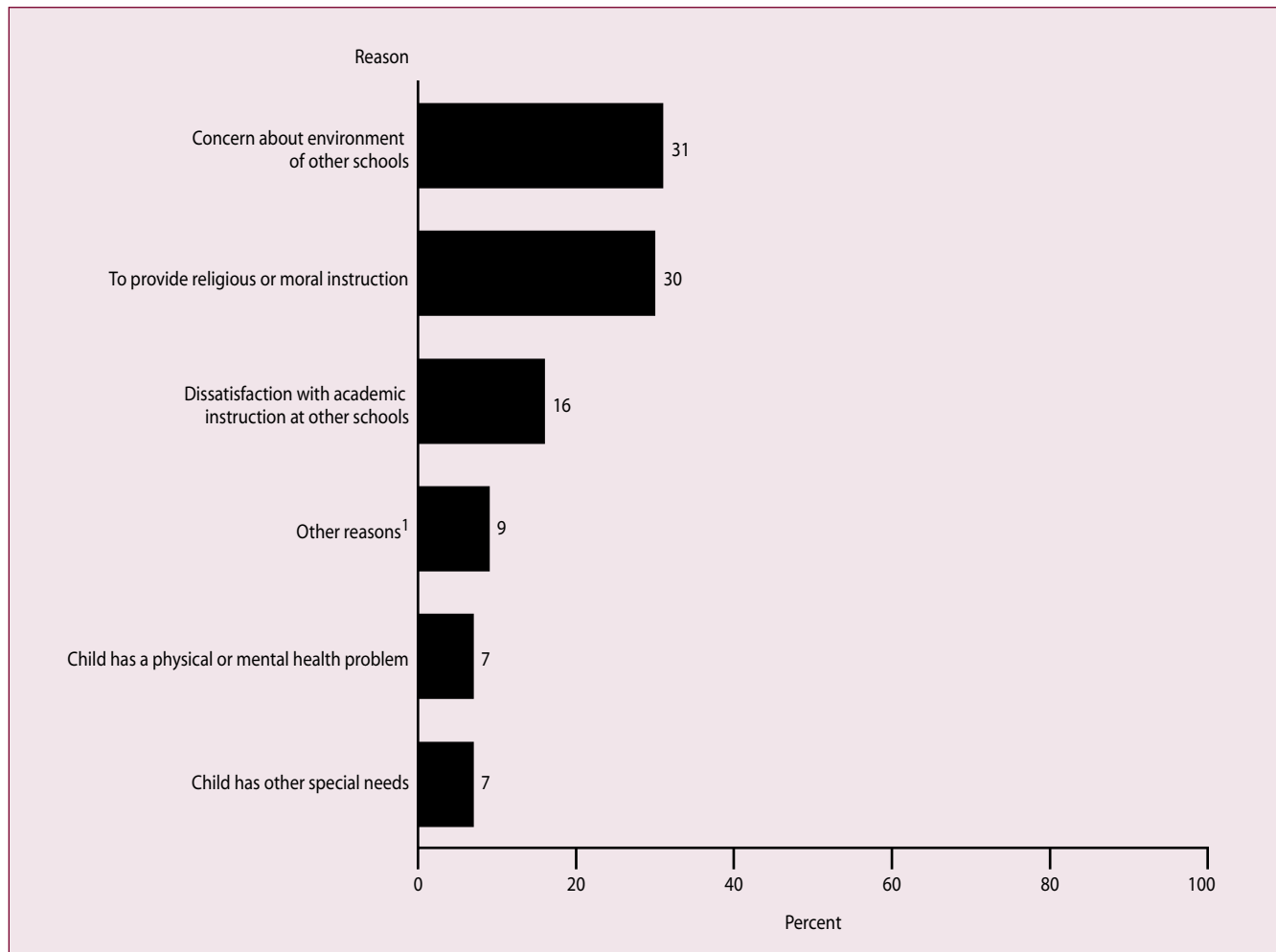
School enrollment status	Homeschooled students			
	1999		2003	
	Number	Percent	Number	Percent
Total	850,000	100.0	1,096,000	100.0
Homeschooled only	697,000	82.0	898,000	82.0
Enrolled in school part time	153,000	18.0	198,000	18.0
Enrolled in school for less than 9 hours a week	107,000	12.6	137,000	12.5
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 public or private school for more than 25 hours per week and students who were homeschooled only because of temporary illness. Detail may not sum to totals because of rounding. Standard errors are available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=20041115>. There were 50,188,000 5- to 17-year-old students in kindergarten through 12th grade in 1999, and 50,707,000 in 2003.

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.



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



<sup>1</sup>Other reasons reported by parents included family unity and individualized teaching, among others.

NOTE: Excludes students who were enrolled in public or private school for more than 25 hours per week and students who were homeschooled only because of temporary illness. Detail may not sum to totals because of rounding. Standard errors are available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004115>.

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 who said dissatisfaction with the academic instruction available at other schools was their most important reason for homeschooling.

## Conclusion

From 1999 to 2003, the number of homeschooled students in the United States increased, as did the homeschooling rate. The increase in the homeschooling rate (from 1.7 percent to 2.2 percent) represents about 0.5 percent of the 2002–03 school-age population and a 29 percent relative increase over the 4-year period. While data from NHES cannot explain why homeschooling was more prevalent in 2003 than in 1999, it can provide insight into why parents

homeschooled their children in 2003.<sup>3</sup> Parents may have homeschooled their children for a variety of reasons, but certain factors appear to have been more influential than others. Nearly two-thirds of homeschooled students had parents who said that their primary reason for homeschooling was either concern about the environment of other schools or a desire to provide religious or moral instruction.

Data from NHES can also be used to examine the student, family, and household characteristics of homeschoolers. Upcoming reports will use these data to study the characteristics of homeschoolers, to compare the characteristics

<sup>3</sup>Questions about reasons for homeschooling were asked differently in 1999 and 2003, and thus are not comparable.

of homeschooled students to those of public and private school students, and to see how homeschooling rates may have changed between 1999 and 2003 for different segments of the student population.

## References

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**Data source:** The NCES National Household Education Surveys Program (NHES), 1999 and 2003.

**For technical information,** see the complete report:

Princiotta, D., Bielick, S., and Chapman, C. (2004). *1.1 Million Homeschooled Students in the United States in 2003* (NCES 2004-115).

**Author affiliations:** D. Princiotta and S. Bielick, Education Statistics Services Institute; C. Chapman, NCES.

**For questions about content,** contact Chris Chapman ([chris.chapman@ed.gov](mailto:chris.chapman@ed.gov)).

**To obtain the complete report (NCES 2004-115),** call the toll-free ED Pubs number (877-433-7827) or visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).

# Revenues and Expenditures

## Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2001–02

Crecilla Cohen and Frank Johnson

*This article was originally published as the Summary of the E.D. TAB report of the same name. The universe data are from the “National Public Education Financial Survey” (NPEFS), part of the Common Core of Data (CCD). Technical notes and definitions from the original report have been omitted.*

Nearly \$420 billion of revenues were raised to fund public education for grades prekindergarten through 12 in school year 2001–02 (fiscal year 2002). Current expenditures (those excluding construction, equipment, and debt financing) exceeded \$368 billion, a 5.8 percent increase from fiscal year 2001. About three out of every five current expenditure dollars were spent on teachers, textbooks, and other instructional services and supplies. An average of \$7,734 was spent on each student—an increase of 4.9 percent from \$7,376 in school year 2000–01 (in unadjusted dollars).<sup>1</sup> Total expenditures for public education, including school construction, debt financing, community services, and adult education programs, came to \$435 billion.

These and other financial data on public elementary and secondary education are collected and reported each year by the National Center for Education Statistics (NCES), U.S. Department of Education. The data are part of the “National Public Education Financial Survey” (NPEFS), one of the components of the Common Core of Data (CCD) collection of surveys. These data were collected from March to September 2003. Editing and imputations were completed in February 2004.

### Revenues for Public Elementary and Secondary Education

Nearly \$420 billion were collected for public elementary and secondary education for school year 2001–02 in the 50 states and the District of Columbia (table 1). Total revenues ranged from a high of around \$52 billion in California, which serves about 1 out of every 8 students in the nation, to a low of about \$794 million in North Dakota, which serves roughly 1 out of every 449 students in the nation. Nationally, revenues increased an average of 4.7 percent over the previous year’s revenues of \$401 billion (in unadjusted dollars). The greatest part of education revenues came from state and local governments, which together provided nearly \$387 billion, or 92.1 percent of all revenues (table 2).

The federal government’s contribution to education revenues made up \$33 billion. The relative contributions from

these levels of government can be expressed as portions of the typical education dollar (figure 1). Local sources for school year 2001–02 made up 43 cents of every dollar in revenue, state revenues comprised 49 cents, and the remaining 8 cents came from federal sources.

Among states with more than one school district, revenues from local sources ranged from 13.8 percent in New Mexico to 62.4 percent in Nevada (table 2).<sup>2</sup> Revenues from state sources also showed a wide distribution in their share of total revenues. The state revenue share of total revenues was 31.5 percent in Nevada and 72.0 percent in New Mexico. Federal revenues ranged from 4.2 percent in New Jersey to 16.8 percent in Alaska. Federal sources contributed 10 percent or more of the revenues in Alabama, Alaska, Arizona, Arkansas, the District of Columbia, Florida, Kentucky, Louisiana, Mississippi, Montana, New Mexico, North Dakota, Oklahoma, South Dakota, and West Virginia.

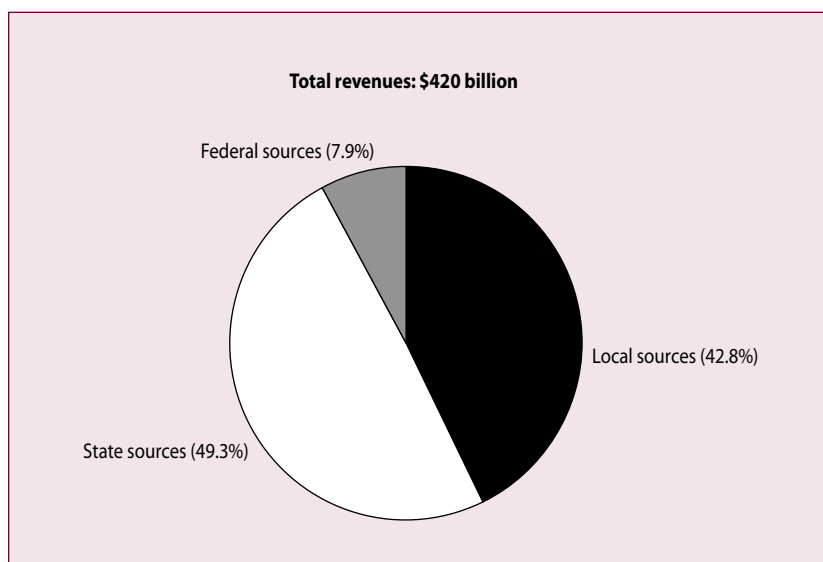
### Current Expenditures for Public Elementary and Secondary Education

Current expenditures for public education in 2001–02 totaled approximately \$368 billion (table 3). This represents a \$20 billion (5.8 percent) increase over expenditures in the previous school year (\$348 billion in unadjusted dollars). Nearly \$227 billion in current expenditures went for instruction. Another \$127 billion were expended for a cluster of services that support instruction. Another \$15 billion were spent on noninstructional services.

Expressed in terms of the typical education dollar, instructional expenditures accounted for approximately 61 cents of the education dollar for current expenditures (figure 2). Instructional expenditures include teacher salaries and benefits, supplies (e.g., textbooks), and purchased services. About 34 cents of the education dollar went for support services, which include operation and maintenance of buildings, school administration, transportation, and other student and school support activities (e.g., student counseling, libraries, and health services). Just over 4 cents of every education dollar went to noninstructional activities, which include school meals and enterprise activities, such as bookstores.

<sup>1</sup>Comparisons are based on the previous edition of this report, *Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2000–01* (St. John 2003).

<sup>2</sup>Hawaii and the District of Columbia have only one school district each and thus are not comparable to other states.

**Figure 1. The public education dollar: Revenues by source: School year 2001–02**

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2001–02.

Most states were closely clustered around the national average (61.5 percent) in terms of the share of current expenditures that were spent on instruction; all but five states and the District of Columbia spent more than 58 percent of their current expenditures on instruction (table 4). These states were Arizona, Colorado, Michigan, New Mexico, and Oklahoma. Two states spent about two-thirds of their current expenditures on instruction. These states were Maine (66.6 percent) and New York (68.3 percent).

### Current Expenditures per Student

In 2001–02, the 50 states and the District of Columbia spent an average of \$7,734 in current expenditures for every pupil in membership (table 5). This represents a 4.9 percent increase in current expenditures per student from the previous school year (\$7,376 in unadjusted dollars). The median of the state per pupil expenditures was \$7,380, indicating that one-half of all states educated students at a cost of less than \$7,380 per student. Four states—New Jersey (\$11,793), New York (\$11,218), Connecticut (\$10,577), and Massachusetts (\$10,232)—expended more than \$10,000 per pupil. The District of Columbia, which comprises a single urban district, spent \$12,102 per pupil. Only one state, Utah, had expenditures of less than \$5,000 for each pupil in membership (\$4,900).

On average, for every student in 2001–02, about \$4,755 was spent for instructional services. Expenditures per pupil for

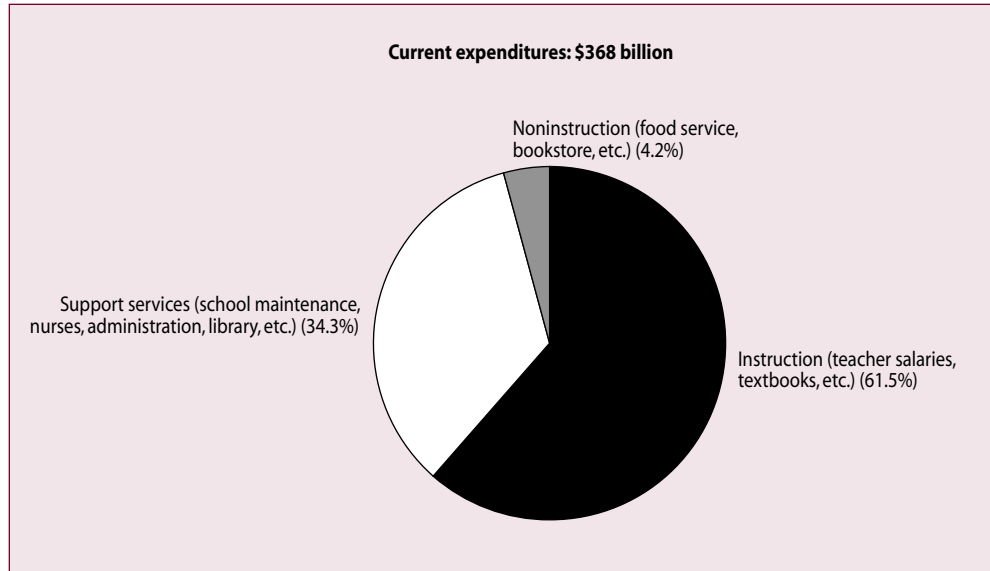
instruction ranged from \$3,197 in Utah to \$7,660 in New York. Support services expenditures per pupil were highest in the District of Columbia (\$5,726) and New Jersey (\$4,454) and lowest in Tennessee (\$1,789), Mississippi (\$1,781), and Utah (\$1,435). Expenditures per pupil for noninstructional services such as food services were \$322 for the nation.

### Expenditures for Instruction

Expenditures for instruction totaled more than \$226 billion for school year 2001–02 (table 6). Over \$162 billion went for salaries for teachers and instructional aides. Benefits for instructional staff made up almost \$42 billion, bringing the total for salaries and benefits for teachers and teacher aides to \$204 billion. Instructional supplies, including textbooks, made up over \$11 billion. (Expenditures for computers and desks are not considered current expenditures, but are otherwise part of replacement equipment in table 7.) Expenditures for purchased services were nearly \$7 billion. These expenditures include the costs for contract teachers (who are not on the school district's payroll), educational television, computer-assisted instruction, and rental equipment for instruction. Tuition expenditures for sending students to out-of-state schools and nonpublic schools within the state totaled over \$3 billion.

### Total Expenditures

Total expenditures made by school districts came to approximately \$435 billion in the 2001–02 school year (table 7).

**Figure 2. The public education dollar: Current expenditures by function: School year 2001–02**

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2001–02.

About \$368 billion of total expenditures were current expenditures for public elementary and secondary education. An additional \$43 billion went for facilities acquisition and construction, \$7 billion for replacement equipment, and another \$10 billion for interest payments on debt. The remaining amount (\$7 billion) was spent on other programs, such as community services and adult education, which are not part of public elementary and secondary education.

## Reference

St. John, E. (2003). *Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2000–01* (NCES 2003–362). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

**Data source:** The NCES Common Core of Data (CCD), "National Public Education Financial Survey" (NPEFS), 2001–02.

**For technical information,** see the complete report:

Cohen, C., and Johnson, F. (2004). *Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2001–02* (NCES 2004–341).

**Author affiliations:** C. Cohen, American Institutes for Research; F. Johnson, NCES.

**For questions about content,** contact Frank Johnson ([frank.johnson@ed.gov](mailto:frank.johnson@ed.gov)).

**To obtain the complete report (NCES 2004–341),** visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).

Table 1. Revenues for public elementary and secondary schools, by source and state: School year 2001–02

[In thousands of dollars]

State	Revenues, by source			
	Total	Local	State	Federal
United States	\$419,767,307 <sup>1</sup>	\$179,760,097 <sup>1</sup>	\$206,820,492	\$33,186,719
Alabama	5,127,807	1,585,575	3,010,987	531,245
Alaska	1,439,901	383,358	814,666	241,877
Arizona	6,872,107 <sup>1</sup>	2,747,955 <sup>1</sup>	3,415,659	708,493
Arkansas	3,199,082	1,078,976	1,776,667	343,440
California	52,252,109	16,371,098	31,038,376	4,842,635
Colorado	5,829,260	3,021,834	2,460,295	347,131
Connecticut	6,755,231	3,557,799	2,885,921	311,511
Delaware	1,137,262	308,174	731,364	97,724
District of Columbia	1,087,022	945,508	0	141,514
Florida	17,949,046	8,012,487	8,137,044	1,799,515
Georgia	12,971,001	5,663,067	6,376,438	931,496
Hawaii	1,890,806	35,222	1,684,227	171,357
Idaho	1,647,541	496,141	1,006,475	144,924
Illinois	18,659,229	10,899,404	6,319,443	1,440,383
Indiana	8,937,236	3,849,987	4,544,604	542,646
Iowa	4,069,223	1,831,685	1,951,679	285,859
Kansas	3,909,306	1,342,805	2,259,007	307,494
Kentucky	4,650,146	1,387,763	2,772,395	489,988
Louisiana	5,304,970	2,032,468	2,608,474	664,028
Maine	2,049,078	976,535	905,441	167,102
Maryland	8,406,316	4,739,938	3,125,033	541,344
Massachusetts	11,014,705	5,657,471	4,755,025	602,209
Michigan	17,534,105	4,931,865	11,322,159	1,280,080
Minnesota	7,967,380	2,635,925	4,894,185	437,270
Mississippi	3,031,118	935,791	1,639,822	455,504
Missouri	7,517,417	4,221,104	2,726,148	570,165
Montana	1,168,265	454,296	559,440	154,529
Nebraska	2,473,075	1,400,357	879,002	193,716
Nevada	2,611,111	1,629,742	822,786	158,584
New Hampshire	1,820,834	790,965	943,938	85,931
New Jersey	17,306,723	9,158,847	7,418,667	729,208
New Mexico	2,613,620	361,647	1,880,568	371,406
New York	35,626,450	16,206,158	17,160,040	2,260,252
North Carolina	9,314,285	2,521,133	6,005,424	787,728
North Dakota	794,027	379,818	303,151	111,058
Ohio	17,643,929	8,555,084	8,041,328	1,047,517
Oklahoma	4,133,041	1,300,364	2,342,385	490,293
Oregon	4,758,589	1,701,074	2,662,316	395,199
Pennsylvania	17,882,681	9,870,150	6,756,469	1,256,061
Rhode Island	1,650,094	854,084	694,244	101,766
South Carolina	5,622,818	2,242,188	2,868,955	511,674
South Dakota	922,410	456,897	335,558	129,955
Tennessee	5,913,922	2,773,409	2,581,100	559,413
Texas	32,281,850	16,087,255	13,186,488	3,008,107
Utah	2,899,722	949,129	1,711,212	239,381
Vermont	1,102,275	267,164	766,197	68,913
Virginia	9,719,262	5,136,677	3,973,610	608,975
Washington	8,382,517	2,438,257	5,233,731	710,529
West Virginia	2,471,393	705,291	1,506,177	259,925
Wisconsin	8,537,996	3,481,423	4,582,657	473,916
Wyoming	908,015	388,751	443,516	75,748
<b>Outlying areas</b>				
American Samoa	60,554	2,502	11,925	46,126
Guam	—	—	—	—
Northern Marianas	55,443	342	37,230	17,871
Puerto Rico	2,420,184	160	1,700,497	719,527
Virgin Islands	167,005	133,562	0	33,443

—Not available.

<sup>1</sup>Value affected by redistribution of reported values to correct for missing data items.

NOTE: Detail may not sum to totals because of rounding. National totals do not include outlying areas. Local revenues include intermediate revenues.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2001–02.

**Table 2. Percentage distribution of revenue for public elementary and secondary schools, by source and state: School year 2001–02**

State	Within-state percentage distribution		
	Local	State	Federal
United States <sup>1</sup>	42.8	49.3	7.9
Alabama	30.9	58.7	10.4
Alaska	26.6	56.6	16.8
Arizona <sup>1</sup>	40.0	49.7	10.3
Arkansas	33.7	55.5	10.7
California	31.3	59.4	9.3
Colorado	51.8	42.2	6.0
Connecticut	52.7	42.7	4.6
Delaware	27.1	64.3	8.6
District of Columbia	87.0	0.0	13.0
Florida	44.6	45.3	10.0
Georgia	43.7	49.2	7.2
Hawaii	1.9	89.1	9.1
Idaho	30.1	61.1	8.8
Illinois	58.4	33.9	7.7
Indiana	43.1	50.9	6.1
Iowa	45.0	48.0	7.0
Kansas	34.3	57.8	7.9
Kentucky	29.8	59.6	10.5
Louisiana	38.3	49.2	12.5
Maine	47.7	44.2	8.2
Maryland	56.4	37.2	6.4
Massachusetts	51.4	43.2	5.5
Michigan	28.1	64.6	7.3
Minnesota	33.1	61.4	5.5
Mississippi	30.9	54.1	15.0
Missouri	56.2	36.3	7.6
Montana	38.9	47.9	13.2
Nebraska	56.6	35.5	7.8
Nevada	62.4	31.5	6.1
New Hampshire	43.4	51.8	4.7
New Jersey	52.9	42.9	4.2
New Mexico	13.8	72.0	14.2
New York	45.5	48.2	6.3
North Carolina	27.1	64.5	8.5
North Dakota	47.8	38.2	14.0
Ohio	48.5	45.6	5.9
Oklahoma	31.5	56.7	11.9
Oregon	35.7	55.9	8.3
Pennsylvania	55.2	37.8	7.0
Rhode Island	51.8	42.1	6.2
South Carolina	39.9	51.0	9.1
South Dakota	49.5	36.4	14.1
Tennessee	46.9	43.6	9.5
Texas	49.8	40.8	9.3
Utah	32.7	59.0	8.3
Vermont	24.2	69.5	6.3
Virginia	52.9	40.9	6.3
Washington	29.1	62.4	8.5
West Virginia	28.5	60.9	10.5
Wisconsin	40.8	53.7	5.6
Wyoming	42.8	48.8	8.3
<b>Outlying areas</b>			
American Samoa	4.1	19.7	76.2
Guam	—	—	—
Northern Marianas	0.6	67.2	32.2
Puerto Rico	0.0	70.3	29.7
Virgin Islands	80.0	0.0	20.0

—Not available.

<sup>1</sup>Distribution affected by redistribution of reported values to correct for missing items.

NOTE: Detail may not sum to totals because of rounding. National totals do not include outlying areas. Local revenues include intermediate revenues.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2001–02.

Table 3. Current expenditures for public elementary and secondary schools, by function and state: School year 2001–02

[In thousands of dollars]

State	Current expenditures, by function			
	Total	Instruction	Support services	Noninstruction
United States	\$368,499,139 <sup>1</sup>	\$226,565,677 <sup>1</sup>	\$126,578,578	\$15,354,884
Alabama	4,444,390	2,721,721	1,415,114	307,556
Alaska	1,284,854	754,660	487,344	42,850
Arizona	5,499,645	3,123,642	2,029,869	346,134
Arkansas	2,822,877	1,739,445	939,213	144,218
California	46,265,544	28,566,063	15,960,392	1,739,089
Colorado	5,151,003	2,976,088	1,991,311	183,604
Connecticut	6,031,062	3,861,634	1,952,819	216,609
Delaware	1,072,875	660,857	361,985	50,033
District of Columbia	912,432	452,905	431,692	27,834
Florida	15,535,864	9,161,962	5,601,259	772,643
Georgia	10,853,496	6,932,058	3,363,275	558,162
Hawaii	1,348,381	815,123	457,784	75,474
Idaho	1,481,803	905,333	512,538	63,933
Illinois	16,480,787	9,804,430	6,140,082	536,275
Indiana	7,704,547	4,689,264	2,699,273	316,010
Iowa	3,565,796	2,124,947	1,181,655	259,195
Kansas	3,450,923	2,017,178	1,272,727	161,018
Kentucky	4,268,608	2,619,607	1,413,529	235,471
Louisiana	4,802,565	2,935,369	1,562,258	304,938
Maine	1,812,798	1,208,176	543,988	60,634
Maryland	7,480,723	4,653,921	2,471,745	355,058
Massachusetts	9,957,292	6,340,143	3,308,015	309,134
Michigan	14,975,150	8,598,644	5,916,871	459,635
Minnesota	6,586,559	4,192,253	2,112,832	281,475
Mississippi	2,642,116	1,591,250	878,870	171,997
Missouri	6,491,603 <sup>2</sup>	3,954,002 <sup>2</sup>	2,249,300	288,301
Montana	1,073,005	664,569	363,625	44,811
Nebraska	2,206,946	1,390,961	659,551	156,434
Nevada	2,169,000	1,353,806	744,190	71,003
New Hampshire	1,641,378	1,064,917	524,179	52,283
New Jersey	15,822,609	9,358,608	5,975,494	488,508
New Mexico	2,204,165	1,232,319	869,870	101,976
New York	32,218,975	22,001,202	9,350,907	866,866
North Carolina	8,550,546	5,412,927	2,643,261	494,358
North Dakota	711,437	436,583	219,858	54,996
Ohio	14,774,065	8,574,310	5,693,030	506,726
Oklahoma	3,875,547	2,239,893	1,382,715	252,939
Oregon	4,214,512	2,476,323	1,597,050	141,139
Pennsylvania	15,550,975	9,686,763	5,272,437	591,774
Rhode Island	1,533,455	989,404	503,479	40,573
South Carolina	4,744,809	2,857,016	1,630,168	257,624
South Dakota	819,296	484,985	289,896	44,415
Tennessee	5,511,452 <sup>1</sup>	3,586,780 <sup>1</sup>	1,655,074	269,598
Texas	28,191,128	17,026,101	9,755,351	1,409,676
Utah	2,374,702	1,549,329	695,398	129,975
Vermont	992,149	638,802	325,507	27,841
Virginia	8,718,554	5,373,764	3,003,915	340,875
Washington	7,103,721 <sup>2</sup>	4,227,572 <sup>2</sup>	2,531,023	345,126
West Virginia	2,219,013	1,368,692	721,118	129,203
Wisconsin	7,592,176	4,705,538	2,642,906	243,733
Wyoming	761,830	463,839	272,841	25,150
<b>Outlying areas</b>				
American Samoa	46,192	21,887	13,439	10,866
Guam	—	—	—	—
Northern Marianas	46,508	38,687	5,253	2,569
Puerto Rico	2,152,724	1,514,026	419,407	219,291
Virgin Islands	107,343	67,985	35,120	4,239

—Not available.

<sup>1</sup>Value contains imputation for missing data. Imputed value is less than 2 percent of total expenditures in any one state.<sup>2</sup>Value affected by redistribution of reported values to correct for missing data items.

NOTE: Detail may not sum to totals because of rounding. National totals do not include outlying areas.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2001–02.



**Table 4. Percentage distribution of current expenditures for public elementary and secondary schools, by function and state: School year 2001–02**

State	Within-state percentage distribution		
	Instruction	Support services	Noninstruction
United States <sup>1</sup>	61.5	34.3	4.2
Alabama	61.2	31.8	6.9
Alaska	58.7	37.9	3.3
Arizona	56.8	36.9	6.3
Arkansas	61.6	33.3	5.1
California	61.7	34.5	3.8
Colorado	57.8	38.7	3.6
Connecticut	64.0	32.4	3.6
Delaware	61.6	33.7	4.7
District of Columbia	49.6	47.3	3.1
Florida	59.0	36.1	5.0
Georgia	63.9	31.0	5.1
Hawaii	60.5	34.0	5.6
Idaho	61.1	34.6	4.3
Illinois	59.5	37.3	3.3
Indiana	60.9	35.0	4.1
Iowa	59.6	33.1	7.3
Kansas	58.5	36.9	4.7
Kentucky	61.4	33.1	5.5
Louisiana	61.1	32.5	6.3
Maine	66.6	30.0	3.3
Maryland	62.2	33.0	4.7
Massachusetts	63.7	33.2	3.1
Michigan	57.4	39.5	3.1
Minnesota	63.6	32.1	4.3
Mississippi	60.2	33.3	6.5
Missouri <sup>1</sup>	60.9	34.6	4.4
Montana	61.9	33.9	4.2
Nebraska	63.0	29.9	7.1
Nevada	62.4	34.3	3.3
New Hampshire	64.9	31.9	3.2
New Jersey	59.1	37.8	3.1
New Mexico	55.9	39.5	4.6
New York	68.3	29.0	2.7
North Carolina	63.3	30.9	5.8
North Dakota	61.4	30.9	7.7
Ohio	58.0	38.5	3.4
Oklahoma	57.8	35.7	6.5
Oregon	58.8	37.9	3.3
Pennsylvania	62.3	33.9	3.8
Rhode Island	64.5	32.8	2.6
South Carolina	60.2	34.4	5.4
South Dakota	59.2	35.4	5.4
Tennessee <sup>1</sup>	65.1	30.0	4.9
Texas	60.4	34.6	5.0
Utah	65.2	29.3	5.5
Vermont	64.4	32.8	2.8
Virginia	61.6	34.5	3.9
Washington <sup>1</sup>	59.5	35.6	4.9
West Virginia	61.7	32.5	5.8
Wisconsin	62.0	34.8	3.2
Wyoming	60.9	35.8	3.3
<b>Outlying areas</b>			
American Samoa	47.4	29.1	23.5
Guam	—	—	—
Northern Marianas	83.2	11.3	5.5
Puerto Rico	70.3	19.5	10.2
Virgin Islands	63.3	32.7	3.9

—Not available.

<sup>1</sup>Distribution affected by redistribution of reported values or imputations to correct for missing items.

NOTE: Detail may not sum to totals because of rounding. National totals do not include outlying areas.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2001–02.

**Table 5. Student membership and current expenditures per pupil in membership for public elementary and secondary schools, by function and state: School year 2001–02**

State	Fall 2001 student membership	Current expenditures per pupil in membership			
		Total	Instruction	Support services	Noninstruction
United States	47,647,972 <sup>1</sup>	\$7,734 <sup>1</sup>	\$4,755 <sup>1</sup>	\$2,657 <sup>1</sup>	\$322 <sup>1</sup>
Alabama	737,190 <sup>1</sup>	6,029 <sup>1</sup>	3,692 <sup>1</sup>	1,920 <sup>1</sup>	417 <sup>1</sup>
Alaska	134,358	9,563	5,617	3,627	319
Arizona	922,180	5,964	3,387	2,201	375
Arkansas	449,805	6,276	3,867	2,088	321
California	6,223,821 <sup>1</sup>	7,434 <sup>1</sup>	4,590 <sup>1</sup>	2,564 <sup>1</sup>	279 <sup>1</sup>
Colorado	742,145	6,941	4,010	2,683	247
Connecticut	570,228	10,577	6,772	3,425	380
Delaware	115,560	9,284	5,719	3,132	433
District of Columbia	75,392	12,102	6,007	5,726	369
Florida	2,500,478	6,213	3,664	2,240	309
Georgia	1,470,634	7,380	4,714	2,287	380
Hawaii	184,546	7,306	4,417	2,481	409
Idaho	246,521	6,011	3,672	2,079	259
Illinois	2,071,391	7,956	4,733	2,964	259
Indiana	996,133	7,734	4,707	2,710	317
Iowa	485,932	7,338	4,373	2,432	533
Kansas	470,205	7,339	4,290	2,707	342
Kentucky	654,363	6,523	4,003	2,160	360
Louisiana	731,328	6,567	4,014	2,136	417
Maine	205,586	8,818	5,877	2,646	295
Maryland	860,640	8,692	5,408	2,872	413
Massachusetts	973,140	10,232	6,515	3,399	318
Michigan	1,730,668 <sup>1</sup>	8,653 <sup>1</sup>	4,968 <sup>1</sup>	3,419 <sup>1</sup>	266 <sup>1</sup>
Minnesota	851,384	7,736	4,924	2,482	331
Mississippi	493,507	5,354	3,224	1,781	349
Missouri	909,792	7,135 <sup>2</sup>	4,346 <sup>2</sup>	2,472	317
Montana	151,947	7,062	4,374	2,393	295
Nebraska	285,095	7,741	4,879	2,313	549
Nevada	356,814	6,079	3,794	2,086	199
New Hampshire	206,847	7,935	5,148	2,534	253
New Jersey	1,341,656	11,793	6,975	4,454	364
New Mexico	320,260	6,882	3,848	2,716	318
New York	2,872,132	11,218	7,660	3,256	302
North Carolina	1,315,363	6,501	4,115	2,010	376
North Dakota	106,047	6,709	4,117	2,073	519
Ohio	1,830,985	8,069	4,683	3,109	277
Oklahoma	622,139	6,229	3,600	2,223	407
Oregon	551,480	7,642	4,490	2,896	256
Pennsylvania	1,821,627	8,537	5,318	2,894	325
Rhode Island	158,046	9,703	6,260	3,186	257
South Carolina	676,198	7,017	4,225	2,411	381
South Dakota	127,542	6,424	3,803	2,273	348
Tennessee	924,899 <sup>1</sup>	5,959 <sup>1</sup>	3,878 <sup>1</sup>	1,789 <sup>1</sup>	291 <sup>1</sup>
Texas	4,163,447	6,771	4,089	2,343	339
Utah	484,677	4,900	3,197	1,435	268
Vermont	101,179	9,806	6,314	3,217	275
Virginia	1,163,091	7,496	4,620	2,583	293
Washington	1,009,200	7,039 <sup>2</sup>	4,189 <sup>2</sup>	2,508	342
West Virginia	282,885	7,844	4,838	2,549	457
Wisconsin	879,361	8,634	5,351	3,005	277
Wyoming	88,128	8,645	5,263	3,096	285
<b>Outlying areas</b>					
American Samoa	15,897	2,906	1,377	845	683
Guam	31,992	—	—	—	—
Northern Marianas	10,479	4,438	3,692	501	245
Puerto Rico	604,177	3,563	2,506	694	363
Virgin Islands	18,780	5,716	3,620	1,870	226

—Not available.

<sup>1</sup>Prekindergarten students were imputed, affecting total student count and per pupil expenditure calculation. Prekindergarten students and tuition expenditures (included in Instruction) were imputed in Tennessee.<sup>2</sup>Value affected by redistribution of reported expenditure values to correct for missing data items.

NOTE: Detail may not sum to totals because of rounding. National totals do not include outlying areas.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2001–02.

Table 6. Current expenditures for instruction for public elementary and secondary education, by state: School year 2001–02

[In thousands of dollars]

State	Total	Salaries	Employee benefits	Purchased services	Tuition to out-of-state and private schools	Supplies	Other
United States	\$226,565,677 <sup>1,2</sup>	\$162,479,110 <sup>2</sup>	\$41,950,536 <sup>2</sup>	\$6,626,717 <sup>2</sup>	\$3,255,596 <sup>1,2</sup>	\$11,221,542 <sup>2</sup>	\$1,032,175 <sup>2</sup>
Alabama	2,721,721	1,906,961	524,272	72,255	1,611	205,477	11,145
Alaska	754,660	503,771	141,151	41,823	0	42,355	25,560
Arizona	3,123,642 <sup>2</sup>	2,237,599 <sup>2</sup>	566,120 <sup>2</sup>	88,633 <sup>2</sup>	63,447 <sup>2</sup>	150,295 <sup>2</sup>	17,547 <sup>2</sup>
Arkansas	1,739,445	1,248,407	271,819	51,528	3,586	153,262	10,843
California	28,566,063	20,161,156	5,078,524	990,457	522,991	1,808,867	4,067
Colorado	2,976,088	2,212,800	401,087	59,358	40,143	215,204	47,497
Connecticut	3,861,634	2,688,389	710,126	113,563	235,473	109,498	4,585
Delaware	660,857	461,208	147,587	14,485	5,578	31,999	0
District of Columbia	452,905	278,597	57,993	12,056	88,882	14,411	965
Florida	9,161,962	6,185,610	1,570,906	852,447	95	449,711	103,194
Georgia	6,932,058	4,996,620	1,501,223	86,065	3,684	338,463	6,003
Hawaii	815,123	606,089	116,918	40,859	0	44,520	6,737
Idaho	905,333	647,036	189,961	21,628	669	45,820	218
Illinois	9,804,430	7,179,384	1,753,331	237,189	220,309	398,435	15,782
Indiana	4,689,264	3,185,211	1,300,424	55,188	0	136,730	11,710
Iowa	2,124,947	1,567,105	412,866	56,731	14,768	70,946	2,531
Kansas	2,017,178	1,542,165	301,058	50,498	1,213	105,728	16,516
Kentucky	2,619,607	1,944,855	474,432	57,435	303	124,003	18,580
Louisiana	2,935,369	2,134,350	567,983	50,774	243	161,356	20,663
Maine	1,208,176	773,644	278,684	46,334	62,931	40,424	6,159
Maryland	4,653,921	3,245,682	959,420	99,238	184,710	143,662	21,208
Massachusetts	6,340,143	4,560,139	1,287,164	39,331	265,438	170,933	17,137
Michigan	8,598,644	5,835,163	2,071,915	331,543	121	331,522	28,380
Minnesota	4,192,253	3,057,758	794,630	144,009	34,156	138,750	22,950
Mississippi	1,591,250	1,160,486	296,876	32,928	3,644	91,121	6,195
Missouri	3,954,002 <sup>2</sup>	2,906,364	602,773	96,340 <sup>2</sup>	24,837 <sup>2</sup>	303,734	19,954 <sup>2</sup>
Montana	664,569	466,792	124,993	20,057	722	49,816	2,189
Nebraska	1,390,961	1,011,425	253,035	43,080	18,044	53,946	11,431
Nevada	1,353,806	943,619	269,142	20,012	295	57,553	63,185
New Hampshire	1,064,917	720,425	198,166	25,912	82,581	35,219	2,613
New Jersey	9,358,608	6,561,117	1,657,406	180,432	470,265	390,138	99,250
New Mexico	1,232,319	900,683	226,485	23,864	0	81,084	203
New York	22,001,202	16,187,038	4,336,324	511,848 <sup>2</sup>	362,434 <sup>2</sup>	600,033	3,526
North Carolina	5,412,927	4,166,642	845,599	108,137	0	287,602	4,948
North Dakota	436,583	312,980	85,483	13,968	1,271	21,166	1,715
Ohio	8,574,310	6,040,867	1,664,159	252,253	91,036	404,638	121,357
Oklahoma	2,239,893	1,649,563	372,594	34,381	0	176,404	6,951
Oregon	2,476,323	1,607,688	641,755	88,641	22,250	111,515	4,475
Pennsylvania	9,686,763	6,989,250	1,709,369	431,952	151,664	391,727	12,802
Rhode Island	989,404	699,724	208,256	8,360	43,152	27,850	2,062
South Carolina	2,857,016	2,066,479	561,695	60,996	248	139,043	28,555
South Dakota	484,985	344,562	84,666	21,134	5,818	27,269	1,536
Tennessee	3,586,780 <sup>1</sup>	2,552,496	539,927	53,367	68,512 <sup>1</sup>	359,525	12,953
Texas	17,026,101	13,092,101	1,897,474	496,721	35,490	1,360,149	144,167
Utah	1,549,329	1,056,617	357,775	29,649	279	96,067	8,942
Vermont	638,802	418,565	117,522	33,396	46,890	20,831	1,597
Virginia	5,373,764	4,030,346	993,472	107,505	2,385	234,306	5,751
Washington	4,227,572 <sup>2</sup>	3,063,890	718,834	200,853	8,464 <sup>2</sup>	205,022	30,509
West Virginia	1,368,692	907,246	379,804	21,183	389	59,898	171
Wisconsin	4,705,538	3,143,174	1,227,904	77,197	64,150	178,714	14,398
Wyoming	463,839	319,269	99,457	19,121	426	24,803	762
<b>Outlying areas</b>							
American Samoa	21,887	14,048	2,716	2,370	0	2,172	582
Guam	—	—	—	—	—	—	—
Northern Marianas	38,687	28,042	7,555	1,847	0	833	410
Puerto Rico	1,514,026	1,244,372	173,270	3,105	0	25,177	68,101
Virgin Islands	67,985	51,820	14,689	138	0	1,270	68

—Not available.

<sup>1</sup>Value contains imputation for missing data. Imputed value is less than 2 percent of total expenditures in any one state.<sup>2</sup>Value affected by redistribution of reported values to correct for missing data items.

NOTE: Detail may not sum to totals because of rounding. National totals do not include outlying areas.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2001–02.

Table 7. Expenditures for public elementary and secondary education and other related programs, by state: School year 2001–02

[In thousands of dollars]

State	Total	Current expenditures	Facilities acquisition and construction	Replacement equipment	Other programs	Interest on debt
United States	\$435,438,650 <sup>1</sup>	\$368,499,139 <sup>1</sup>	\$43,042,143	\$6,873,195 <sup>1</sup>	\$6,528,811 <sup>1</sup>	\$10,495,361 <sup>1</sup>
Alabama	5,156,903	4,444,390	469,227	29,069	112,523	101,694
Alaska	1,537,251	1,284,854	197,136	19,467	7,923	27,871
Arizona	6,699,391 <sup>1</sup>	5,499,645	732,312	196,758 <sup>1</sup>	39,568 <sup>1</sup>	231,109
Arkansas	3,172,698	2,822,877	184,320	78,092	21,750	65,659
California	54,425,142	46,265,544	6,228,451	507,917	969,819	453,411
Colorado	6,235,939	5,151,003	633,394	149,898	49,605	252,040
Connecticut	7,022,254 <sup>1</sup>	6,031,062	644,757	92,361 <sup>1</sup>	120,018 <sup>1</sup>	134,056
Delaware	1,269,253	1,072,875	137,046	26,849 <sup>2</sup>	17,279 <sup>2</sup>	15,204
District of Columbia	1,146,065	912,432	192,372	26,474	14,787	0
Florida	19,443,481	15,535,864	2,790,219	212,353	469,717	435,329
Georgia	12,739,243	10,853,496	1,448,106	212,119	57,340	168,182
Hawaii	1,483,148	1,348,381	7,402	41,032	46,141	40,194
Idaho	1,693,120	1,481,803	139,521	32,758	4,202	34,837
Illinois	19,970,125	16,480,787	2,351,017	533,013	141,365	463,943
Indiana	9,283,975	7,704,547	731,477	124,094	63,099	660,759
Iowa	4,113,595	3,565,796	367,642	91,742	29,237	59,178
Kansas	3,834,020	3,450,923	106,759	143,977	5,178	127,184
Kentucky	4,567,493	4,268,608	33,672	126,073	51,391	87,749
Louisiana	5,400,008	4,802,565	354,749	88,940	49,175	104,579
Maine	2,013,802	1,812,798	107,961	31,838	21,175	40,030
Maryland	8,544,911	7,480,723	861,676	92,255	22,275	87,982
Massachusetts	10,635,293	9,957,292	118,470	168,773	113,220	277,537
Michigan	18,467,758	14,975,150	2,088,095	346,878	415,169	642,465
Minnesota	8,570,743	6,586,559	1,171,431	130,302	314,656	367,794
Mississippi	2,928,691	2,642,116	123,512	76,036	21,798	65,228
Missouri	7,688,956 <sup>2</sup>	6,491,603 <sup>2</sup>	603,592	225,879	153,326	214,556
Montana	1,166,021	1,073,005	54,415	18,269	7,360	12,972
Nebraska	2,610,863	2,206,946	270,739	77,510 <sup>2</sup>	2,899 <sup>2</sup>	52,769
Nevada	2,929,241	2,169,000	519,600	86,084	16,812	137,744
New Hampshire	1,868,786	1,641,378	160,814	26,040	5,770	34,784
New Jersey	17,568,596	15,822,609	1,186,136	113,362 <sup>2</sup>	181,626 <sup>2</sup>	264,863
New Mexico	2,634,747	2,204,165	349,285	26,680	18,369	36,248
New York	37,225,533	32,218,975	2,692,592	349,248	1,330,376	634,342
North Carolina	10,065,719 <sup>1</sup>	8,550,546	1,133,414	95,926	49,018	236,815 <sup>1</sup>
North Dakota	781,895	711,437	34,167	23,296	5,770	7,225
Ohio	17,665,581	14,774,065	1,654,396	487,106	411,541	338,473
Oklahoma	4,234,350	3,875,547	248,101	48,271	16,706	45,726
Oregon	4,966,829	4,214,512	505,506	51,623	30,303	164,886
Pennsylvania	18,639,229	15,550,975	1,715,589	264,383	378,808	729,474
Rhode Island	1,612,465	1,533,455	3,614	23,515	24,199	27,682
South Carolina	5,900,096	4,744,809	881,823	67,050	66,803	139,611
South Dakota	994,193	819,296	101,317	48,653	3,323	21,604
Tennessee	6,495,307 <sup>1</sup>	5,511,452 <sup>1</sup>	650,573	117,701	35,175	180,405
Texas	35,238,428	28,191,128	4,956,494	442,300	247,626	1,400,881
Utah	2,949,468	2,374,702	373,706	52,777	69,499	78,783
Vermont	1,075,981	992,149	47,714	17,990	3,163	14,965
Virginia	10,074,939	8,718,554	905,900	221,283	58,484	170,718
Washington	8,493,042 <sup>2</sup>	7,103,721 <sup>2</sup>	913,378	134,648	42,125	299,170
West Virginia	2,462,386	2,219,013	125,119	73,192	33,911	11,150
Wisconsin	8,877,133	7,592,176	671,544	170,691	155,078	287,644
Wyoming	864,564	761,830	61,893	30,653	2,332	7,855
<b>Outlying areas</b>						
American Samoa	55,227	46,192	4,629	1,735	2,672	0
Guam	—	—	—	—	—	—
Northern Marianas	59,197	46,508	12,313	32	343	0
Puerto Rico	2,219,364	2,152,724	103	3,538	44,158	18,842
Virgin Islands	115,143	107,343	4,581	1,198	2,020	0

—Not available.

<sup>1</sup>Value contains imputation for missing data. Imputed value is less than 2 percent of total expenditures in any one state.<sup>2</sup>Value affected by redistribution of reported values to correct for missing data items.

NOTE: Detail may not sum to totals because of rounding. National totals do not include outlying areas.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2001–02.

## English Language Learner Students in U.S. Public Schools: 1994 and 2000

David Meyer, David Madden, and Daniel J. McGrath

*This article was originally published as an Issue Brief. The sample survey data are from the Schools and Staffing Survey (SASS).*

In the United States, many languages other than English have always been spoken, and in recent years this is increasingly the case. In 1990, 32 million people over the age of 5 in the United States spoke a language other than English in their home, comprising 14 percent of the total U.S. population. By 2000, that number had risen by 47 percent to nearly 47 million, comprising nearly 18 percent of the total U.S. population (U.S. Census Bureau 2002). This growth is reflected in the elementary and secondary school population in the form of growth in the population of students defined as English Language Learners (ELL).<sup>1</sup> This is affecting geographic regions differently in terms of the relative size of their ELL student populations. In particular, previous research found that elementary and secondary school-aged ELL students were especially prevalent in the West and Northeast (McCandless, Rossi, and Daugherty 1997). However, that research did not look at how concentrations of ELL students in schools differed within the geographic regions.

This Issue Brief uses data from the 1993–94 and 1999–2000 Schools and Staffing Survey (SASS) to examine recent growth in the population of ELL students in public schools in the United States. In addition to an estimate of the national growth in the ELL population between the 1993–94 and 1999–2000 school years, the Issue Brief reports growth at the regional level.<sup>2</sup> Moreover, the Issue Brief describes regional differences in the concentration of ELL students within schools, reporting the percentage of schools within regions with varying distributions of ELL students.

### Population Trends in ELL Students

Nationally, the number of ELL students in public schools increased from approximately 2 million students in 1993–94 to 3 million students in 1999–2000 (table 1). ELL students

<sup>1</sup>The SASS school questionnaires use the term “Limited-English proficient” (LEP) to describe students whose native or dominant language is other than English and whose difficulties in speaking, reading, writing, or understanding the English language are sufficient to deny them the opportunity to learn successfully in an English-speaking-only classroom. The U.S. Department of Education is currently using the term “English Language Learners” (ELL). This Issue Brief uses ELL to be consistent with current usage.

<sup>2</sup>The regions used in the Issue Brief are those used by the U.S. Census Bureau: West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming); Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont); Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin); and South (Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia).

represented approximately 7 percent of the national public school population in 1999–2000, up from 5 percent in 1993–94.

This growth in the ELL student population was not evenly distributed across geographic regions. The West had the largest number of ELL students in public schools in 1993–94 and 1999–2000. Schools in the West identified 1.7 million of their students as ELL in 1999–2000, compared with 1.1 million students in 1993–94. In 1999–2000, 16 percent of public school students (or one in every six) in the West were identified as ELL, compared to 12 percent in 1993–94. The West’s public school population also includes over half of the national total of ELL students.

The Northeast experienced a reduction in its share of all U.S. ELL students—from 15 percent of all ELL students in 1993–94 to 10 percent in 1999–2000. The number of ELL students in public schools in the Midwest and South increased between 1993–94 and 1999–2000. In the Midwest and South, this translated into an increase in the percentage of the public school population who were ELL, from 1.4 to 2.6 percent in the Midwest and from 3.5 to 4.5 percent in the South. In 1999–2000, the Midwest still had the lowest percentage of its public school population designated ELL of any region. As of 1999–2000, the South had a higher percentage of students who were ELL than did the Northeast.

### Concentrations of ELL Students

The national or regionwide prevalence of ELL students does not provide a complete picture of the distribution of ELL students. For example, knowing that 16 percent of public school students in the West were ELL students does not tell us whether all schools in the region had ELL populations of 16 percent or whether the ELL students were concentrated more in some schools than others. The 1999–2000 SASS data allow examination of the distribution of ELL students at the school level.

Nationwide, over one-half of ELL students in public schools were in schools with less than 1 percent of their students designated ELL; this pattern was repeated in the Northeast, Midwest, and South (table 2). At the other end of the distribution, 7 percent of public schools had at least one-quarter of their students designated ELL; this percentage was lower in the Northeast, Midwest, and South. In contrast, in the

**Table 1. Number and percentage of public school students in the United States who were identified as English Language Learners (ELL), by nation and region: 1993–94 and 1999–2000**

Region	1993–94			1999–2000		
	Number of ELL	Percent of all students	Percent of all ELL	Number of ELL	Percent of all students	Percent of all ELL
United States	2,121,000	5.1	100.0	3,042,000	6.7	100.0
Northeast	323,000	4.4	15.2	304,000	3.8	10.0
Midwest	136,000	1.4	6.4	276,000	2.6	9.1
South	521,000	3.5	24.6	723,000	4.5	23.8
West	1,142,000	12.3	53.8	1,738,000	16.3	57.2

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=2004035>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 1993–94 and 1999–2000 “Public School Questionnaire” and 1999–2000 “Charter School Questionnaire.”

West, 37 percent of public schools reported ELL populations under 1 percent and 19 percent reported ELL populations of at least 25 percent.

## Conclusion

The number of ELL students in the United States grew by about 900,000 students between 1993–94 and 1999–2000, but growth was not equal across regions. The Midwest, South, and West all showed an increase in the size of the ELL student population both in total and as a percentage of the total public school population. At the same time, the West had the largest population of public school students designated ELL, with more than half of the national total of ELL students in the 1999–2000 school year. Regional differences were apparent, as well, in terms of the concentration of ELL students in public schools, with ELL concentration most prevalent in the West.

This Issue Brief provides a profile of the location and concentration of public school ELL students. The Schools and Staffing Survey can be used to address other questions regarding the education of ELL students, including the characteristics of the schools with high concentrations of ELL students. SASS also contains information on techniques

used to teach ELL students, as well as the programs schools offer to ELL students. A closer examination of this topic could reveal whether regional differences in the concentration of ELL students in public schools translate into differences in educational services provided for ELL students.

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**Data source:** The NCES 1993–94 and 1999–2000 Schools and Staffing Survey (SASS).

**For technical information,** see the Schools and Staffing Survey website (<http://nces.ed.gov/surveys/sass>).

**Author affiliations:** D. Meyer, D. Madden, and D.J. McGrath, Education Statistics Services Institute.

**For questions about content,** contact Edith McArthur ([edith.mcarthur@ed.gov](mailto:edith.mcarthur@ed.gov)).

**To obtain the complete report (NCES 2004–035),** visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).

**Table 2. Percentage distribution of public schools in the United States by concentration of English Language Learner (ELL) students, by nation and region: 1999–2000**

Region	Less than 1 percent ELL	1–5 percent ELL	5–15 percent ELL	15–25 percent ELL	25–50 percent ELL	50 percent or more ELL
United States	61.7	17.0	10.4	4.1	4.3	2.4
Northeast	66.0	16.3	11.8	3.6	1.5	0.7
Midwest	78.5	11.6	5.7	1.3	1.6	1.3
South	62.0	19.9	10.2	4.1	2.8	1.0
West	36.5	20.3	15.8	8.0	12.0	7.0

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=2004035>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), 1999–2000 “Public School Questionnaire” and “Charter School Questionnaire.”

# Teacher Attrition and Mobility

## Teacher Attrition and Mobility: Results From the Teacher Follow-up Survey, 2000–01

Michael T. Luekens, Deanna M. Lyter, and Erin E. Fox

*This article was originally published as the summary of the E.D. TAB report of the same name. The sample survey data are from the Schools and Staffing Survey (SASS) and the Teacher Follow-up Survey (TFS).*

### Introduction

Between the 1999–2000 and 2000–01 school years, approximately 8 percent of public and private school teachers transferred to a different school and 7 percent and 13 percent of public and private school teachers, respectively, chose to leave the teaching profession. Teachers who change schools or leave the teaching profession create difficulties for school administrators who must spend valuable time and resources to adequately staff their classrooms. Additionally, teachers moving and leaving raises questions about the professional satisfaction of teachers. In order to gain an understanding of the professional motivations of teachers who leave their positions, three related questions must be examined.

- First, who is most likely to move or leave? Understanding trends in teachers moving and leaving will enable policymakers to target those teachers who are most likely to leave their positions.
- Second, why do teachers move or leave? It is important to understand the underlying reasons for these decisions to develop strategies to retain teachers.
- Finally, where do teachers go when they move or leave? Information about what teachers do after they leave their position, and how these new positions compare to teaching, provides insight about the professional needs of teachers.

This report seeks to shed light on these questions by examining the characteristics of teachers who left the teaching profession between the 1999–2000 and 2000–01 school years (“leavers”), teachers who continued teaching but changed schools (“movers”), and teachers who continued teaching in the same school in 2000–01 (“stayers”).

### Data Source

The Teacher Follow-up Survey (TFS) is a 1-year follow-up of a sample of approximately 8,400 teachers who were originally selected for the teacher component in the Schools and Staffing Survey (SASS). The Schools and Staffing Survey is an integrated set of surveys of public and private schools, principals, teachers, library media centers, and public school districts throughout the United States of America. There have been four data cycles for the Schools and Staffing Survey, and likewise, four Teacher Follow-up Surveys.

The 2000–01 Teacher Follow-up Survey data in this report link responses from the 2000–01 school year to characteristics of those same teachers who participated in SASS during the 1999–2000 school year. Within this report, there are some data that are drawn directly from the 1999–2000 SASS. These data are termed “base-year” because the SASS sample is the “base” for the teachers who are selected for the Teacher Follow-up Survey. Base-year characteristics include personal and professional descriptors of the teacher (age, sex, race/ethnicity, teaching assignment field), as well as characteristics of the school in which the teachers worked in 1999–2000 (whether the school was public or private, region of the country in which the school was located, and the community type or locale of the school). These “base-year” characteristics provide the context for the data collected in the Teacher Follow-up Survey.

The purpose of the Teacher Follow-up Survey is to provide information about teacher mobility and attrition. For example, how do teachers who remain teaching at the same school from year to year (“stayers”) compare with those who do not? How many teachers move from one school to another school (“movers”)? What percentage of teachers leave the profession between one year and the next (“leavers”)? These types of questions can be answered with data from the Teacher Follow-up Survey. For teachers who leave the profession, TFS asks about their occupational status (are former teachers working, retired, or caring for family members?) or whether they are seeking further education, and reasons for leaving teaching, as well as recommendations for how schools might retain teachers. Those who remain in teaching are asked about changes in teaching assignment, opinions about retaining teachers, and retirement plans. Teachers who move from one school to another are asked to describe the type of school to which they moved. Furthermore, data from the Teacher Follow-up Survey can be used to compare attrition and mobility across the public and private school sectors.

Approximately 3,300 stayers, 2,200 movers, and 2,800 leavers were included in the initial 2000–01 Teacher Follow-up Survey sample. A questionnaire for former teachers was mailed to leavers, while stayers and movers were mailed a separate questionnaire for current teachers. The unit survey response rate for the TFS was 90 percent (90 percent for



current teachers and 89 percent for former teachers), and 97 percent of questionnaire items had a response rate of 90 percent or higher. The cumulative overall response rate for the Teacher Follow-up Survey is based on the response rate to the SASS teacher listing form, the SASS teacher questionnaire response rate, and the TFS response rate. Because TFS estimates are based on a sample, they may differ somewhat from the values obtained from administering a complete census using the same questionnaire, instructions, and procedures.

## Organization of the Report

The body of this report is organized around the three previously described questions related to teacher attrition and mobility in the United States: Who is most likely to move or leave? Why do teachers move or leave? Where do these teachers go? A set of tables with data from the 2000–01 Teacher Follow-up Survey is presented for each question.

The first section, “Who is most likely to move or leave?,” presents basic information on base-year (1999–2000) teachers who left the teaching profession (“leavers”), as well as corresponding characteristics of teachers who remained in their base-year schools (“stayers”) or who moved to another school to teach during the 2000–01 school year (“movers”). The number and percentage of stayers, movers, and leavers are reported along a number of selected teacher, school, and job characteristics, as well as teachers’ plans to remain in teaching, as reported in SASS in 1999–2000. This section also includes the average income levels of stayers, movers, and leavers during the 1999–2000 school year.

The second section, “Why do teachers move or leave?,” includes current and former teachers’ satisfaction with their base-year schools; their perceptions of the administrators, instructional leaders, and staff at their base-year schools; and the reasons movers and leavers gave for leaving the school in which they taught in 1999–2000.

Finally, the section titled “Where do teachers go when they move or leave?” reports the current main occupational status of former teachers, as well as how those teachers perceived their current jobs relative to their former teaching positions. The percentage of base-year teachers moving across schools, school districts, and sectors is also considered in this section, as are data on base-year teachers who retired from the teaching profession between the 1999–2000 and 2000–01 school years.

Many of the tables found in this report present findings by a set of selected teacher and school characteristics. Included among these characteristics are the sector (public or private) and level of the school (elementary, secondary, or combined-grade) at which the respondent taught during the 1999–2000 school year, the main assignment field (e.g., mathematics, science) and teaching status (full-time or part-time) of the respondent in 1999–2000, and the current or former teachers’ years of teaching experience, age, sex, and race/ethnicity. Public school teachers include those who teach in public charter schools as well as in traditional public schools.

## Selected Findings

### Who is most likely to move or leave?

- Between the 1999–2000 and 2000–01 school years, 85 percent of all public school teachers remained at the same school, 8 percent moved to a different school, and 7 percent left the teaching profession. A higher proportion of public school teachers left the profession between the 1999–2000 and 2000–01 school years compared to the 1990–91 to 1991–92 and 1987–88 to 1988–89 school years.
- Between 1999–2000 and 2000–01, private school teachers were more likely to leave teaching (13 percent) than their public school counterparts (7 percent). Conversely, public school teachers were more likely to stay, and 8 percent of the teachers in both sectors moved.
- Public and private school teachers with fewer than 10 years of teaching experience were more likely than their more experienced colleagues to move to a different school between the 1999–2000 and 2000–01 school years. Additionally, private school teachers with 1 to 3 years of experience were more likely to leave the profession than more experienced teachers.
- Public and private school teachers who were younger than age 30 were also more likely to move than older teachers in both sectors (table A). In public and private schools, respectively, 16 percent and 13 percent of teachers who were less than 30 years old transferred to another school. Public school teachers who were older than 50 years of age or younger than 30 years of age were more likely to leave the teaching profession after 1999–2000 than other public school teachers, while private school teachers younger than 30 years old were also more likely to leave than their older counterparts.

**Table A. Number and percentage of public and private school teacher stayers, movers, and leavers, by selected school and teacher characteristics: 1999–2000 to 2000–01**

School or teacher characteristic	Public						Private					
	Number			Percentage			Number			Percentage		
	Stayers	Movers	Leavers	Stayers	Movers	Leavers	Stayers	Movers	Leavers	Stayers	Movers	Leavers
Total	2,542,200	231,000	221,400	84.9	7.7	7.4	354,800	37,600	56,200	79.1	8.4	12.5
Teaching experience												
1–3 years	372,900	66,500	43,100	77.3	13.8	8.9	68,400	11,200	24,200	65.9	10.8	23.3
4–9 years	583,700	76,200	48,600	82.4	10.8	6.9	88,200	13,500	15,200	75.4	11.6	13.0
10–19 years	678,200	52,400	47,700	87.1	6.7	6.1	102,600	6,900	7,800	87.5	5.9	6.6
20 years or more	907,500	35,900	82,100	88.5	3.5	8.0	95,600	6,000	9,000	86.5	5.4	8.2
Age												
Less than 30 years	367,900	77,200	47,300	74.7	15.7	9.6	55,700	11,100	19,700	64.4	12.8	22.8
30–39 years	601,200	60,800	46,300	84.9	8.6	6.5	81,000	9,200	14,300	77.5	8.8	13.7
40–49 years	810,600	61,300	41,700	88.7	6.7	4.6	112,200	10,300	11,400	83.8	7.7	8.5
50 years or more	762,600	31,700	86,100	86.6	3.6	9.8	105,800	7,000	10,800	85.6	5.7	8.7
Sex												
Male	633,700	43,800	53,800	86.7	6.0	7.4	84,500	7,500	12,200	81.1	7.2	11.7
Female	1,908,500	187,200	167,600	84.3	8.3	7.4	270,300	30,100	44,000	78.5	8.8	12.8
Race/ethnicity												
White, non-Hispanic	2,158,100	191,900	190,400	85.0	7.6	7.5	317,300	34,800	49,600	79.0	8.7	12.3
American Indian or Alaska Native	19,900	1,100	1,700	87.9	4.7	7.5	2,900	100	700	76.9	2.9	20.2
Asian or Pacific Islander	43,100	8,600	1,100	81.7	16.2	2.1	4,500	500	1,600	68.6	7.2	24.2
Black, non-Hispanic	183,600	18,100	16,200	84.3	8.3	7.4	12,000	300	2,100	83.2	2.1	14.8
Hispanic	137,500	11,400	12,000	85.4	7.1	7.5	18,100	2,000	2,100	81.5	8.9	9.6
Main assignment field												
Arts and music	155,400	21,900	15,600	80.6	11.4	8.1	25,100	2,400	2,300	84.3	8.1	7.7
English/language arts	263,100	22,500	19,100	86.3	7.4	6.3	30,000	3,300	4,700	79.0	8.7	12.3
General elementary	858,100	84,300	73,400	84.5	8.3	7.2	132,100	14,800	22,900	77.8	8.7	13.5
Mathematics	178,900	13,500	19,000	84.6	6.4	9.0	29,500	3,100	6,400	75.6	8.0	16.4
Science	158,300	12,400	13,500	85.9	6.7	7.3	25,600	3,600	2,700	80.2	11.4	8.4
Social studies	134,100	7,300	13,600	86.5	4.7	8.8	24,800	1,600	3,800	82.3	5.1	12.6
Special education	263,500	33,000	28,300	81.1	10.2	8.7	13,100	1,700	1,500	80.2	10.5	9.4
Other	530,800	36,100	38,900	87.6	6.0	6.4	74,600	7,100	11,900	79.7	7.6	12.7
Teaching status												
Full-time	2,306,500	201,200	194,800	85.4	7.4	7.2	297,800	31,200	43,000	80.1	8.4	11.6
Part-time	235,700	29,900	26,600	80.7	10.2	9.1	57,000	6,400	13,100	74.4	8.4	17.2
Region												
Northeast	525,300	32,700	35,500	88.5	5.5	6.0	82,500	9,100	12,500	79.2	8.8	12.0
Midwest	646,900	51,800	48,300	86.6	6.9	6.5	91,900	9,700	14,200	79.4	8.4	12.3
South	894,900	104,300	94,700	81.8	9.5	8.7	116,700	11,400	20,700	78.4	7.7	13.9
West	475,100	42,300	43,000	84.8	7.6	7.7	63,800	7,400	8,800	79.8	9.2	11.0
Community type												
Central city	683,600	65,400	57,300	84.8	8.1	7.1	166,800	18,500	25,600	79.1	8.8	12.1
Urban fringe/large town	1,276,800	117,100	118,000	84.5	7.8	7.8	146,800	13,800	21,400	80.7	7.6	11.8
Rural/small town	581,800	48,600	46,000	86.0	7.2	6.8	41,200	5,300	9,200	74.0	9.5	16.5
School level												
Elementary	1,668,600	168,800	133,600	84.7	8.6	6.8	170,700	22,200	23,900	78.8	10.2	11.0
Secondary	817,600	59,200	82,900	85.2	6.2	8.6	64,200	7,000	6,600	82.5	9.0	8.5
Combined	56,000	3,000	4,900	87.6	4.8	7.7	119,900	8,500	25,700	77.8	5.5	16.7
School enrollment												
Less than 200 students	148,400	17,800	15,200	81.8	9.8	8.4	117,000	14,100	23,700	75.6	9.1	15.3
200–349 students	279,900	29,300	22,200	84.5	8.8	6.7	88,300	10,700	13,100	78.8	9.5	11.7
350–499 students	408,200	36,300	35,300	85.1	7.6	7.4	53,300	4,200	6,600	83.2	6.5	10.3
500–749 students	704,500	68,000	59,000	84.7	8.2	7.1	42,800	3,700	5,800	81.9	7.1	11.1
750 students or more	1,001,300	79,600	89,800	85.5	6.8	7.7	53,300	4,900	7,100	81.6	7.6	10.8
Minority enrollment												
Less than 10 percent	873,600	66,700	70,000	86.5	6.6	6.9	197,300	20,700	30,200	79.5	8.4	12.2
10–34 percent	714,700	64,800	58,600	85.3	7.7	7.0	100,700	10,100	15,700	79.6	8.0	12.4
35 percent or more	954,000	99,500	92,800	83.2	8.7	8.1	56,800	6,800	10,300	77.0	9.2	13.9

NOTE: Stayers are teachers who were teaching in the same school in the current school year as in the previous school year. Movers are teachers who were still teaching in the current school year but had moved to a different school after the previous school year. Leavers are teachers who left the teaching profession after the previous school year. Total numbers are rounded to the nearest 100. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1999–2000 Schools and Staffing Survey (“Public School Teacher Questionnaire,” “Public Charter School Teacher Questionnaire,” and “Private School Teacher Questionnaire”) and 2000–01 Teacher Follow-up Survey (“Questionnaire for Current Teachers” and “Questionnaire for Former Teachers”). (Originally published as table 3 on p. 11 of the complete report from which this article is excerpted.)

- Approximately 34 percent of public school movers earned \$40,000 or more in 1999–2000, in comparison to 50 percent of public school stayers and leavers. Additionally, both public school movers and leavers were more likely to earn less than \$30,000 (23 percent and 21 percent, respectively) compared to public school stayers (16 percent). Similar trends appear among private school teachers. For example, 69 percent of private school leavers and 68 percent of movers reported earning less than \$30,000 in annual income, compared to 54 percent of private school stayers.\*
- Many public and private school leavers did not plan to leave the teaching profession when asked during the base year. Twenty-seven percent of public school leavers and 40 percent of private school leavers stated in 1999–2000 that they planned to remain in teaching as long as they were able. Nineteen percent and 32 percent of public and private school leavers, respectively, were undecided about their future plans to remain in teaching when asked during the base year.

#### Why do teachers move or leave?

- Among the reasons that public school teachers gave in 2000–01 for moving to a new school were an opportunity for a better teaching assignment (40 percent), dissatisfaction with support from administrators (38 percent), and dissatisfaction with workplace conditions (32 percent).
- Like public school movers, private school movers frequently cited an opportunity for a better teaching assignment (42 percent) and dissatisfaction with support from administrators (41 percent) as reasons for changing schools following the 1999–2000 school year. However, private school movers more frequently reported changing schools to obtain a better salary or benefits (48 percent) than public school movers (19 percent).
- Twenty-nine percent of public school leavers reported in 2000–01 that they left the teaching profession in order to retire and about 20 percent each reported that they left to pursue another career and obtain a better salary or benefits. Private school leavers also frequently reported that they left teaching to pursue another career (31 percent) or obtain a better salary or benefits (28 percent). However, private school leavers were less likely than public school teachers to report that they left in order to retire (11 percent).
- Among public and private school teachers who left the teaching profession between 1999–2000 and 2000–01, larger percentages of women than men cited pregnancy/child rearing and health as very important or extremely important reasons in their decision to leave teaching. Conversely, men were more likely than women to report leaving their public or private school teaching position for a better salary or benefits, to pursue another career, or to take courses to improve their career opportunities within or outside the field of education.
- One-half of all black, non-Hispanic public school leavers in 2000–01 cited retirement as a very or extremely important reason in their decision to leave teaching, compared to 28 percent of white leavers. Black, non-Hispanic public school leavers (44 percent) were also more likely to report that they left teaching to pursue a better salary or benefits than white, non-Hispanic (17 percent), Hispanic (13 percent), and American Indian or Asian (13 percent) leavers.
- Of public school teachers who left teaching after the 1999–2000 school year and who were drawing a pension in 2000–01, about three-quarters indicated that their eligibility to receive full pension benefits was a very or extremely important factor in their decision to retire. Eligibility for an early retirement incentive was also an important factor in the decision to retire for about one-quarter (27 percent) of these former teachers.
- Public school movers were generally more likely to report dissatisfaction with their teaching experience in their former school than public school leavers (table B). For example, movers were more likely to report that they were not satisfied with their salary at their 1999–2000 school (29 percent) than leavers (22 percent). Additionally, public school movers were more likely to report that student behavior was a problem (25 percent) than leavers (13 percent).
- A comparison of private school movers' and leavers' levels of satisfaction with aspects of their 1999–2000 school shows that movers were less satisfied than leavers with the salary and benefits they received (table B). Private school movers were also more likely than leavers to report that they had neither enough

\*For more information regarding public and private school teachers' average salaries and earned income, please see tables 76–79 in the *Digest of Education Statistics 2002* (NCES 2003–060), U.S. Department of Education, National Center for Education Statistics.

**Table B. Percentage of public and private school teacher movers and leavers who strongly agreed or strongly disagreed with various statements about their former schools: 2000–01**

Statement	Public				Private			
	Strongly agreed		Strongly disagreed		Strongly agreed		Strongly disagreed	
	Movers	Leavers	Movers	Leavers	Movers	Leavers	Movers	Leavers
I was satisfied with my salary.	11.8	12.3	29.1	21.9	7.5	12.7	47.1	34.4
The school or district offered satisfactory benefits.	20.9	24.7	11.0	4.8	13.1	18.9	31.4	19.3
I was satisfied with the level of job security at the school (e.g., the possibility of being laid off).	37.5	56.3	10.1	7.7	33.2	42.3	23.0	13.7
In thinking of all the factors that influenced my satisfaction with teaching in last year's school, overall, I was satisfied.	19.0	29.3	24.4	16.8	18.8	31.1	19.2	12.5
In thinking of all the factors that influenced my satisfaction with teaching in general, overall, I was satisfied.	†	28.4	†	7.4	†	31.3	†	6.2
The school facility (buildings and grounds) was in need of significant repair.	22.4	14.5	26.1	30.6	17.4	12.5	27.2	34.1
The school was located in a safe neighborhood.	40.4	52.0	7.8	3.3	51.6	56.7	6.7	3.8
I felt safe at the school.	40.1	53.5	6.0	2.2	62.2	58.6	1.4	0.9
The school's security policies and practices were sufficient.	33.1	39.2	9.2	4.5	36.4	46.7	5.3	2.8
Student behavior was a problem.	24.9	12.8	15.0	20.0	10.7	11.1	33.9	36.4
Most of the students in the school were motivated to learn.	16.7	19.7	12.0	9.8	33.9	32.3	6.6	6.9
The school emphasized academic success.	35.3	49.4	5.9	2.3	48.4	55.1	4.6	3.2
I received little support from parents.	18.2	9.7	17.4	24.8	10.6	4.3	39.7	41.0
The school received little support from the community.	14.4	5.1	23.8	27.0	12.7	6.1	30.3	34.1
The procedures for teacher performance evaluation were satisfactory.	20.3	24.2	10.8	10.9	22.1	21.6	21.7	15.0
I was satisfied with the policies and practices for assigning students to classes or sections for instruction.	17.5	18.7	15.4	13.2	28.7	24.1	10.2	9.6
Some of the classes or sections I taught were too large.	27.6	26.1	19.1	18.4	17.0	10.9	39.2	41.4
I was satisfied with the grade(s) I was assigned to teach.	54.5	64.1	7.0	3.4	54.2	60.0	4.7	2.7
I was satisfied with the subject(s) I was assigned to teach.	54.7	67.2	4.5	1.0	62.6	63.6	3.9	3.8
I often felt that my teaching workload was too heavy.	30.6	24.2	10.8	13.6	26.1	17.4	19.7	20.3
At last year's school, including (mainstreaming) special needs (e.g., disabled) students in regular classes made it difficult for me to teach.	17.2	12.2	18.7	25.5	7.0	5.3	31.8	34.3
I did not have enough influence over the school's policies and practices.	23.5	13.7	9.0	13.2	29.0	17.0	12.7	13.9
I was satisfied with the amount of autonomy and control I had over my own classroom.	32.1	46.1	7.0	4.4	41.8	52.6	9.1	2.7
Computers and other technology for my classroom(s) were sufficiently available.	19.7	23.5	24.0	18.3	19.9	22.3	25.0	17.5
Resources and materials/equipment for my classroom(s) were sufficiently available.	22.3	26.6	19.6	12.7	22.9	23.1	13.5	12.1
There was not enough time available for planning and preparation during a typical week at the school.	33.4	34.1	7.8	13.9	31.1	26.0	15.2	19.2
There was not enough uninterrupted class time available for instruction.	12.3	10.4	14.6	23.5	13.8	13.2	19.3	25.8
The professional caliber of the faculty at the school was high.	28.6	41.5	8.1	2.2	33.3	43.9	7.1	7.2
There were many opportunities to collaborate with other teachers in the school.	17.7	20.7	16.5	15.5	26.5	25.9	15.8	9.6
The school administrators' behavior toward the staff was supportive and encouraging.	25.9	38.6	24.3	13.3	31.3	41.3	26.3	17.8
I was pleased with the opportunities for professional advancement (promotion) offered to teachers at the school.	11.0	13.7	18.8	16.2	17.7	10.0	26.9	23.4
I was pleased with the opportunities for professional development (learning/training) offered to teachers at the school.	16.0	20.9	10.8	12.5	19.9	13.7	24.2	18.2
Required professional development activities at the school usually closely matched my professional development goals.	11.3	14.7	19.2	20.4	12.5	12.9	20.4	16.3

† Not applicable.

NOTE: Movers are teachers who were still teaching in the current school year but had moved to a different school after the previous school year. Leavers are teachers who left the teaching profession after the previous school year. Response choices were based on a 5-point scale, and included the following: "Strongly agree," "Somewhat agree," "Neither agree nor disagree," "Somewhat disagree," and "Strongly disagree." This table includes the percent of movers and leavers who responded "Strongly agree" or "Strongly disagree."

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–01 Teacher Follow-up Survey ("Questionnaire for Current Teachers" and "Questionnaire for Former Teachers"). (Originally published as table 9 on p. 21 of the complete report from which this article is excerpted.)

influence over the school's policies and practices nor enough autonomy and control over the classroom in 1999–2000.

- Movers were more critical of the instructional leader at their 1999–2000 school than stayers, in both public and private schools, on all eight measures included in the Teacher Follow-up Survey. Public school movers were also less likely than leavers to report that their 1999–2000 instructional leader was very or extremely effective at communicating respect and value of teachers, encouraging teachers to change teaching methods if students were not doing well, encouraging professional collaboration among teachers, and working with teaching staff to solve school or department problems. Private school movers were more critical of their previous year's instructional leader than private school leavers on one measure: encouraging teachers to change teaching methods if students were not doing well.
- Private school movers and leavers were less likely than private school stayers to rate their former instructional leader as being effective on a variety of measures. For example, 66 percent of stayers, 41 percent of movers, and 46 percent of leavers reported that their instructional leader was effective at encouraging professional collaboration among teachers in the 1999–2000 school year. Sixty-three percent of stayers, 39 percent of movers, and 40 percent of leavers reported that their instructional leader was very or extremely effective at facilitating and encouraging professional development activities of teachers. Additionally, 70 percent of stayers reported that their instructional leader was very or extremely effective at communicating respect and value of teachers compared to 52 percent of movers and 61 percent of leavers.
- Movers were generally less satisfied than stayers with their former school's administrators and staff. For example, fewer public and private school movers strongly agreed that there was a great deal of cooperative effort among staff members at their 1999–2000 school compared to public and private school stayers.

#### Where do teachers go when they move or leave?

- Between the 1999–2000 and 2000–01 school years, private school movers were much more likely to transfer to the public school sector (53 percent) than public school movers were to transfer to the private school sector (2 percent). Additionally, switching to the public school sector was more common among private school teachers with less than 5 years' experience (61 percent) than among those with 5 or more years' experience (48 percent).
- About half (53 percent) of public school movers chose to move to a public school in a different school district for the 2000–01 school year, while 45 percent moved to a different school but remained in the same public school district.
- Public school leavers were most likely to specify "retired" as their main occupational status in 2000–01 (28 percent), whereas private school leavers were most likely to report that they were working in an occupation outside the field of education (30 percent) or were caring for family members (24 percent). About 20 percent of public school leavers and 14 percent of private school leavers continued to work in a K–12 school in 2000–01, but were no longer teaching.
- Of leavers who reported that their main occupational status in 2000–01 was working, private school leavers (67 percent) were more likely than public school leavers (32 percent) to be employed in the private sector. Fifty-nine percent and 23 percent of public and private school leavers whose main occupational status was working, respectively, reported being employed by the local, state, or federal government.
- Leavers who were working in a nonteaching position in 2000–01 were asked to compare their current position to their 1999–2000 teaching position on 17 occupational characteristics, like salary, intellectual challenge, availability of resources, and recognition and support from administrators or managers (table C). Of leavers who did not report "no difference" between the two positions, public school leavers indicated that 15 of the 17 characteristics were better in their current position than in teaching, with the exception of benefits and job security. Similarly, private school leavers were more likely to report that 16 of the 17 characteristics were better in their current position than better in teaching. There was no statistically significant difference in whether job security was better in one position or another.
- In comparing their new positions with teaching, half or more of both public and private school leavers who selected working as their main occupational status reported that the manageability of their workload, opportunities for professional advancement, professional prestige, and general work conditions were

**Table C. Percentage of public and private school teacher leavers who were working that rated various aspects of their current main occupation as better than teaching, not better than teaching, or no difference: 2000–01**

Occupation characteristic	Public			Private		
	Better in teaching	Better in current position	No difference	Better in teaching	Better in current position	No difference
Salary	30.1	43.8	26.1	19.2	65.0	15.8
Benefits	39.6	20.3	40.0	22.4	53.9	23.7
Job security	31.0	19.2	49.7	23.1	32.9	44.0
Intellectual challenge	17.4	51.8	30.8	29.4	42.4	28.2
Opportunities for professional development	19.0	41.7	39.3	19.0	51.7	29.4
Professional prestige	15.8	57.7	26.5	21.1	55.8	23.0
General work conditions	4.3	50.9	44.8	11.2	54.9	33.9
Safety of environment	10.9	29.7	59.5	16.2	28.3	55.5
Manageability of workload	13.5	60.4	26.1	8.1	63.4	28.4
Procedures for performance evaluation	17.9	38.0	44.1	16.4	40.6	43.1
Autonomy or control over own work	13.7	65.2	21.1	24.1	45.5	30.4
Influence over workplace policies and practices	17.5	49.0	33.4	22.8	40.7	36.5
Availability of resources and materials/equipment for doing job	19.8	44.0	36.3	8.5	56.3	35.2
Recognition and support from administrators/managers	19.7	46.8	33.6	15.8	52.1	32.1
Professional caliber of colleagues	14.9	27.0	58.2	20.7	35.4	43.9
Opportunities for learning from colleagues	21.2	40.4	38.4	25.9	41.4	32.7
Opportunities for professional advancement	18.1	53.9	28.0	11.9	61.1	27.0

NOTE: Leavers are teachers who left the teaching profession after the previous school year. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2000–01 Teacher Follow-up Survey (“Questionnaire for Former Teachers”). (Originally published as table 14 on p. 25 of the complete report from which this is excerpted.)

better in their current (2000–01) positions (table C). Private school leavers were more likely to report that they received a better salary in their current position (65 percent) than were public school leavers (44 percent).

**Data source:** The NCES Schools and Staffing Survey (SASS), “Public School Teacher Questionnaire,” “Public Charter School Teacher Questionnaire,” and “Private School Teacher Questionnaire,” 1999–2000; and the Teacher Follow-up Survey (TFS), “Questionnaire for Current Teachers” and “Questionnaire for Former Teachers,” 2000–01.

**For technical information,** see the complete report:

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**Author affiliations:** M.T. Luekens, D.M. Lyter, and E.E. Fox, Education Statistics Services Institute.

**For questions about content,** contact Kerry Gruber ([kerry.gruber@ed.gov](mailto:kerry.gruber@ed.gov)).

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# Reading Teacher Preparation

## Who Teaches Reading in Public Elementary Schools? The Assignments and Educational Preparation of Reading Teachers

David Meyer and Daniel J. McGrath

*This article was originally published as an Issue Brief. The sample survey data are from the Schools and Staffing Survey (SASS).*

A central task of elementary-level schooling in the United States is teaching children to read. This task is assigned to general elementary teachers who teach reading as one of many subjects taught during the day, as well as to teachers assigned specifically to teach reading. This Issue Brief presents a description of the teachers who provide reading instruction in public elementary schools. Specifically, it presents 1999–2000 school-year estimates of the number of public general elementary school teachers, public elementary school teachers who taught reading as a main assignment, and any other elementary teachers who taught at least one reading class. This Issue Brief also describes these three groups of teachers in terms of their educational preparation in reading and elementary education.

Data are taken from the National Center for Education Statistics (NCES) 1999–2000 Schools and Staffing Survey (SASS) teacher survey. SASS asked teachers to report both the subject matter of their main teaching assignment and the subject matter of each class they taught during the day.<sup>1</sup> Teachers were also asked about their educational attainment and the subject matter of their postsecondary majors and minors. Estimates are presented on the percentage of teachers who have postsecondary majors or state certifications in reading and elementary education. Major and certification in the subject of their main teaching assignment from the 1999–2000 SASS have previously been used as indicators of teacher qualifications (Seastrom et al. 2002).

For this analysis, public school teachers of elementary grades were split into four groups:<sup>2</sup>

- *General elementary education teachers:* Teachers who reported a main assignment in elementary education;
- *Reading specialists:* Teachers who reported a main assignment in reading;

- *Other reading teachers:* Teachers who did not report a main assignment in elementary education or reading, but did report teaching at least one class of reading; and
- *Other teachers:* Teachers who were excluded from the analysis.

### The Assignments of Reading Teachers

There were more general elementary-level teachers in public schools in the United States in 1999–2000 than there were teachers with specific reading assignments. One million public elementary-level teachers had main assignments as general elementary teachers (table 1). Twenty-nine thousand public elementary-level teachers had main assignments in reading (referred to in this analysis as “reading specialists”) and another 32,000 taught at least one class in reading, but did not report a main assignment in reading or in general elementary teaching (referred to in this report as “other reading teachers”).

Reading specialists were less likely than other teachers of reading to have full-time teaching assignments. Seventy-four percent of reading specialists described themselves as regular full-time teachers in 1999–2000, compared with 96 percent or more of other reading teachers and general elementary teachers. Eleven percent of reading specialists were regular part-time teachers; 6 percent were itinerant teachers (i.e., teaching in more than one school); and 8 percent described their work role as “other professional staff,” an assignment described by SASS as including, “e.g., counselor, curriculum coordinator, social worker.”

Reading specialists also tended to teach in different classroom settings than the other teachers. About three out of four (73 percent) reading specialists taught “pull-out” classes. In other words, they taught students who were excused from their regular classes for sessions of reading instruction. Eleven percent or less of reading specialists taught in each of the four other arrangements: self-contained classrooms in which they taught the same children all day long (11 percent); team-teaching arrangements in which they collaborated with other teachers in teaching multiple subjects to the same classroom of children (6 percent); elementary enrichment classes in which they taught only reading,

<sup>1</sup>Teachers who reported classroom assignments in which they taught the same group of students all day, team-taught, or taught students pulled out of their regular classrooms for instruction were not asked to report each subject taught.

<sup>2</sup>Teachers of elementary grades include teachers who taught only grades K–4, as well as other teachers who taught grades 5–9 but identified themselves as elementary or special education teachers. The analysis included a sample size of approximately 10,300 teachers.

**Table 1. Number of public elementary-level teachers and percentage of teachers with specific subject-matter assignments, by various work-role assignments and classroom settings: 1999–2000**

Characteristics	Subject-matter assignment		
	Main assignment in reading (reading specialist)	At least one class in reading, but not main assignment (other reading teacher)	General elementary education
Number of teachers	28,700	32,300	1,009,000
Work-role assignment			
Regular full-time teacher	74.2	95.6	96.9
Regular part-time teacher	11.0	1.4	1.9
Itinerant teacher	6.1	0.2	0.4
Long-term substitute	0.5	0.9	0.2
Administrator	#	0.2	#
Library specialist	0.2	0.7	0.1
Other professional staff	7.9	1.0	0.4
Classroom setting <sup>1</sup>			
Departmentalized instruction	4.1	84.1	2.7
Elementary enrichment class	5.5	15.9	0.8
Self-contained class	10.8	#	85.5
Team teaching	6.4	#	9.4
"Pull-out" class	73.2	#	1.6

#Rounds to zero.

<sup>1</sup>Classroom settings include "departmentalized instruction," in which teachers teach subject-matter courses to several classes of different students all or most of the day; "elementary enrichment class," in which teachers teach only one subject in an elementary school; "team teaching," in which teachers collaborate with one or more teachers in teaching multiple subjects to the same class of students; and "pull-out" class," in which teachers provide instruction to certain students who are released from their regular classes.

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=2004034>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public Teacher Questionnaire" and "Charter Teacher Questionnaire," 1999–2000.

possibly to different classes of students (6 percent); and departmentalized instruction settings in which they taught several different classes of students and may have taught subjects other than reading (4 percent).

Other reading teachers most often described their assignments as departmentalized instruction (84 percent). The remaining other reading teachers (16 percent) described their classes as elementary enrichment classes.

General elementary teachers most often (85 percent) reported their assignment as teaching a single group of students in a self-contained classroom, which means they taught several subjects, including reading, to a single classroom of students throughout the school day. Next most frequently, general elementary teachers described their assignments as team-teaching roles (9 percent).

## Educational Preparation

Table 2 reports on the educational preparation of the three groups of reading teachers in 1999–2000. The table reports the percentage of teachers with various levels of educational attainment, as well as the percentage of teachers with postsecondary majors, minors, or certifications in reading or elementary education. Public elementary-level reading specialists and other reading teachers were more likely to have master's degrees than general elementary education teachers. Sixty-three percent of public elementary reading specialists and 51 percent of other reading teachers had a master's degree, compared with 40 percent of general elementary teachers.

**Reading**—Reading specialists tended to have more educational preparation in reading than did the other teachers.



**Table 2. Percentage of public elementary-level teachers with specific subject-matter assignments, by educational attainment and preparation characteristics: 1999–2000**

Characteristics	Subject-matter assignment		
	Main assignment in reading (reading specialist)	At least one class in reading, but not main assignment (other reading teacher)	General elementary education
Educational attainment			
Bachelor's degree	100.0	98.2	99.9
Master's degree	63.3	51.3	40.2
Higher degree than master's	6.6	4.4	4.4
Educational preparation and certification in reading			
Major	36.2	5.3	5.1
Minor	6.4	#	1.6
Certification	81.4	4.3	2.7
Major and certification	31.7	‡	1.5
Educational preparation and certification in elementary education			
Major	76.3	74.0	75.1
Minor	2.1	1.1	2.1
Certification	20.2	76.3	93.2

#Rounds to zero.

‡Reporting standards not met.

NOTE: Teachers with undergraduate majors in both reading and elementary education were counted for both groups. Not all apparent differences in this table are statistically significant. Standard errors are available at <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004034>.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public Teacher Questionnaire" and "Charter Teacher Questionnaire," 1999–2000.

Thirty-six percent<sup>3</sup> of reading specialists had majored in reading at the postsecondary level, compared with 5 percent each of other reading teachers and general elementary education teachers. Six percent of reading specialists held minors in reading, compared with 2 percent or less of other reading teachers and general elementary education teachers. Eighty-one percent of reading specialists held a regular or provisional (awaiting only time on the job) state certification in reading, compared with 4 percent of other reading teachers and 3 percent of general elementary education teachers. Thirty-two percent of reading specialists held both a major and certification in reading. Thus, close to 9 out of 10 reading specialists who majored in reading held a reading certificate.

**Elementary education**—Three-quarters of those who taught reading had a major in elementary education (76 percent of reading specialists, 74 percent of other reading teachers, and 75 percent of general elementary teachers). Reading specialists and other reading teachers were less likely than

<sup>3</sup>This leaves 64 percent of reading specialists without a postsecondary major in reading. Further analyses found that 45.6 percent of reading specialists had a postsecondary major in elementary education, but not reading, and that 18.2 percent had neither postsecondary majors in reading nor elementary education.

general elementary education teachers to hold certification in elementary education. Twenty percent of reading specialists and 76 percent of other reading teachers were certified in elementary education, compared with 93 percent of general elementary education teachers. Similarly, 16 percent of reading specialists had a major and certification in elementary education, compared with 61 percent of other reading teachers and 72 percent of elementary education teachers.

Comparing reading teachers and general elementary education teachers in terms of their educational qualifications, 36 percent of reading specialists had a postsecondary major in reading, while 75 percent of general elementary teachers held a postsecondary major in elementary education. Thirty-two percent of reading specialists had both a major and certification in reading; 72 percent of general elementary education teachers had both a major and certification in elementary education. Data are available on the educational qualifications of public school teachers of other subjects in 1999–2000, as well. Another NCES report (Seastrom et al. 2002) reported public school teachers' educational qualifications in their subjects taught during the 1999–2000 school year. Seastrom and her colleagues found, at the

elementary grades level, that 71 percent of teachers with main assignments in special education held both a major and certification in special education. At the middle grades level, more than 40 percent of English, science, and social science teachers held both credentials in their field; at the high school grades level, 70 percent or more of English, mathematics, science, and social science teachers had both a major and certification in the field taught.

## Conclusion

This Issue Brief looked at the qualifications of elementary-level reading teachers relative to general elementary teachers. There were about 29,000 public elementary-level reading specialists in 1999–2000, compared with approximately 32,000 other elementary teachers who reported teaching at least one reading class and 1 million general elementary education teachers.

Public elementary school reading specialists differed from other elementary teachers on several measures of their assignments and educational backgrounds. Three-quarters of reading specialists held full-time positions and were more likely than other elementary teachers to have part-time or itinerant assignments. Reading specialists tended to teach pull-out classes, while other reading teachers were more likely to teach in departmentalized instruction assignments and general elementary education teachers were more likely to teach in self-contained classrooms. Reading specialists and other reading teachers were more likely to have master's degrees than other elementary-level teachers. Reading specialists also tended to have more educational preparation in reading than other elementary teachers.

Although reading specialists tended to have more educational preparation in reading than did the other teachers

typically engaged in reading instruction, they tended not to have as much educational preparation as other teachers in their main assignments. Seastrom et al. (2002) listed several subjects in which higher percentages of teachers held majors and certifications in their main assignments in 2002 than did reading specialists.

This Issue Brief provides an initial description of reading teachers and their assignments. It has not examined the school settings of teachers who specialize in reading instruction. Future analyses could examine the extent to which these teachers are employed in Title I or other schools with expected high need for specialized reading instruction.

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**Author affiliations:** D. Meyer and D.J. McGrath, Education Statistics Services Institute.

**For questions about content,** contact Edith McArthur ([edith.mcarthur@ed.gov](mailto:edith.mcarthur@ed.gov)).

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# POSTSECONDARY EDUCATION

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## Undergraduate Student Aid A Decade of Undergraduate Student Aid: 1989–90 to 1999–2000

*Christina Chang Wei, Xiaojie Li, and Lutz Berkner*

***This article was originally published as the Executive Summary of the Postsecondary Education Descriptive Analysis Report of the same name. The sample survey data are from the National Postsecondary Student Aid Study (NPSAS).***

The decade of the 1990s saw growth in tuition at the postsecondary level and in the amount of financial aid available, particularly student loans (U.S. General Accounting Office 1998; The College Board 2002). Since public funding was constrained in the early part of the decade, tuition increases were of growing concern. At the same time, federal financial aid programs and policies as we know them today were being shaped by the 1992 Reauthorization of the Higher Education Act (HEA-92). Growth in tuition, the increased availability of federal student loans (especially unsubsidized Stafford loans), and increases in grant aid from nonfederal sources were among the major driving forces of change in undergraduate student financing during this decade.

This study examines changes in many of the major aspects of undergraduate financing during the 1990s for full-time, full-year undergraduates enrolled in the four major institutional sectors located in the 50 states, the District of Columbia, and Puerto Rico: public 2-year, public 4-year, private not-for-profit 4-year, and private for-profit less-than-4-year. Tuition, total price of attendance, various net price

measures, need, total aid, remaining need after aid, grants, loans, and work-study<sup>1</sup> are compared using data from the four National Postsecondary Student Aid Studies (NPSAS<sup>2</sup>) conducted in 1989–1990, 1992–1993, 1995–1996, and 1999–2000. The main purpose of this report is to provide a convenient and readily accessible reference to the data most frequently used for trend analysis from the NPSAS surveys.

### Overview

During the 1990s, tuition increased faster than inflation and median household income (U.S. General Accounting Office 1996, 1998). Financial aid also increased, particularly in the form of federal loans. HEA-92 was a defining moment in the history of federal financial aid because it established the direction in which the federal government would support

<sup>1</sup>Federal tax subsidies provided through the Hope and Lifetime Learning Credits are not included as financial aid. This study focuses only on the types of assistance that are offered as part of a student's financial aid package.

<sup>2</sup>NPSAS is a nationwide study conducted by the U.S. Department of Education's National Center for Education Statistics (NCES) primarily to determine how undergraduate and graduate students and their families pay for postsecondary education. For more information on NPSAS surveys, consult the NPSAS website at <http://nces.ed.gov/npsas>.

postsecondary education in subsequent years.<sup>3</sup> As a result of its passage, many middle-income students who were previously ineligible for need-based student aid were able to receive it, primarily in the form of subsidized student loans. HEA-92 also increased the amounts students were permitted to borrow and for the first time allowed dependent students to take out federally guaranteed unsubsidized loans.

NPSAS data from 1989–90 and 1992–93 reflect the federal financial aid policies in effect prior to HEA-92, while the 1995–96 and 1999–2000 data reflect the changes introduced by that legislation. Between 1989–90 and 1999–2000, the average net tuition (tuition minus grant aid)<sup>4</sup> increased at public 2-year, public 4-year, and private not-for-profit 4-year institutions, indicating that among those types of institutions, increases in grant aid did not keep pace with increases in tuition over time. As the decade progressed, the proportion of full-time<sup>5</sup> undergraduates who received any type of financial aid (grants, loans, work-study, or other) increased among all of the institutional sectors included in this study, from an overall average of 60 percent to 74 percent between 1989–90 and 1999–2000 (figure A). Among those who received aid, the percentage of the price of attendance that was covered by any type of aid also increased over time, from 47 percent to 54 percent. Increases between 1989–90 and 1999–2000 were seen in the percentage of students who received at least one of the two major types of aid: grants (51 percent to 60 percent) and loans (36 percent to 47 percent) (figure B).

Single parents, however, were one group of students for whom financial aid declined. While as many as 94 percent of single parents who were enrolled full time received some form of financial aid in 1989–90, the proportion had dropped to 79 percent by 1999–2000.<sup>6</sup> This may have reflected several changes in the characteristics of single parents enrolled full time in postsecondary education. Between 1989–90 and 1999–2000, the average expected family con-

tribution (EFC) among single parents had increased from \$800 to \$1,300 even though it had decreased among all independent students with incomes at or below the median. In 1989–90, about one-half (48 percent) of all single parents worked while they were enrolled full time; in 1999–2000, this proportion had increased to about three-fourths (77 percent).<sup>7</sup> While 87 percent of single parents were females in 1989–90, this proportion had dropped to 76 percent in 1999–2000. The socioeconomic backgrounds of single parents also appear to have changed. In 1989–90 and 1995–96, about 35 to 38 percent had a parent with at least some postsecondary education; in 1999–2000, about one-half (51 percent) of all single parents came from families with one or more parents who had some postsecondary education.<sup>8</sup> In addition, the proportion of single parents receiving public assistance while enrolled full time decreased from 34 percent in 1995–96 to 9 percent in 1999–2000. Compared to the earlier years, single parents enrolled full time at the end of the decade were less likely to be receiving public assistance, more likely to have parents with some postsecondary education, and more likely to be working while they were enrolled. These changes may have been related to a reduced eligibility for need-based financial aid among single parents.

Among the different types of financial aid that are available to postsecondary students, the growth in federal unsubsidized loans has been most prominent.<sup>9</sup> After the restriction on dependent students was lifted by HEA-92, the overall rate at which full-time undergraduates borrowed unsubsidized loans increased from 3 percent to 23 percent between 1989–90 and 1999–2000.<sup>10</sup> However, the inclusion of dependent students was not the sole driving force behind this increase. Independent undergraduates also were more likely to borrow federal unsubsidized loans in 1999–2000 than in 1989–90 (35 percent vs. 11 percent). In addition to the increase in unsubsidized loans, the average annual total loan amount from all sources combined (both subsidized and unsubsidized loans from federal, state, institutional,

<sup>3</sup>Reauthorization also took place in 1998 (HEA-98) with relatively minor changes. Reauthorization for 2004 was under consideration at the time of this publication.

<sup>4</sup>Grants are not necessarily limited to paying for tuition, but may cover other educational expenses as well. If the grant amount is greater than the tuition charges, the excess is applied to room and board or other expenses. In calculating the average net tuition, negative values (when the grant amount exceeds tuition) were set to zero.

<sup>5</sup>In this study, students were considered to have full-time, full-year status if they were enrolled full time during the academic year for 8 or more months at public 2-year, public 4-year, and private not-for-profit 4-year institutions, or 6 or more months at private for-profit less-than-4-year institutions. For ease of presentation, the term "full time" will be used throughout the report to refer to students enrolled full time for the full academic year.

<sup>6</sup>These figures represent all institutions, including private for-profit less-than-4-year institutions where no measurable difference was detected in the rate at which single parents received aid in 1989–90 and 1999–2000.

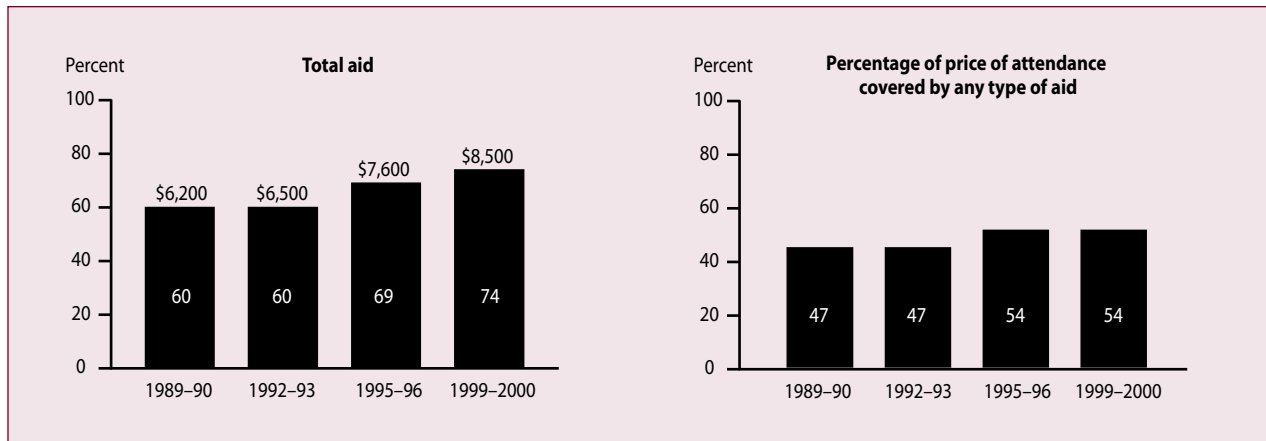
<sup>7</sup>1989–90 National Postsecondary Student Aid Study Data Analysis System and 1999–2000 National Postsecondary Student Aid Study Data Analysis System (data not shown in tables).

<sup>8</sup>1989–90 National Postsecondary Student Aid Study Data Analysis System, 1995–96 National Postsecondary Student Aid Study Data Analysis System, and 1999–2000 National Postsecondary Student Aid Study Data Analysis System (data not shown in tables).

<sup>9</sup>Unsubsidized Stafford loans are available to students who are enrolled at least half time, and the amount borrowed may not exceed the price of attendance, minus any other aid. Unlike subsidized Stafford loans, the federal government does not pay any interest on the loans while the student is enrolled and eligibility for unsubsidized Stafford loans is not restricted by need.

<sup>10</sup>1989–90 National Postsecondary Student Aid Study Data Analysis System and 1999–2000 National Postsecondary Student Aid Study Data Analysis System (data not shown in tables).

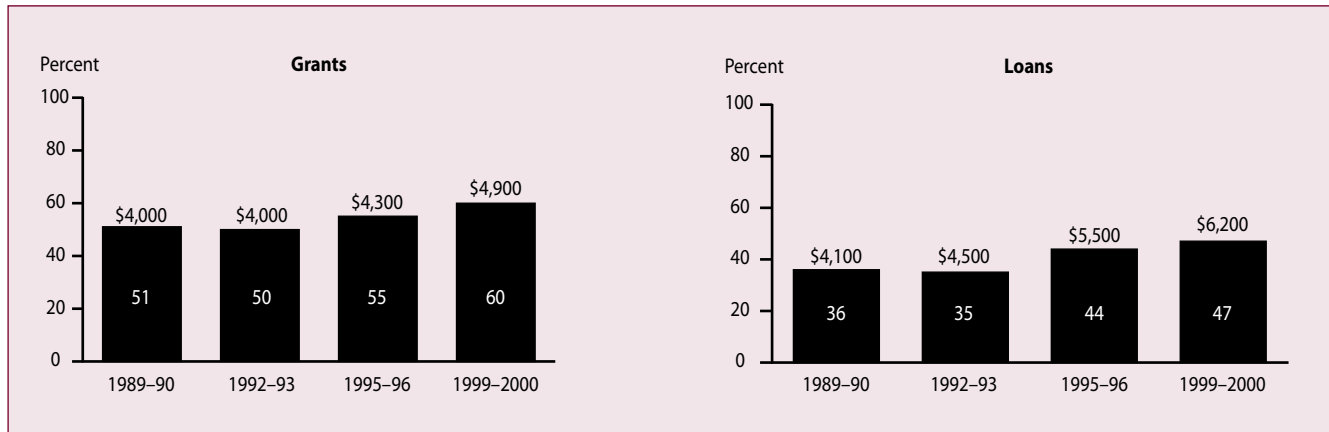
**Figure A.** Among full-time, full-year undergraduates, percentage who received financial aid, and among those receiving aid, average amount of aid received (in constant 1999 dollars) and the percentage of the price of attendance that was covered by any type of aid: 1989–90, 1992–93, 1995–96, and 1999–2000



NOTE: Limited to undergraduate students who were U.S. citizens or permanent residents and attended only one institution in the 50 states, the District of Columbia, or Puerto Rico. Excluded are students enrolled at institutions other than the four major sectors (i.e., public 2-year, public 4-year, private not-for-profit 4-year, and private for-profit less-than-4-year) who constituted no more than 5 percent of the undergraduate population across the four NPSAS years. To have full-time, full-year status, students must be enrolled full time during the academic year for 8 or more months at public 2-year, public 4-year, and private not-for-profit 4-year institutions, or 6 or more months at private for-profit less-than-4-year institutions. Estimates for the 1989–90, 1992–93, and 1995–96 academic years were adjusted for inflation using the Consumer Price Index for All Urban Consumers (CPI-U). "Total aid" includes all types of financial aid: grants, loans, work-study, and other (such as employer's benefits and veteran's benefits). The price of attendance is equal to the total amount of tuition plus estimated living expenses for the academic year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989–90, 1992–93, 1995–96, and 1999–2000 National Postsecondary Student Aid Studies (NPSAS:90, NPSAS:93, NPSAS:96, and NPSAS:2000).

**Figure B.** Among full-time, full-year undergraduates, percentage who received grants, percentage who received loans, and the average amount of grant and loan aid received by those receiving grant and loan aid, respectively (in constant 1999 dollars): 1989–90, 1992–93, 1995–96, and 1999–2000



NOTE: Limited to undergraduate students who were U.S. citizens or permanent residents and attended only one institution in the 50 states, the District of Columbia, or Puerto Rico. Excluded are students enrolled at institutions other than the four major sectors (i.e., public 2-year, public 4-year, private not-for-profit 4-year, and private for-profit less-than-4-year) who constituted no more than 5 percent of the undergraduate population across the four NPSAS years. To have full-time, full-year status, students must be enrolled full time during the academic year for 8 or more months at public 2-year, public 4-year, and private not-for-profit 4-year institutions, or 6 or more months at private for-profit less-than-4-year institutions. Estimates for the 1989–90, 1992–93, and 1995–96 academic years were adjusted for inflation using the Consumer Price Index for All Urban Consumers (CPI-U). "Grants" include all federal, state, institutional, and privately funded grants. "Loans" include all federal, state, institutional, and privately funded loans, as well as Parent Loans for Undergraduate Students (PLUS), a federal loan that is taken out by parents of dependent undergraduates, and do not include loans from friends or family. Students who received both grants and loans are represented in both figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989–90, 1992–93, 1995–96, and 1999–2000 National Postsecondary Student Aid Studies (NPSAS:90, NPSAS:93, NPSAS:96, and NPSAS:2000).

and private agencies) also increased during this time for both independent and dependent loan recipients (\$4,100 to \$6,200).

### Key Definitions and Data Issues

There are several components and types of price, net price, and financial need analyzed in this study. The definitions are as follows: “total price of attendance” (or “student budget”) is equal to tuition plus estimated living expenses; “net tuition” is defined as tuition minus total grants received (up to the tuition amount)<sup>11</sup>; “net price of attendance” is the total price of attendance minus all grants and loans received; “financial need” is equal to the total price of attendance minus the federal EFC—which is the federal estimate of the student’s and family’s ability to pay based on the formula (need analysis) prescribed by law; and “remaining financial need” (or “unmet need”) is the amount of financial need that remains after all financial aid, including loans, is subtracted from the total financial need.

The two net price variables used in this study—net tuition and net price of attendance—measure the different levels of cost to students and families. The net tuition variable (tuition and fees minus grant aid) represents the amount of tuition paid after grants are received, while the net price of attendance (price of attendance minus all grant and loan aid) represents the amount paid for both tuition and living expenses after all aid is taken into account.

Researchers who are interested in changes in tuition and grant aid can utilize the “net tuition” variables included in this report for further study. Because net tuition is equal to the amount of tuition that is paid after all grants have been received, and does not subtract loans, it represents the amount of tuition for which students and families are responsible. In some cases, however, grants will exceed the amount of tuition (and would therefore be used to offset the cost of living), resulting in a negative net tuition amount. In calculating the average net tuition, all negative net tuition values were set to zero. In 1999–2000, the percentage of full-time, full-year undergraduates with zero net tuition was 5 percent at private for-profit less-than-4-year institutions, 12 percent at private not-for-profit 4-year institutions, 26 percent at public 4-year institutions, and 34 percent at public 2-year institutions.

Analysis of changes in the net price of attendance can help determine whether total aid—which includes loans that must be repaid—has kept up with changes in total price over time. However, the net price of attendance does not equal the actual price that must be paid for a postsecondary education because loans were subtracted from the total price to achieve this estimate. While grants reduce the amount to be paid, loans only postpone the actual cost since loans must be repaid eventually and with interest. The net price of attendance represents only the immediate, out-of-pocket costs upon enrollment. The actual cost of a postsecondary education over the lifetime of the student (or parent) who has taken out a loan will be higher. Any increases or decreases in average net price should be viewed with caution. A reduction in net price over time may only signify that students and/or parents have taken out more loans rather than received more grant aid or paid less in tuition.

Dependency and income are important considerations when financial aid is awarded. Most students under age 24 are dependent, and their income quartiles are based on their parents’ income. Most independent students are 24 or older, and their income quartiles are based on their own income (and that of their spouse, if married). In addition, independent students are disaggregated by their marital status and whether they had children, factors that are also considered in determining financial aid eligibility. In this report, comparisons of average amounts over time are made using constant (1999) dollars. In most cases, comparisons in constant (1999) dollars were made only between the two survey years at the beginning and end of the decade (1989–90 and 1999–2000), although estimates from the interim NPSAS years (1992–93 and 1995–96) are presented to provide the reader with complete information. Throughout the report, statistical conclusions are drawn at the  $p < .05$  significance level.

### Changes in Financial Aid by Type of Institution

The wide variation in level of tuition charged by the different institutional sectors necessitates an analysis of trends by institution type. Following are summaries of the detailed findings from each of the institutional sectors in this study. Comparisons of average amounts are presented in constant (1999) dollars.

#### Public 2-year institutions

Among full-time undergraduates enrolled in public 2-year institutions, the average tuition increased from \$1,100 to \$1,500 and the average net tuition (tuition minus grants) increased from \$700 to \$900 between 1989–90 and 1999–2000.

<sup>11</sup>Grants are not necessarily limited to paying for tuition, but may cover other educational expenses as well. If the grant amount is greater than the tuition charges, the excess is applied to room and board or other expenses. In calculating the average net tuition, negative values (when the grant amount exceeds tuition) were set to zero.

The percentage of all full-time students receiving financial aid also grew (49 percent to 58 percent), as did the average amount of total aid received (\$3,300 to \$3,900) (figure C). Middle-income dependent students were more likely to take out loans at the end of the decade than at the beginning (lower middle: 9 percent to 19 percent; upper middle: 6 percent to 13 percent), although no measurable change was detected in the overall rate of borrowing among all full-time students. The percentage of those who received unsubsidized Stafford loans increased from 1 percent to 9 percent. Also contributing to the overall increase in aid between 1989–90 and 1999–2000 was growth in the percentage of all full-time students receiving grants (44 percent to 51 percent). The percentage of dependent students who received federal Supplemental Educational Opportunity Grants (SEOGs) increased for those in the lowest income quarter<sup>12</sup> (7 percent to 16 percent). Dependent students were more likely to receive state grants (12 percent vs. 18 percent), and both dependent and independent students were more likely to receive institutional grants (16 percent vs. 9 percent).

#### Public 4-year institutions

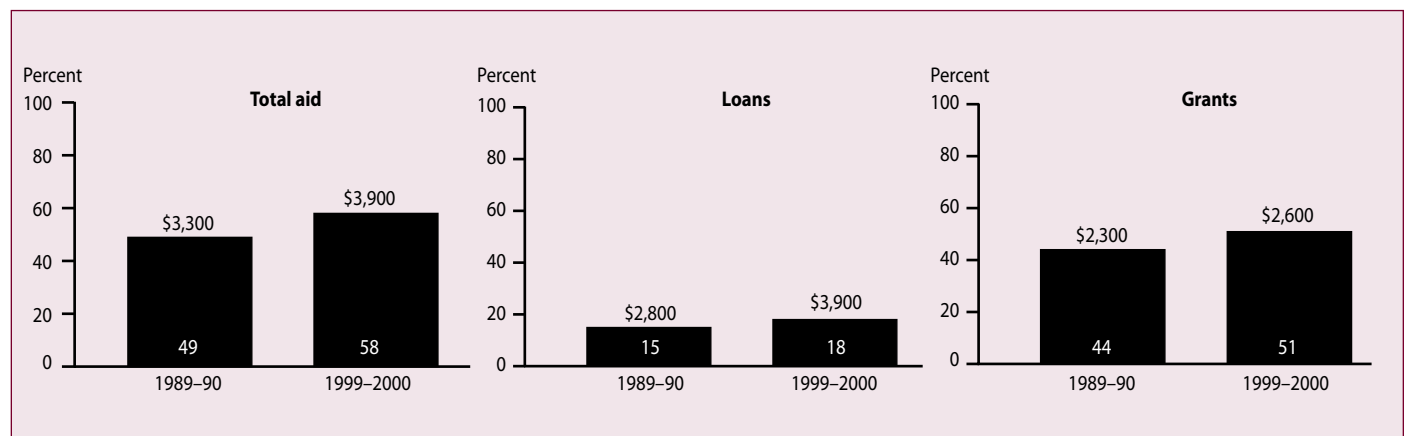
Among full-time undergraduates enrolled in public 4-year institutions, the average tuition increased from \$2,800 to \$4,200 and the average net tuition (tuition minus grants)

grew from \$1,900 to \$2,700 between 1989–90 and 1999–2000. Gains during this period were seen in the percentage receiving any type of financial aid (52 percent to 73 percent) and in the average amount of total financial aid received (\$5,200 to \$7,100) (figure D). Loans, in particular, became an increasingly important source of financing for students in this sector. In 1999–2000, one-half (50 percent) of all full-time undergraduates in public 4-year institutions were taking out loans, compared to about one-third (31 percent) 10 years earlier. The percentage receiving subsidized Stafford loans increased from 24 percent to 38 percent, and the percentage receiving unsubsidized Stafford loans increased from 1 percent to 25 percent.

There were gains in Parent Loans for Undergraduate Students (PLUS), a federal loan taken out by parents of dependent undergraduates, and nonfederal loan borrowing as well. Increases in aid were also driven by growth in the percentage of undergraduates receiving grants (42 percent to 55 percent). In 1999–2000 (compared with 1989–90), both dependent and independent low-income students were more likely to receive federal Pell Grants (low-income dependent students: 73 percent vs. 65 percent; low-income independent students: 76 percent vs. 63 percent); low-income independent students were more likely to receive federal SEOGs (16 percent vs. 24 percent); and all full-time students were more likely to receive state or institutional grants.

<sup>12</sup>Hereafter referred to as “low-income students” for ease of presentation.

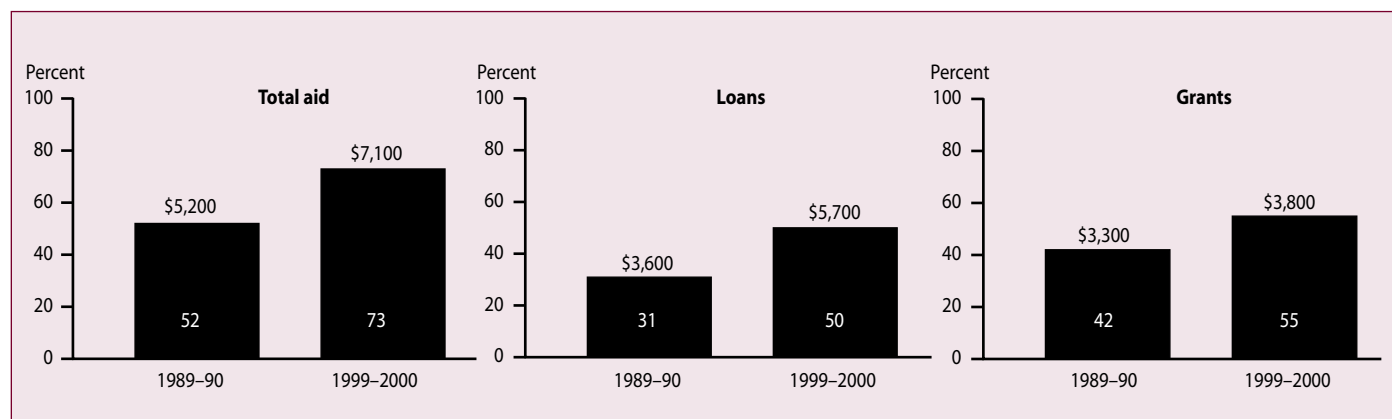
**Figure C. Among full-time, full-year undergraduates enrolled at public 2-year institutions, percentage who received aid and average amount of aid received by those receiving aid (in constant 1999 dollars), by type of aid: 1989–90 and 1999–2000**



NOTE: Limited to undergraduate students who were U.S. citizens or permanent residents and attended only one institution in the 50 states, the District of Columbia, or Puerto Rico. Excluded are students enrolled at institutions other than the four major sectors (i.e., public 2-year, public 4-year, private not-for-profit 4-year, and private for-profit less-than-4-year) who constituted no more than 5 percent of the undergraduate population across the four NPSAS years. To have full-time, full-year status, students must be enrolled full time during the academic year for 8 or more months. Estimates for the 1989–90 academic year were adjusted for inflation using the Consumer Price Index for All Urban Consumers (CPI-U). “Total aid” includes all types of financial aid: grants, loans, work-study, and other (such as employer’s benefits and veteran’s benefits). “Loans” include all federal, state, institutional, and privately funded loans, as well as Parent Loans for Undergraduate Students (PLUS), a federal loan that is taken out by parents of dependent undergraduates, and do not include loans from friends or family. “Grants” include all federal, state, institutional, and privately funded grants. Figures include students who received both loans and grants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989–90 and 1999–2000 National Postsecondary Student Aid Studies (NPSAS:90 and NPSAS:2000).

**Figure D. Among full-time, full-year undergraduates enrolled at public 4-year institutions, percentage who received aid and average amount of aid received by those receiving aid (in constant 1999 dollars), by type of aid: 1989–90 and 1999–2000**



NOTE: Limited to undergraduate students who were U.S. citizens or permanent residents and attended only one institution in the 50 states, the District of Columbia, or Puerto Rico. Excluded are students enrolled at institutions other than the four major sectors (i.e., public 2-year, public 4-year, private not-for-profit 4-year, and private for-profit less-than-4-year) who constituted no more than 5 percent of the undergraduate population across the four NPSAS years. To have full-time, full-year status, students must be enrolled full time during the academic year for 8 or more months. Estimates for the 1989–90 academic year were adjusted for inflation using the Consumer Price Index for All Urban Consumers (CPI-U). “Total aid” includes all types of financial aid: grants, loans, work-study, and other (such as employer’s benefits and veteran’s benefits). “Loans” include all federal, state, institutional, and privately funded loans, as well as Parent Loans for Undergraduate Students (PLUS), a federal loan that is taken out by parents of dependent undergraduates, and do not include loans from friends or family. “Grants” include all federal, state, institutional, and privately funded grants. Figures include students who received both loans and grants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989–90 and 1999–2000 National Postsecondary Student Aid Studies (NPSAS:90 and NPSAS:2000).

### Private not-for-profit 4-year institutions

Among full-time undergraduates enrolled in private not-for-profit 4-year institutions, the average tuition increased from \$11,500 to \$14,800 and the average net tuition (tuition minus grants) grew from \$7,600 to \$8,800 between 1989–90 and 1999–2000. The percentage of all full-time undergraduates receiving financial aid increased from 74 percent to 85 percent and the average amount of total aid received grew from \$9,200 to \$13,800 between 1989–90 and 1999–2000 (figure E). Changes in financial aid were related to dependency status, as dependent students had a higher average tuition than independent students in both 1989–90 and 1999–2000. The percentage of dependent students who received any type of financial aid increased from 71 percent to 85 percent, but 85 percent of independent students were already receiving aid in 1989–90 and no measurable change from this percentage was detected in 1999–2000. Borrowing increased among dependent students during this period (45 percent to 63 percent). Dependent students were also more likely to receive subsidized Stafford loans (50 percent vs. 37 percent) and their parents were more likely to take out PLUS loans (12 percent vs. 6 percent) in 1999–2000 than in 1989–90. Although no change was detected in the overall rate of borrowing among independent students (58 percent in both years), both independent and dependent students were more likely to take out unsubsidized loans (24 percent vs. 2 percent) and nonfederal loans (14 percent vs. 3 percent) in 1999–2000 than in 1989–90. Low-income dependent students were more likely to receive federal

Pell Grants, and both dependent and independent low-income students were more likely to receive federal SEOGs in 1999–2000 than in 1989–90. Dependent students were more likely to receive institutional grant aid in 1999–2000 than in 1989–90, while no significant difference was found among independent students. The percentage of full-time dependent students who received work-study aid grew from 21 percent to 29 percent between 1989–90 and 1999–2000.

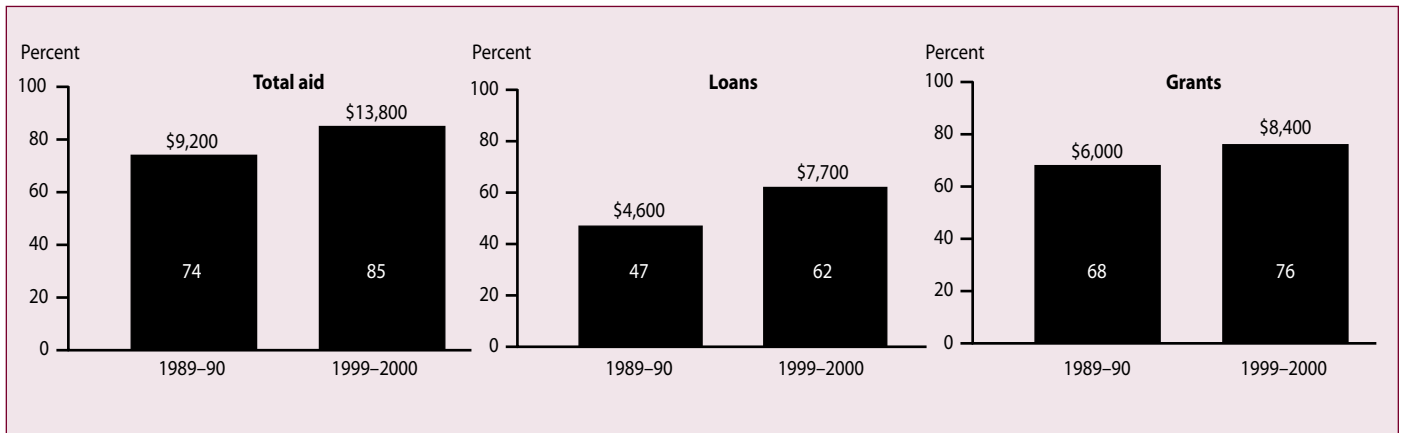
### Private for-profit less-than-4-year institutions

Among full-time undergraduates enrolled for 6 or more months in private for-profit less-than-4-year institutions, no statistical difference was detected in average tuition between 1989–90 and 1999–2000 (about \$7,400 in both years).<sup>13</sup> The percentage of full-time undergraduates who received any type of financial aid increased from 88 to 93 percent and the average amount they received grew from \$6,300 to \$8,000 between 1989–90 and 1999–2000 (figure F). This study did not detect a difference in the overall percentage of full-time students who took out student loans in 1989–90 and 1999–2000 (about 75 percent), but dependent students with incomes above the lowest quarter were more likely to take out loans in 1999–2000 than in 1989–90. This study also did not detect a difference in the overall percentage of

<sup>13</sup>The definition of full-time, full-year status is different for students enrolled in private for-profit less-than-4-year institutions where certificates can be attained within a shorter time frame. Unlike those enrolled in other sectors where full-time, full-year status was defined as full-time enrollment for 8 or more months, students at private for-profit less-than-4-year institutions were considered to be enrolled full time, full year if they attended full time for 6 or more months.



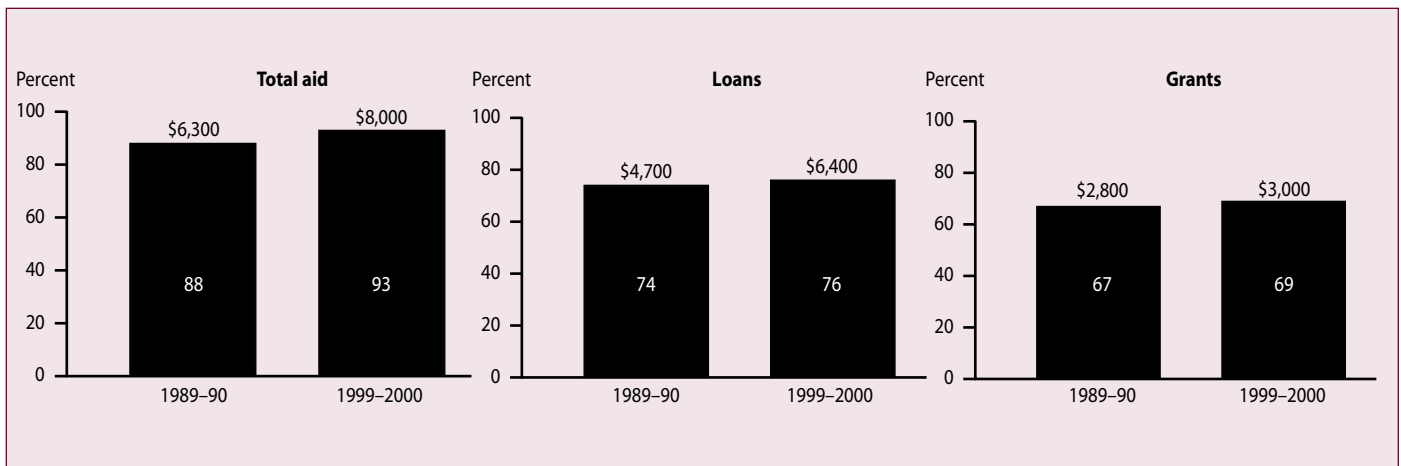
**Figure E. Among full-time, full-year undergraduates enrolled at private not-for-profit 4-year institutions, percentage who received aid and average amount of aid received by those receiving aid (in constant 1999 dollars), by type of aid: 1989–90 and 1999–2000**



NOTE: Limited to undergraduate students who were U.S. citizens or permanent residents and attended only one institution in the 50 states, the District of Columbia, or Puerto Rico. Excluded are students enrolled at institutions other than the four major sectors (i.e., public 2-year, public 4-year, private not-for-profit 4-year, and private for-profit less-than-4-year) who constituted no more than 5 percent of the undergraduate population across the four NPSAS years. To have full-time, full-year status, students must be enrolled full time during the academic year for 8 or more months. Estimates for the 1989–90 academic year were adjusted for inflation using the Consumer Price Index for All Urban Consumers (CPI-U). "Total aid" includes all types of financial aid: grants, loans, work-study, and other (such as employer's benefits and veteran's benefits). "Loans" include all federal, state, institutional, and privately funded loans, as well as Parent Loans for Undergraduate Students (PLUS), a federal loan that is taken out by parents of dependent undergraduates, and do not include loans from friends or family. "Grants" include all federal, state, institutional, and privately funded grants. Figures include students who received both loans and grants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989–90 and 1999–2000 National Postsecondary Student Aid Studies (NPSAS:90 and NPSAS:2000).

**Figure F. Among full-time, full-year undergraduates enrolled at private for-profit less-than-4-year institutions, percentage who received aid and average amount of aid received by those receiving aid (in constant 1999 dollars), by type of aid: 1989–90 and 1999–2000**



NOTE: Limited to undergraduate students who were U.S. citizens or permanent residents and attended only one institution in the 50 states, the District of Columbia, or Puerto Rico. Excluded are students enrolled at institutions other than the four major sectors (i.e., public 2-year, public 4-year, private not-for-profit 4-year, and private for-profit less-than-4-year) who constituted no more than 5 percent of the undergraduate population across the four NPSAS years. To have full-time, full-year status, students must be enrolled full time during the academic year for 6 or more months. Estimates for the 1989–90 academic year were adjusted for inflation using the Consumer Price Index for All Urban Consumers (CPI-U). "Total aid" includes all types of financial aid: grants, loans, work-study, and other (such as employer's benefits and veteran's benefits). "Loans" include all federal, state, institutional, and privately funded loans, as well as Parent Loans for Undergraduate Students (PLUS), a federal loan that is taken out by parents of dependent undergraduates, and do not include loans from friends or family. "Grants" include all federal, state, institutional, and privately funded grants. Figures include students who received both loans and grants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989–90 and 1999–2000 National Postsecondary Student Aid Studies (NPSAS:90 and NPSAS:2000).

full-time students receiving grants in 1989–90 and 1999–2000 (about 68 percent). However, low-income students were more likely to receive grants in 1999–2000 than in 1989–90 (dependent students: 90 percent vs. 81 percent; independent students: 92 percent vs. 85 percent), including federal Pell Grants and state grants. Independent students with incomes at or below the median were more likely to receive federal SEOGs in 1999–2000 compared to 1989–90 (30 percent vs. 12 percent).

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**Data source:** The NCES National Postsecondary Student Aid Study (NPSAS), 1989–90, 1992–93, 1995–96, and 1999–2000.

**For technical information,** see the complete report:

Wei, C.C., Li, X., and Berkner, L. (2004). *A Decade of Undergraduate Student Aid: 1989–90 to 1999–2000* (NCES 2004–158).

**Author affiliations:** C.C. Wei, X. Li, and L. Berkner, MPR Associates.

**For questions about content,** contact Aurora D'Amico ([aurora.d'amico@ed.gov](mailto:aurora.d'amico@ed.gov)).

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# Historically Black Colleges

## Historically Black Colleges and Universities, 1976 to 2001

Stephen Provasnik and Linda L. Shafer

*This article was originally published as the Summary of the E.D. TAB report of the same name. The universe data are from the Integrated Postsecondary Education Data System (IPEDS) and the Higher Education General Information Survey (HEGIS).*

### Introduction

This report presents a statistical overview of historically Black colleges and universities (HBCUs) from 1976 to 2001. HBCUs are institutions established prior to 1964, whose principal mission is the education of Black Americans.

Although most HBCUs are 4-year institutions in the southern United States, they represent a diverse set of institutions in 19 states, the District of Columbia, and the Virgin Islands. They are both public and private; single-sex and coeducational; predominantly Black and predominantly White; 2-year and 4-year colleges; research universities, professional schools, community colleges, and small liberal arts colleges.

Three colleges for Blacks were established before 1862. Cheyney University of Pennsylvania was established in the 1830s. Lincoln University in Pennsylvania and Wilberforce College in Ohio were established in the 1850s. In 1862, the first land-grant college provisions, known as the First Morrill Act, were enacted by Congress. By the late 1860s, Morrill Act funds were distributed to the states, with the intention that they would foster educational opportunity for all students, especially newly freed Blacks. Congress passed the Second Morrill Act in 1890, which required states with dual systems of higher education (all-White and non-White) to provide land-grant institutions for both systems. Nineteen land-grant institutions for Blacks were organized and were initially non-degree-granting agricultural, mechanical, and industrial schools. In 1965, Congress introduced its institutional aid program for HBCUs (20 USC 1060). This E.D. TAB report presents tabular data on institution enrollment, degrees conferred, staff and salaries, revenues, expenditures, and student financial aid.

### Data

The data used in this report are from the Integrated Postsecondary Education Data System (IPEDS) and, prior to 1986, its predecessor survey, the Higher Education General Information Survey (HEGIS). The trend tables draw on HEGIS and IPEDS surveys that collected information concerning enrollment, institutional finances, student financial aid, salaries, tenure and fringe benefits, staff, and degree completions. According to section 490 of the Higher

Education Amendments of 1992 (PL. 102-325), IPEDS is mandatory for any institutions that participate in or are applicants for participation in any federal financial assistance program authorized by Title IV of the Higher Education Act of 1965, as amended [20 USC 1094 (a)(17)]. For the spring 2002 data collection, the overall response rate was 98.6 percent for degree-granting institutions (including those eligible for Title IV federal financial aid programs and that grant an associate's or higher degree) and 98.6 percent for non-degree-granting institutions. In addition, other postsecondary institutions that do not participate in Title IV programs are invited to participate. Of the approximately 10,000 postsecondary institutions surveyed in 2002, some 6,696 institutions had Title IV programs and are the basis for comparison in the analysis.

IPEDS is a universe survey with missing data subject to imputation for nonresponse in the enrollment, degree, staff, and finance data. Because IPEDS is a census of the population of Title IV schools, the data presented here are not subject to sampling error. However, they are subject to nonsampling error, the sources of which vary with the survey instrument. A technical appendix is included in the full report that explains the data sources in more detail.

### Selected Findings

#### Enrollment

- Total fall enrollment in HBCUs was about 290,000 in 2001 (table 1). For the past 4 decades, women have made up a larger proportion of enrollment in these institutions than men (figure 1); in 2001, women made up 61 percent of enrollment.
- In 2001, 90 percent of HBCU students attended 4-year institutions and 10 percent attended 2-year institutions. HBCU students were more likely to attend public institutions than private, not-for-profit institutions (72 vs. 28 percent).
- Two percent of all college students were enrolled in HBCUs in 2001. Black enrollment at HBCUs accounted for 13 percent of all Black enrollment (table 1).
- In 2001, Blacks constituted 82 percent of all those enrolled in HBCUs and in 1976, they made up 85 percent.

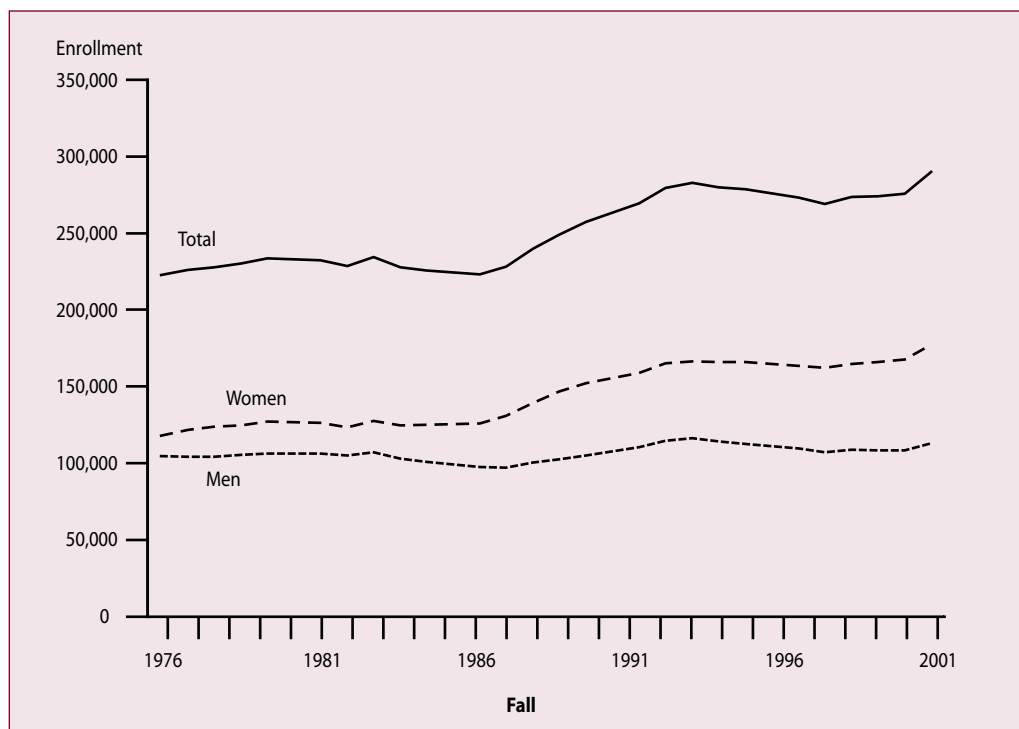
**Table 1. Fall enrollment in historically Black colleges and universities (HBCUs), by sex and attendance status of student, and type and control of institution: 2001**

Sex of student, and type and control of institution	HBCU enrollment	Enrollment in HBCUs as a percentage of all institutions	Black HBCU enrollment as a percentage of all Black enrollment
Total	289,985	1.8	12.9
Men	112,874	1.6	13.5
Women	177,111	2.0	12.6
Full-time	222,453	2.4	18.4
Part-time	67,532	1.0	5.6
2-year	29,438	0.5	1.8
4-year	260,547	2.7	21.3
Public	210,083	1.7	11.8
2-year	28,737	0.5	1.8
4-year	181,346	2.9	23.2
Private	79,902	2.2	16.4
2-year	701	0.3	1.4
4-year	79,201	2.3	18.2

NOTE: Black includes African American and excludes Hispanic origin.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2002.

**Figure 1. Fall enrollment in historically Black colleges and universities, by total and sex: 1976 to 2001**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1976 through 1985 Higher Education General Information Survey (HEGIS), "Fall Enrollment in Colleges and Universities"; 1986 through 2001 Integrated Postsecondary Education Data System (IPEDS), "Fall Enrollment Survey" (IPEDS-EF:86-99), Spring 2001 and Spring 2002. (This table was prepared in April 2004.)

### Degrees conferred by HBCUs

- More bachelor's degrees than other degrees were awarded by HBCUs in 2001–02 (table 2).
- Compared with other racial/ethnic groups, Blacks earned the highest proportion of degrees awarded by HBCUs in 2001 at each level—associate's, bachelor's, master's, doctor's, and first-professional degrees. Blacks earned 87 percent of bachelor's degrees.
- In 2001, more than one-fifth of all bachelor's degrees awarded to Blacks were from HBCUs (figure 2). Compared with 1976–77, there were proportionately fewer Blacks earning bachelor's degrees at HBCUs in 2001–02 (35 percent vs. 22 percent). (Although the number of bachelor's degrees earned by Blacks at HBCUs increased from 20,800 to 25,100 during this period, the number of Blacks earning degrees at other types of institutions rose more rapidly).
- Since 1990–91, 60 percent or more of associate's, bachelor's, and master's degrees at HBCUs have been earned by women. At HBCUs since 1994–95, women have earned more than half of the first-professional degrees, and since 1999–2000, women have earned more than half of the doctor's degrees.

### Staff and salaries

- Of the 14,100 full-time faculty at HBCUs in 2001, 72 percent were members of minority groups. Of full-time faculty, 58 percent were male and 42 percent were female. Blacks constituted 60 percent of the full-time faculty at HBCUs and Whites constituted 27 percent.

- In 2001, 54,551 persons were employed at HBCUs, of which 76 percent were Black.
- In 2001–02, average salaries of full-time instructional faculty on 9-month contracts at HBCUs were 81 percent of what they were in all institutions. Since 1976–77, the average salaries at HBCUs have been around 80 percent of those at all institutions (ranging from 79 to 84 percent).

### Finance

- Private, not-for-profit HBCUs in 1996–97 derived 22 percent of their revenue from student tuition and fees; by 2000–01, the proportion had increased to 25 percent.
- In 1976–77, current-fund revenue for public HBCUs from tuition and fees was 14 percent; by 2000–01, it had increased to 20 percent.
- Educational and general expenditures per full-time-equivalent (FTE) student for public HBCUs increased from \$10,100 in 1976–77 to \$15,100 in 2000–01 (in constant 2000–01 dollars); expenditures per FTE student for all public institutions increased from \$10,800 in 1976–77 to \$16,500 in 2000–01 (in constant 2000–01 dollars) (figure 3).
- Private, not-for-profit HBCUs spent less per FTE student in instructional expenditures than all private, not-for-profit colleges and universities. In 2000–01, HBCUs averaged \$7,732 and all institutions averaged \$10,662—a difference of \$2,930.

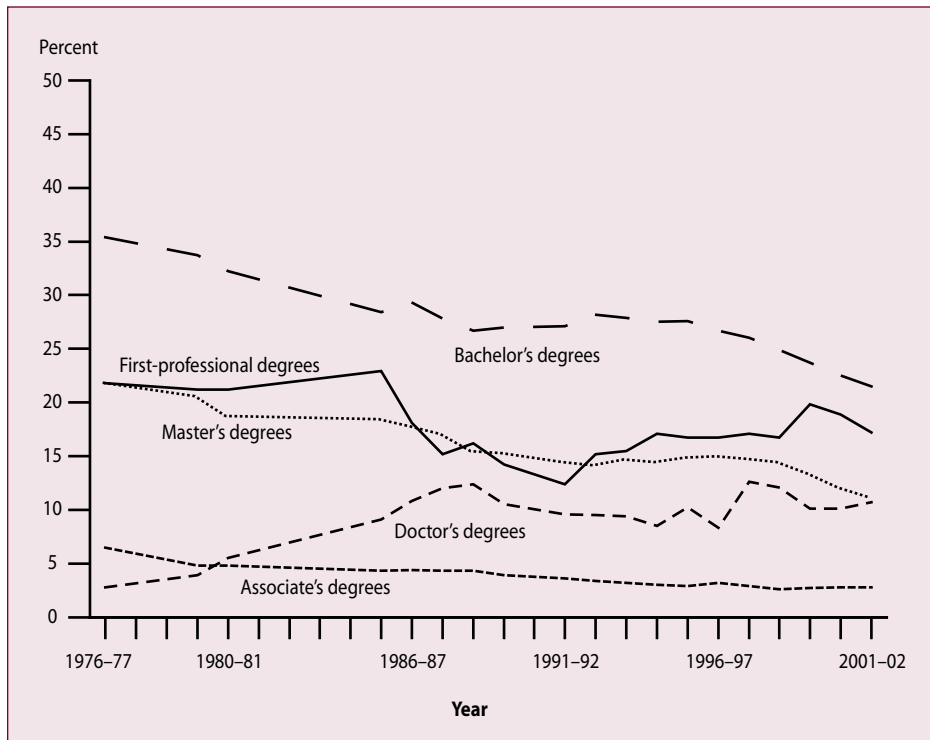
**Table 2. Degrees conferred by historically Black colleges and universities (HBCUs), by degree: 2001–02**

Degree	Number of degrees	HBCU degrees as a percentage of all degrees awarded	HBCU degrees to Blacks as a percentage of all degrees to Blacks
Associate's	3,436	0.6	2.8
Bachelor's	28,846	2.2	21.5
Master's	6,338	1.3	11.0
Doctor's	364	0.8	10.7
First-professional	1,427	1.8	17.2

NOTE: Black includes African American and excludes Hispanic origin.

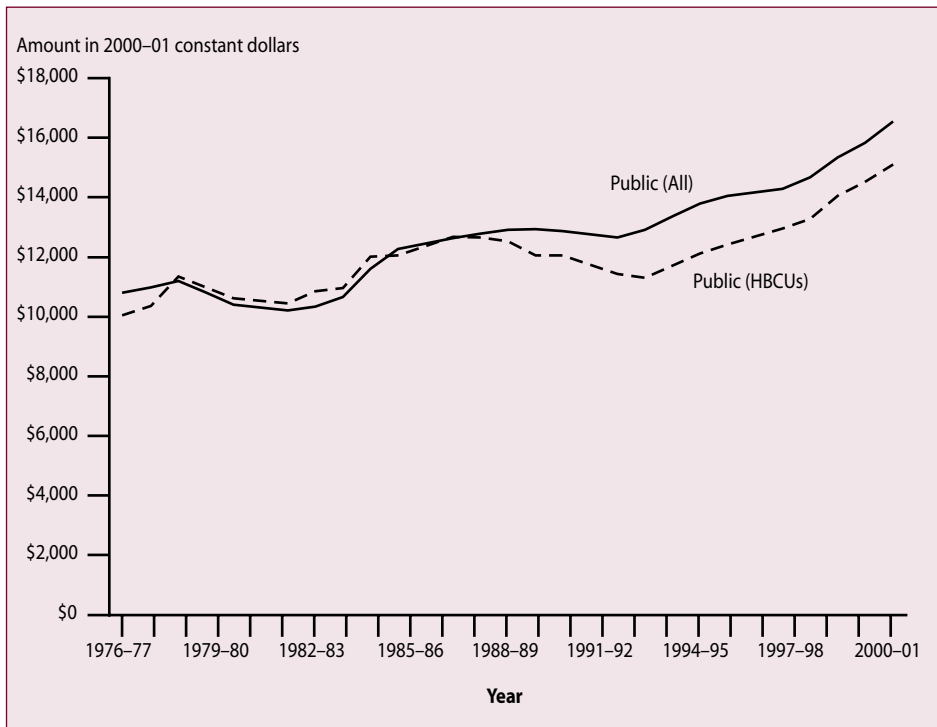
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2002.

**Figure 2. Percentage of degrees earned by Blacks at historically Black colleges and universities as a percentage of all degrees earned by Blacks: 1976–77 to 2001–02**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1976–77 through 1984–85 Higher Education General Information Survey (HEGIS), “Degrees and Other Formal Awards Conferred”; 1986–87 through 2001–02 Integrated Postsecondary Education Data System (IPEDS), “Completions Survey” (IPEDS-C:86–87 through 98–99), Fall 2000, Fall 2001, and Fall 2002. (This table was prepared in April 2004.)

**Figure 3. Educational and general expenditures per full-time-equivalent student in public historically Black colleges and universities and in all public institutions: 1976–77 to 2000–01**



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1976–77 through 1985–86 Higher Education General Information Survey (HEGIS), “Fall Enrollment” and “Financial Statistics of Institutions of Higher Education”; 1986–87 through 2000–01 Integrated Postsecondary Education Data System (IPEDS), “Fall Enrollment Survey” (IPEDS-EF:87–99) and “Finance Survey” (IPEDS-F:FY88 through FY99), Spring 2001 and Spring 2002. (This table was prepared in April 2004.)

### Student financial aid

- Full-time, first-time undergraduate students enrolled at HBCUs were slightly more likely to receive financial aid, compared with full-time, first-time students attending all institutions (77 vs. 70 percent) (figure 4). Over 80 percent of students enrolled in private, not-for-profit 4-year schools received financial aid whether or not the school was an HBCU.
- The average federal grant amount for students enrolled in private, not-for-profit 4-year HBCUs was \$3,200, and the comparable average for all private, not-for-profit 4-year schools was \$2,900.
- Average institutional grant amounts for HBCU students attending 2- and 4-year public schools were higher than for all 2- and 4-year public school students. The opposite was the case for 2- and 4-year

private, not-for-profit schools. The average institutional grant amount was \$7,500 for all 4-year private, not-for-profit school students and \$4,500 for HBCU students.

**Data sources:** The NCES Integrated Postsecondary Education Data System (IPEDS) and Higher Education General Information Survey (HEGIS), various years.

**For technical information,** see the complete report:

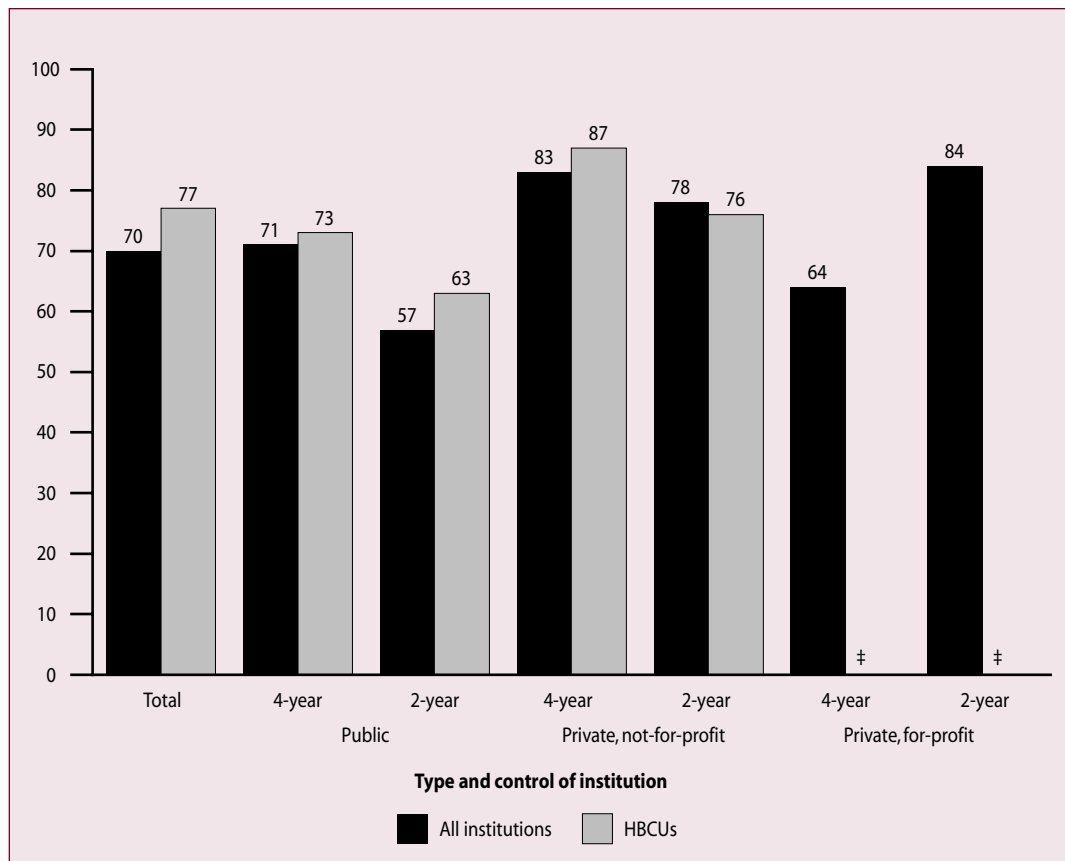
Provasnik, S., and Shafer, L.L. (2004). *Historically Black Colleges and Universities, 1976 to 2001* (NCES 2004-062).

**Author affiliations:** S. Provasnik and L.L. Shafer, Education Statistics Services Institute.

**For questions about content,** contact Tom D. Snyder ([tom.snyder@ed.gov](mailto:tom.snyder@ed.gov)).

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**Figure 4. Percent of full-time, first-time degree- or certificate-seeking undergraduate students receiving financial aid at all degree-granting institutions and at historically Black colleges and universities (HBCUs), by type and control of institution: 2001**



‡ Not applicable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2002. (This figure was prepared in April 2004.)





# CROSSCUTTING STATISTICS

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## Federal Support for Education

### Federal Support for Education: Fiscal Years 1980 to 2003

William C. Sonnenberg

*This article was excerpted from the Introduction and Highlights of the Statistical Analysis Report of the same name. The data are primarily from the U.S. Department of Education's Budget Service, the U.S. Office of Management and Budget, the National Science Foundation, and the budget offices of other federal agencies.*

#### Introduction

This report attempts to provide a comprehensive picture of total federal financial support for education since fiscal year (FY) 1980.\* In addition to U.S. Department of Education programs, the many other federal programs that support education are included. The report also includes other types of federal support that are sometimes overlooked.

#### Categories of federal support

This report puts federal education funding into three categories: on-budget funds, off-budget support, and nonfederal funds generated by federal legislation.

*On-budget funds* are provided through programs funded by congressional appropriations. Although some consolidation

of education programs in one federal agency was achieved with the establishment of the U.S. Department of Education in 1980, many large and significant federal education programs remain outside the Department. In addition, many federal programs involving education have other primary purposes. In order to account fully for all federal support for education, programs residing in other federal departments and agencies having significant educational components are included, even if they have additional purposes.

*Off-budget support* is federal money that has been excluded from the budget by law. Off-budget support in this report consists of the loan capital that is provided directly by the federal government under the William D. Ford Federal Direct Student Loan (FDSL) program.

*Nonfederal funds generated by federal legislation* result from federal loan guarantees and interest subsidies to support loan capital raised through various private and public sources.

\*Some data have been revised from *Federal Support for Education: Fiscal Years 1980 to 2002* (Hoffman 2002) and *Digest of Education Statistics, 2002* (Snyder and Hoffman 2003). In addition to the data covering FY 1980 to FY 2003, appendix tables in the full report include historical data from FY 1965, FY 1970, and FY 1975.

Nonfederal funds are also made available for education purposes when federal programs require matching funds or offer incentives and subsidies. Almost all such nonfederal education funds go to postsecondary education.

### Federal tax expenditures

Education programs can be supported either by direct funding or by indirect funding mechanisms such as tax expenditures. In this report, federal tax expenditures include only reductions in tax revenue received by the federal government due to deductions, exemptions, and credits allowable in the tax code. Unless otherwise noted, tables and discussions of federal support in this report do not include federal tax expenditures.

### Outlays versus appropriations or obligations

To the extent possible, outlays were used in this report rather than appropriations or obligations, with the exception that obligations were used for academic research at postsecondary institutions. Outlays are the actual amount of dollars spent. Appropriations are the amount of funds made available in legislation providing funds for federal programs. Obligations are spending commitments by the federal government that will require outlays either immediately or in the future.

### Highlights

The federal government provides support for education well beyond programs funded through the Department of Education. Federal support for education, excluding estimated federal tax expenditures, was an estimated \$171.0 billion in FY 2003 (table A). In current dollars (i.e., before adjusting for inflation), this represents an increase of \$108.2 billion, or 172 percent, since FY 1990. In constant dollars (i.e., after adjusting for inflation), federal support for education increased 102 percent between FY 1990 and FY 2003.

For FY 2003, on-budget federal funds for education programs were estimated to be \$124.7 billion, an increase of 142 percent since FY 1990 in current dollars or an increase of 79 percent after being adjusted for inflation. Off-budget support and nonfederal funds generated by federal legislation (predominantly postsecondary education loans) were estimated at \$46.3 billion, a rise of 314 percent in current dollars between FY 1990 and FY 2003 and 207 percent in constant dollars.

### Department of Education outlays

In FY 2003, Department of Education outlays totaled an estimated \$57.4 billion (table B), reflecting an increase of 84 percent between FY 1990 and FY 2003, after being ad-

justed for inflation. The Department of Education's share of total federal on-budget education funds rose from 38 percent in FY 1980 to 45 percent in FY 1990 and then increased to 46 percent in FY 2003 (figure A).

### Recipients of federal education support

Sixty percent of federal education support, excluding estimated federal tax expenditures, went to educational institutions in FY 2003. Twenty percent was used for student support. The remaining 20 percent went to banks and other lending agencies, libraries, museums, and federal institutions.

### Federal support for educational institutions

Over 13 percent of school and college revenues in FY 2003 were from the federal government, with the remaining revenues coming from state and local governments, individuals, and private organizations and endowments. Of the estimated \$769.5 billion in expenditures of schools and colleges in FY 2003, revenues from federal sources amounted to \$102.8 billion and revenues from other sources amounted to \$666.7 billion.

The estimated federal share of expenditures of educational institutions declined from 14 percent in FY 1980 to 10 percent in FY 1990 and then increased to 13 percent in FY 2003. Among elementary and secondary educational institutions, the federal share declined from 12 percent in FY 1980 to 7 percent in FY 1990 and then increased to 10 percent in FY 2003. Among postsecondary institutions, the federal share declined from 18 percent in FY 1980 to 14 percent in FY 1990 and then rose to 19 percent in FY 2003.

### On-budget funds by education level or other educational purpose

Between FY 1980 and FY 1990, after being adjusted for inflation, federal on-budget funds for elementary and secondary education decreased 12 percent; postsecondary education funds declined 22 percent (derived from table A); other education funds (which include funds for libraries, museums, cultural activities, and miscellaneous research) increased 39 percent; and funds for research at universities and university-administered research and development centers increased 39 percent.

In the more recent period, between FY 1990 and FY 2003, federal on-budget funds for elementary and secondary education increased 101 percent in constant dollars, postsecondary education funds increased 59 percent, other education funds increased 44 percent, and research funds at colleges and universities increased 72 percent.

**Table A. Federal support across levels and other educational purposes: Selected years, 1980 to 2003**

Level	FY 1980	FY 1985	FY 1990	FY 1995	FY 2000	FY 2003 <sup>1</sup>
	[In billions of <b>current</b> dollars]					
<b>Total</b>	<b>\$39.3</b>	<b>\$47.8</b>	<b>\$62.8</b>	<b>\$95.8</b>	<b>\$119.5</b>	<b>\$171.0</b>
On-budget	34.5	39.0	51.6	71.6	85.9	124.7
Elementary and secondary	16.0	16.9	22.0	33.6	43.8	59.7
Postsecondary	11.1	11.2	13.7	17.6	15.0	29.3
Libraries, museums, and other	1.5	2.1	3.4	4.7	5.5	6.6
Research at educational institutions	5.8	8.8	12.6	15.7	21.7	29.2
Off-budget support and nonfederal funds <sup>2</sup>	4.9	8.7	11.2	24.2	33.6	46.3
	[In billions of <b>constant</b> FY 2003 dollars]					
<b>Total</b>	<b>\$83.1</b>	<b>\$74.8</b>	<b>\$84.7</b>	<b>\$111.6</b>	<b>\$127.0</b>	<b>\$171.0</b>
On-budget	72.9	61.1	69.6	83.5	91.3	124.7
Elementary and secondary	33.9	26.5	29.6	39.2	46.5	59.7
Postsecondary	23.5	17.5	18.4	20.5	15.9	29.3
Libraries, museums, and other	3.3	3.3	4.6	5.5	5.8	6.6
Research at educational institutions	12.3	13.9	17.0	18.3	23.0	29.2
Off-budget support and nonfederal funds <sup>2</sup>	10.3	13.7	15.1	28.2	35.7	46.3

<sup>1</sup>Estimated.<sup>2</sup>Off-budget support and nonfederal funds generated by federal legislation.

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

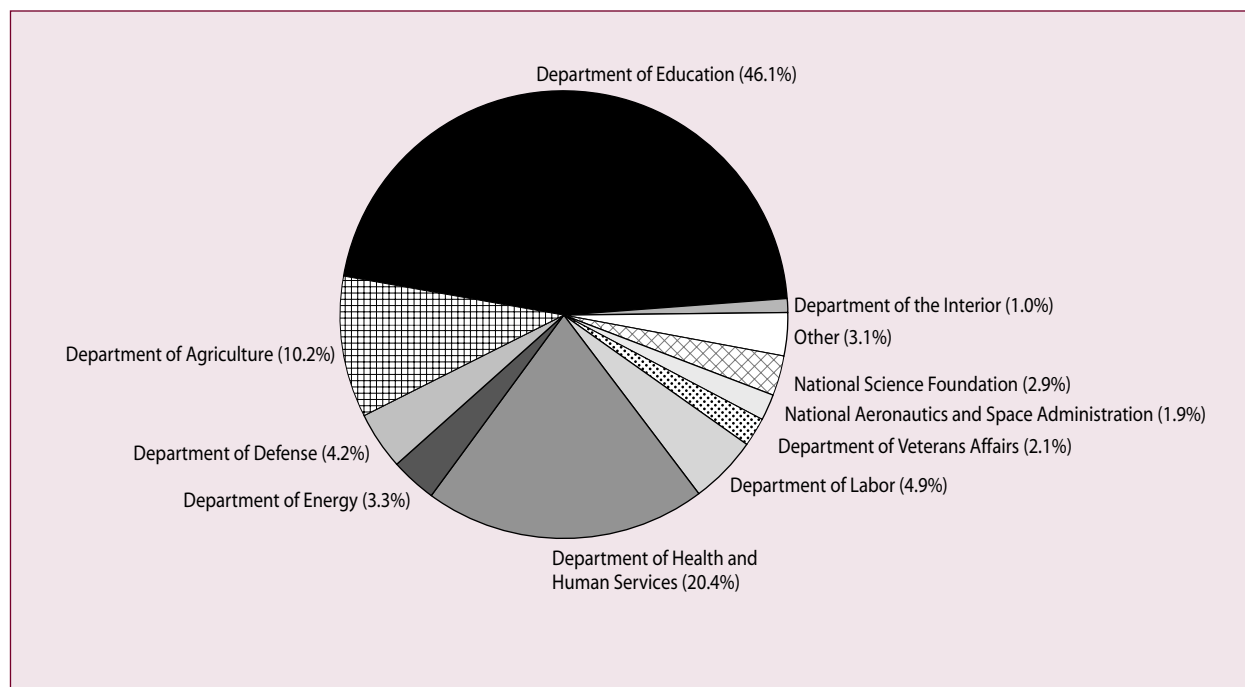
SOURCE: U.S. Department of Education, Office of the Deputy Secretary, Budget Service, unpublished data, and National Center for Education Statistics, compiled from data appearing in U.S. Office of Management and Budget, *Budget of the United States Government*, FYs 1982 to 2004 (selected years); National Science Foundation, *Federal Funds for Research and Development*, FYs 1980 to 2003 (selected years); and unpublished data from various federal agencies. (Originally published on page iv of the full report from which this article is excerpted.)

**Table B. Federal agencies providing the largest amounts of education program funds: Selected years, 1980 to 2003**

Agency	FY 1980	FY 1985	FY 1990	FY 1995	FY 2000	FY 2003 <sup>1</sup>
	[In billions of <b>current</b> dollars]					
Dept. of Education	\$13.1	\$16.7	\$23.2	\$31.4	\$34.1	\$57.4
Dept. of Health and Human Services	5.6	5.3	8.0	12.5	17.7	25.4
Dept. of Agriculture	4.6	4.8	6.3	9.1	11.1	12.8
Dept. of Labor	1.9	1.9	2.5	4.0	4.7	6.1
Dept. of Defense	1.6	3.1	3.6	3.9	4.5	5.2
Dept. of Energy	1.6	2.2	2.6	2.7	3.6	4.1
National Science Foundation	0.8	1.1	1.6	2.1	3.0	3.6
Dept. of Veterans Affairs	2.4	1.3	0.8	1.3	1.6	2.7
National Aeronautics and Space Administration	0.3	0.5	1.1	1.8	2.1	2.4
	[In billions of <b>constant</b> FY 2003 dollars]					
Dept. of Education	\$27.8	\$26.2	\$31.3	\$36.6	\$36.2	\$57.4
Dept. of Health and Human Services	11.9	8.3	10.7	14.5	18.8	25.4
Dept. of Agriculture	9.6	7.5	8.4	10.6	11.8	12.8
Dept. of Labor	3.9	3.1	3.4	4.6	5.0	6.1
Dept. of Defense	3.3	4.9	4.9	4.5	4.8	5.2
Dept. of Energy	3.4	3.5	3.5	3.1	3.8	4.1
National Science Foundation	1.7	1.8	2.1	2.4	3.1	3.6
Dept. of Veterans Affairs	5.0	2.0	1.0	1.5	1.7	2.7
National Aeronautics and Space Administration	0.5	0.8	1.5	2.0	2.2	2.4

<sup>1</sup>Estimated.

SOURCE: U.S. Department of Education, Office of the Deputy Secretary, Budget Service, unpublished data, and National Center for Education Statistics, compiled from data appearing in U.S. Office of Management and Budget, *Budget of the United States Government*, FYs 1982 to 2004 (selected years); National Science Foundation, *Federal Funds for Research and Development*, FYs 1980 to 2003 (selected years); and unpublished data from various federal agencies. (Originally published on page iv of the full report from which this article is excerpted.)

**Figure A. Estimated federal on-budget funds for education, by agency: Fiscal year 2003**

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, compiled from data appearing in the U.S. Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2004*; and National Science Foundation, *Federal Funds for Research and Development, Fiscal Years 2001, 2002, and 2003*. (Originally published as figure 2 on p. 7 of the full report from which this article is excerpted.)

### Estimated federal tax expenditures

Between FY 1980 and FY 1990, estimated federal tax expenditures, after being adjusted for inflation, decreased 9 percent; between FY 1990 and FY 2001, expenditures went up 68 percent.

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- Hoffman, C. (2002). *Federal Support for Education: Fiscal Years 1980 to 2002* (NCES 2003–006). U.S. Department of Education. Washington, DC: National Center for Education Statistics.
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**Data sources:** U.S. Department of Education, Office of the Deputy Secretary, Budget Service, unpublished data; U.S. Office of Management and Budget, *Budget of the United States Government*, FY 1967–2004 editions (selected years); National Science Foundation, *Federal Funds for Research and Development*, FY 1965–2003 editions (selected years); and unpublished data from various federal agencies.

**For technical information**, see the complete report:

Sonnenberg, W.C. (2004). *Federal Support for Education: Fiscal Years 1980 to 2003* (NCES 2004–026).

**Author affiliation:** W.C. Sonnenberg, NCES.

**For questions about content**, contact William C. Sonnenberg ([william.sonnenberg@ed.gov](mailto:william.sonnenberg@ed.gov)).

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# DATA PRODUCTS, OTHER PUBLICATIONS, AND FUNDING OPPORTUNITIES

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## Data Products

### ECLS-K Longitudinal Kindergarten–Third-Grade Public-Use Data File and Electronic Code Book

The Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), is following a nationally representative sample of children from kindergarten through fifth grade, collecting information on their home and academic environments, opportunities, and achievements. During the 1998–99 school year, this NCES-sponsored study collected two waves of base-year data on over 20,000 kindergartners from a wide variety of public and private kindergarten programs and from diverse racial/ethnic and socioeconomic backgrounds. Two more waves of data were collected in the fall and spring of the 1999–2000 school year when most of the base-year children were in first grade, and a fifth wave of data was collected in the spring of the 2001–02 school year when most of the sampled children were in third grade.

This CD-ROM contains kindergarten, first-, and third-grade public-use data from the ECLS-K. The CD-ROM contains an electronic code book (ECB), data files, and survey and ECB documentation for the first five waves of the ECLS-K. This data file and ECB will be most useful for researchers interested in changes in children's experiences and achievement across school years. Researchers interested in conducting cross-sectional or within-grade analyses should use the separate base-year (kindergarten), first-grade, and third-grade data files and ECBs.

**For questions about this CD-ROM**, contact Elvira Germino Hausken ([elvira.hausken@ed.gov](mailto:elvira.hausken@ed.gov)).

**To obtain this CD-ROM (NCES 2004–089)**, call the toll-free ED Pubs number (877-433-7827).

### ECLS-K Third-Grade Public-Use Data File and Electronic Code Book

The Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K), is following a nationally representative sample of children from kindergarten through fifth grade, measuring their home and academic environments, opportunities, and achievements. During the 1998–99 school year, this NCES-sponsored study collected two waves of base-year data on over 20,000 kindergartners from a wide variety of public and private kindergarten programs and from diverse

racial/ethnic and socioeconomic backgrounds. Two more waves of data were collected in the fall and spring of the 1999–2000 school year when most of the base-year children were in first grade, and a fifth wave of data was collected in the spring of the 2001–02 school year when most of the sampled children were in third grade.

This CD-ROM contains third-grade public-use data from the ECLS-K. All data collected from the sampled children, and their parents, teachers, and schools, are included. In addition to the data file, the CD-ROM contains an electronic code book (ECB) and survey and ECB documentation.

**For questions about this CD-ROM**, contact Elvira Germino Hausken ([elvira.hausken@ed.gov](mailto:elvira.hausken@ed.gov)).

**To obtain this CD-ROM (NCES 2004–002)**, call the toll-free ED Pubs number (877-433-7827).

### Parent and Family Involvement in Education Survey (PFI) Data File From the National Household Education Surveys Program of 2003

The National Household Education Surveys Program (NHES) provides descriptive data on the educational activities of the U.S. population and offers researchers, educators, and policymakers a variety of statistics on the condition of education in the United States. The NHES comprised two surveys in 2003—Adult Education for Work-Related Reasons (AEWR) and Parent and Family Involvement in Education (PFI).

This data file contains information collected through PFI. The data file contains information about students in kindergarten through 12th grade, and focuses on parental and family involvement in their education. Questions were asked about parental and family involvement in students' schools, and about educational activities students engaged in with their parents and families outside of school. The data file contains approximately 12,500 cases. The data can be downloaded from the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004105>) in SPSS, SAS, and STATA formats.

**For questions about this data product**, contact Chris Chapman ([chris.chapman@ed.gov](mailto:chris.chapman@ed.gov)).

**To obtain this data product (NCES 2004–105)**, visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).

## Adult Education for Work-Related Reasons Survey Data File of the National Household Education Surveys Program of 2003

The National Household Education Surveys Program (NHES) provides descriptive data on the educational activities of the U.S. population and offers researchers, educators, and policymakers a wide variety of statistics on the condition of education in the United States. The NHES comprised two surveys in 2003—Adult Education for Work-Related Reasons (AEWR) and Parent and Family Involvement in Education (PFI).

This data file contains information collected through AEWR. Approximately 12,700 adults were interviewed about the types of training they had taken in the last 12 months for work-related reasons. Data were collected about participation in college and university degree or certificate programs taken for work-related reasons; postsecondary vocational/technical diploma or degree programs taken for work-related reasons; apprenticeships; work-related courses; and work-related informal learning. In addition, the survey explored factors associated with participation or nonparticipation in these activities. The data can be downloaded from the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004106>) in SPSS, SAS, and STATA formats.

*For questions about this data product*, contact Chris Chapman ([chris.chapman@ed.gov](mailto:chris.chapman@ed.gov)).

*To obtain this data product (NCES 2004–106)*, visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).

## National Household Education Surveys Program of 2001–03: Electronic Codebook and Data Files

The National Household Education Surveys Program (NHES) provides descriptive data on the educational activities of the U.S. population and offers researchers, educators, and policymakers a wide variety of statistics on the condition of education in the United States. In 2001, the NHES comprised three surveys—the Adult Education and Lifelong Learning Survey, the Before- and After-School Programs and Activities Survey, and the Early Childhood Program Participation Survey. In 2003, the NHES comprised two surveys—the Parent and Family Involvement in Education Survey and the Adult Education for Work-Related Reasons Survey.

The data, data documentation, and software to help users search through and convert the data into SPSS, SAS, or STATA files are available on CD-ROM. The data and documentation needed to set up the data files can be downloaded directly from the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2004100>).

*For questions about this data product*, contact Chris Chapman ([chris.chapman@ed.gov](mailto:chris.chapman@ed.gov)).

*To obtain this data product (NCES 2004–100)*, call the toll-free ED Pubs number (877-433-7827) or visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).

## Data File: State Library Agencies Survey: Fiscal Year 2003

The State Library Agencies (StLA) Survey is conducted annually by NCES as a cooperative effort with the Chief Officers of State Library Agencies, the U.S. National Commission on Libraries and Information Science, and the U.S. Census Bureau. The StLA Survey provides state and federal policymakers, researchers, and other interested users with descriptive information about state library agencies in the 50 states and the District of Columbia. The StLA Survey for fiscal year 2003, the 10th in the series, collected data on 339 items, including state library agency identification, governance, public service hours, service outlets, collections, library service transactions, library development transactions, services to other libraries in the state, allied operations, staff, income, expenditures, and electronic services and information.

The StLA Survey file is available in both MS-Access and ASCII formats. The data and related documentation can be downloaded from the NCES Electronic Catalog.

*For questions about this data product*, contact P. Elaine Kroe ([patricia.kroe@ed.gov](mailto:patricia.kroe@ed.gov)).

*To obtain this data product (NCES 2004–378)*, visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).

## Progress in International Reading Literacy Study (PIRLS) 2001 National Data File

PIRLS is a large international comparative study of the reading literacy of young students. It focuses on the achievement and reading experiences of children in 35 countries in grades equivalent to fourth grade in the United States. The study includes a written test of reading comprehension and a series of questionnaires

focusing on the factors associated with the development of reading literacy.

PIRLS 2001 was the first in a planned 5-year cycle of international trend studies in reading literacy. This CD-ROM contains PIRLS 2001 public-use data for the United States, in ASCII format. These files can easily generate SPSS or SAS code. The CD-ROM also contains a user's guide and an electronic codebook.

**For questions about this CD-ROM**, contact Laurence T. Ogle ([laurence.ogle@ed.gov](mailto:laurence.ogle@ed.gov)).

**To obtain this CD-ROM (NCES 2004-016)**, call the toll-free ED Pubs number (877-433-7827).

## Program for International Student Assessment (PISA) 2000 Data File

Begun in 2000, PISA is an assessment that focuses on 15-year-olds' capabilities in reading, mathematics, and science literacy. In the United States, this age corresponds largely to grade 9 and 10 students. PISA also includes measures of general or cross-curricular competencies such as learning strategies. PISA emphasizes skills that students have acquired as they near the end of mandatory schooling. Currently administered every 3 years, PISA 2000 focused on reading literacy, PISA 2003 focused on mathematics literacy, and in 2006, PISA will focus on science literacy.

This CD-ROM contains PISA 2000 public-use data for the United States, in ASCII format. It also contains a user's guide and electronic codebook.

**For questions about this CD-ROM**, contact Mariann Lemke ([mariann.lemke@ed.gov](mailto:mariann.lemke@ed.gov)).

**To obtain this CD-ROM (NCES 2004-006)**, call the toll-free ED Pubs number (877-433-7827).

## Other Publications

### User's Manual for the ECLS-K Third-Grade Public-Use Data File and Electronic Code Book

*National Center for Education Statistics*

This user's manual provides guidance and documentation for users of the third-grade public-use data file and electronic code book for the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K). The user's manual begins with an overview of the ECLS-K study, which follows a nationally representative cohort of children from kindergarten through fifth grade. The

ECLS-K focuses on children's early school experiences, and is a multisource, multimethod study that includes interviews with parents; the collection of data from principals, teachers, and student record abstracts; and direct child assessments. Subsequent chapters in the user's manual provide details on the instruments and measures used, the sample design, weighting procedures, response rates, data collection and processing procedures, the structure of the data file, and the installation and use of the electronic code book.

This user's manual is also available on the CD-ROM that contains the ECLS-K third-grade data file and electronic code book (NCES 2004-002).

**For questions about this user's manual**, contact Elvira Germino Hausken ([elvira.hausken@ed.gov](mailto:elvira.hausken@ed.gov)).

**To obtain this user's manual (NCES 2004-001)**, visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).

### National Household Education Surveys of 2003: Data File User's Manual, Volumes I-III

*Mary Hagedorn, Jill Montaquila, Nancy Vaden-Kiernan, Kwang Kim, and Christopher Chapman*

The National Household Education Surveys Program (NHES) encompasses a number of household telephone surveys designed to address a wide range of education-related issues. This user's manual provides documentation and guidance for users of the public-use data files for the 2003 Parent and Family Involvement in Education Survey (PFI-NHES:2003) and Adult Education for Work-Related Reasons Survey (AEWR-NHES:2003).

This user's manual is composed of three volumes. Volume I includes information about the purposes of the study, the data collection instruments, the sample design, and data collection and data processing procedures. Appendixes to volume I contain the data collection instruments and a chart summarizing weighting and sample variance estimation variables for all NHES surveys. Volumes II and III of the manual each address one data file, the PFI-NHES:2003 and AEWR-NHES:2003, respectively. They each contain a guide to the data file; a discussion of data considerations and anomalies; and, in appendixes, the file layout, derived variable specifications, and the codebook for the file.

**For questions about this user's manual**, contact Chris Chapman ([chris.chapman@ed.gov](mailto:chris.chapman@ed.gov)).

**To obtain volumes I-III of this user's manual (NCES 2004-101, 2004-102, and 2004-103, respectively)**, visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).



## Developments in School Finance: 2003

William J. Fowler, Jr. (editor)

*Developments in School Finance: 2003* is the eighth education finance publication produced from the annual NCES Summer Data Conference. Each year, state department of education policymakers, fiscal analysts, and fiscal data providers attend the conference for fiscal training sessions and presentations by invited experts on developments in the field of education finance.

This publication contains seven of the papers presented at the July 2003 conference. Discussions and presentations dealt with topics such as the effects of salary and working conditions on teacher turnover, determining the cost of improving student performance, and measuring school efficiency.

**Editor affiliation:** W.J. Fowler, Jr., NCES.

**For questions about this publication,** contact William J. Fowler, Jr. ([william.fowler@ed.gov](mailto:william.fowler@ed.gov)).

**To obtain this publication (NCES 2004-325),** call the toll-free ED Pubs number (877-433-7827) or visit the NCES Electronic Catalog (<http://nces.ed.gov/pubsearch>).

**For information about education finance,** see the NCES Education Finance Statistics Center home page (<http://nces.ed.gov/edfin>).

## Training and Funding Opportunities

NCES is offering a series of advanced-studies seminars on the analysis of the following NCES databases in summer 2005:

- Education finance database (May 16–18)
- National Education Longitudinal Study of 1988 (NELS:88) and Education Longitudinal Study of 2002 (ELS:2002) (Seminar I: May 18–20)
- National Household Education Surveys Program (NHES) (June 15–17)
- Early Childhood Longitudinal Study, Kindergarten Class of 1998–99 (ECLS-K) (June 27–30)
- Schools and Staffing Survey (SASS) (June 27–30)
- National Assessment of Educational Progress (NAEP) (July 5–8)
- National Education Longitudinal Study of 1988 (NELS:88) and Education Longitudinal Study of 2002 (ELS:2002) (Seminar II: July 20–22)

These seminars are designed for researchers in academic communities and other research communities (e.g., federal agencies, research organizations, and think tanks that are interested in quantitative studies). Each multiday seminar is held at the Academy for Educational Development in Washington, DC, and covers several topics, including the nature and content of the database, computer software for accessing and analyzing the data, and funding opportunities. Seminar activities include lectures, illustrations, demonstrations, and hands-on practice. At the end of each seminar, participants are expected to make a brief presentation describing their analyses and findings.

**For more information,** contact Beverly Coleman ([beverly.coleman@ed.gov](mailto:beverly.coleman@ed.gov)).

## The AERA Grants Program

Jointly funded by the National Science Foundation (NSF), NCES, and the Institute of Education Sciences, this training and research program is administered by the American Educational Research Association (AERA). The program has four major elements: a research grants program, a dissertation grants program, a fellows program, and a training institute. The program is intended to enhance the capability of the U.S. research community to use large-scale datasets, specifically those of the NSF and NCES, to conduct studies that are relevant to educational policy and practice, and to strengthen communications between the educational research community and government staff.

Applications for this program may be submitted at any time. The application review board meets three times per year. The following are examples of grants recently awarded under the program:

### Research Grants

- Geoffrey Borman, University of Wisconsin-Madison—Social and Neighborhood Context and School-Year and Summer Achievement
- Lora Cohen-Vogel, Florida State University—Teacher Quality and Alternative Certification: Testing Core Assumptions
- George Farkas, Pennsylvania State University—What's Special About Special Education? Modeling the Determinants and Consequences of Special Education Placement Using the ECLS-K

- Jennifer Glanville, University of Iowa—The Measurement, Consequences, and Antecedents of School Engagement: Comparisons Among African American, Latino, and White Students
- Susan Losh, Florida State University—The Foundations: High School and College Math and Science Experiences and Adult Civic Science Literacy: 1979–2003
- Stephen Morgan, Cornell University—The Size, Variation, and Meaning of the Catholic School Effect on Achievement for the High School Class of 2004
- Amanda Nickerson, University at Albany, SUNY—Authoritarian vs. Educational/Therapeutic Approaches: Effects on Crime in U.S. Schools
- Joanne Roberts, Wellesley College—The Influence of Early Care and Education on Children’s Outcomes and Family Functioning: An Ecological Model
- Philip Trostel, University of Maine—The Impact of New College Graduates on Intrastate Labor Markets

#### Dissertation Grants

- Emily Beller, University of California, Berkeley—Explaining the Relationship Between Family Structure and Children’s Educational Outcomes: Conceptual and Measurement Issues
- Katerina Bodovski, Pennsylvania State University—Instruction, Behavior, and Mathematics Learning in Elementary School
- Jacob Cheadle, Pennsylvania State University—Early Childhood Academic Achievement and the Family Environment: A Unified Methodological Approach using “GLAMMs” via MCMC
- Ummuhan Dagli, Florida State University—Effects of Relative Age on Children’s Cognitive Competence in Kindergarten Through Third Grade: Cross-Classified Model
- Stacey Farber, University at Buffalo, SUNY—The Space Between: Roles Parents Play in Their Children’s Educational Success (or Non-Success). Examining a Model of Parental Influence Across Family Race and Child Gender
- Kirsten Kainz, University of North Carolina, Chapel Hill—Child, Family, Classroom, and School Contributions to Reading Development for Children Living in Poverty

- Amy Langenkamp, University of Texas, Austin—The Effect of School Transitions on Math/Science Academic Achievement: Curriculum, Social Relationships, and School Context
- Jie Li, Boston College—The Effect of Accommodations for Special-Needs Students in NAEP
- Michelle Reininger, Stanford University—Do Community Colleges Increase the Supply of Teachers in Areas With Difficult-to-Staff Schools?

**For more information**, contact Edith McArthur ([edith.mcarthur@ed.gov](mailto:edith.mcarthur@ed.gov)) or visit the AERA Grants Program website (<http://www.aera.net/grantsprogram>).

#### The NAEP Secondary Analysis Grant Program

The NAEP Secondary Analysis Grant Program was developed to encourage education researchers to conduct secondary analysis studies using data from the National Assessment of Educational Progress (NAEP) and the NAEP High School Transcript Studies. This program is open to all public or private organizations and consortia of organizations. The program is typically announced annually, in the late fall, in the *Federal Register*. Grants awarded under this program run from 12 to 18 months and awards range from \$15,000 to \$100,000. The following grants were awarded for fiscal year 2004:

- Motoko Akiba, University of Missouri—State Policy, Multicultural Teacher Education, and Student Learning
- Albert Beaton, Boston College—Analysis of the Fit of NAEP Scales for Specified Subpopulations
- Randy Bennett, Educational Testing Service—Toward Theoretically Meaningful Automated Essay Scoring
- Laura Desimone, Vanderbilt University—State Policy and Trends in Student Achievement: The Relationship Between Changes in State Standards-Based Reform Policy and Student Achievement
- Xin Ma, University of Kentucky—Understanding the Relationship Between Mathematics and Science Coursework With NAEP Data
- Lynn Stokes, Southern Methodist University—Use of Sampling Weights in Hierarchical Models Fit to NAEP Data

- John Warren, University of Minnesota—High School Exit Examinations and NAEP Long-Term Trends in Reading, Mathematics and Science: 1970–2004

**For more information**, contact Alex Sedlacek ([alex.sedlacek@ed.gov](mailto:alex.sedlacek@ed.gov)).

## AIR Grants Program

The Association for Institutional Research (AIR), with support from NCES and the National Science Foundation (NSF), has developed a grants program titled Improving Institutional Research in Postsecondary Educational Institutions. The goals of this program are to provide professional development opportunities to doctoral students, institutional researchers, educators, and administrators, and to foster the use of federal databases for institutional research in postsecondary education. The program has the following four major components:

- dissertation research fellowships for doctoral students;
- research grants for institutional researchers and faculty;
- a Summer Data Policy Institute in the Washington, DC, area to study the national databases of NSF and NCES; and
- a senior fellowship program.

Calls for proposals go out in the spring, and proposals are normally accepted through June 30 for work starting no later than September 1 of each year. Following are grants awarded for fiscal year 2004:

- Consuelo Arbona and Amaury Nora, University of Houston—Predicting College Attainment of Hispanic Students: Individual, Institutional, and Environmental Factors
- Kathryn Corder, Tracey Pattok, and Kevin Corder, Western Michigan University—College Financing and College Completion: Using Ecological Inference to Investigate How Types of Aid Received Affect Retention and Graduation Outcomes

- Wei-Cheng Mau, Randy Ellsworth, and Donna Hawley, Wichita State University—Finding Leakage in the Pipeline of Teacher Supply: Factors Influencing Youngsters to Aspire to and Stay in Teaching Careers
- Kevin Murphy, University of Massachusetts, Boston—Factors Affecting the Retention, Persistence, and Attainment of Undergraduate Students at Public Urban Four-Year Higher Education Institutions
- Ann Person, Northwestern University—Institutional Characteristics and Student Success in Sub-Baccalaureate Education
- Marvin Titus, North Carolina State University—Examining the Private Benefit of Graduate Education: A Two-Stage Approach
- Robert Toutkoushian, Indiana University—Using NSOPF:99 to Examine the Effects of Gender, Race, and Family Status on the Careers of Faculty
- Kjersten Bunker Whittington, Stanford University—Employment Sectors as Opportunity Structures: The Effects of Location on Male and Female Scientific Dissemination

**For more information**, contact Susan Broyles ([susan.broyles@ed.gov](mailto:susan.broyles@ed.gov)) or visit the AIR website ([www.airweb.org](http://www.airweb.org)).

## NPEC/AIR Focused Grants

The National Postsecondary Education Cooperative (NPEC) and the Association for Institutional Research (AIR) have developed a focused grant program to fund research and studies to increase understanding and knowledge in a specific issue area that has been identified by the NPEC Executive Committee as critically important to the postsecondary education community. This year the focus is on student success in postsecondary education. Proposals are due January 15 of each year.

In 2004, NPEC and AIR made seven 1-year grant awards ranging up to \$15,000 for dissertation work and up to \$30,000 for other activities. Grant recipients will make a presentation of their work at NPEC's national conference in 2006. Travel to the conference will be paid for by NPEC.

Following are grants awarded for fiscal year 2004:

- Amy Caison, North Carolina State University—  
Analysis of Institutionally Specific Retention Research Methods: A Comparison Between Survey and Institutional Database Approaches
- Lora Cohen-Vogel, Florida State University—  
Allocating College Financial Aid on the Basis of Merit: Program Impact on Student Success in Terms of Whether and Where to Attend College
- James Cole and David Bergin, University of Missouri, Columbia—Association Between Motivation and General Education Standardized Test Scores
- Susan Kahn and Sharon Hamilton, Indiana University-Purdue University, Indianapolis—  
Enhancing Student Success Through Electronic Portfolios
- Fernando Lozano, University of California—High School Leadership Skills, Language Proficiency, and the Educational Attainment of Hispanic Students
- Josipa Roksa, New York University—States, Schools, and Students: Contextualizing Community College Outcomes
- Audrey Alforque Thomas, Harvard University—  
The Effect of the Immigrant Family Experience on College Application and Attendance

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**For more information**, contact Roz Korb ([roslyn.korb@ed.gov](mailto:roslyn.korb@ed.gov)) or visit the AIR website ([www.airweb.org](http://www.airweb.org)) for more information and instructions for writing and submitting proposals.