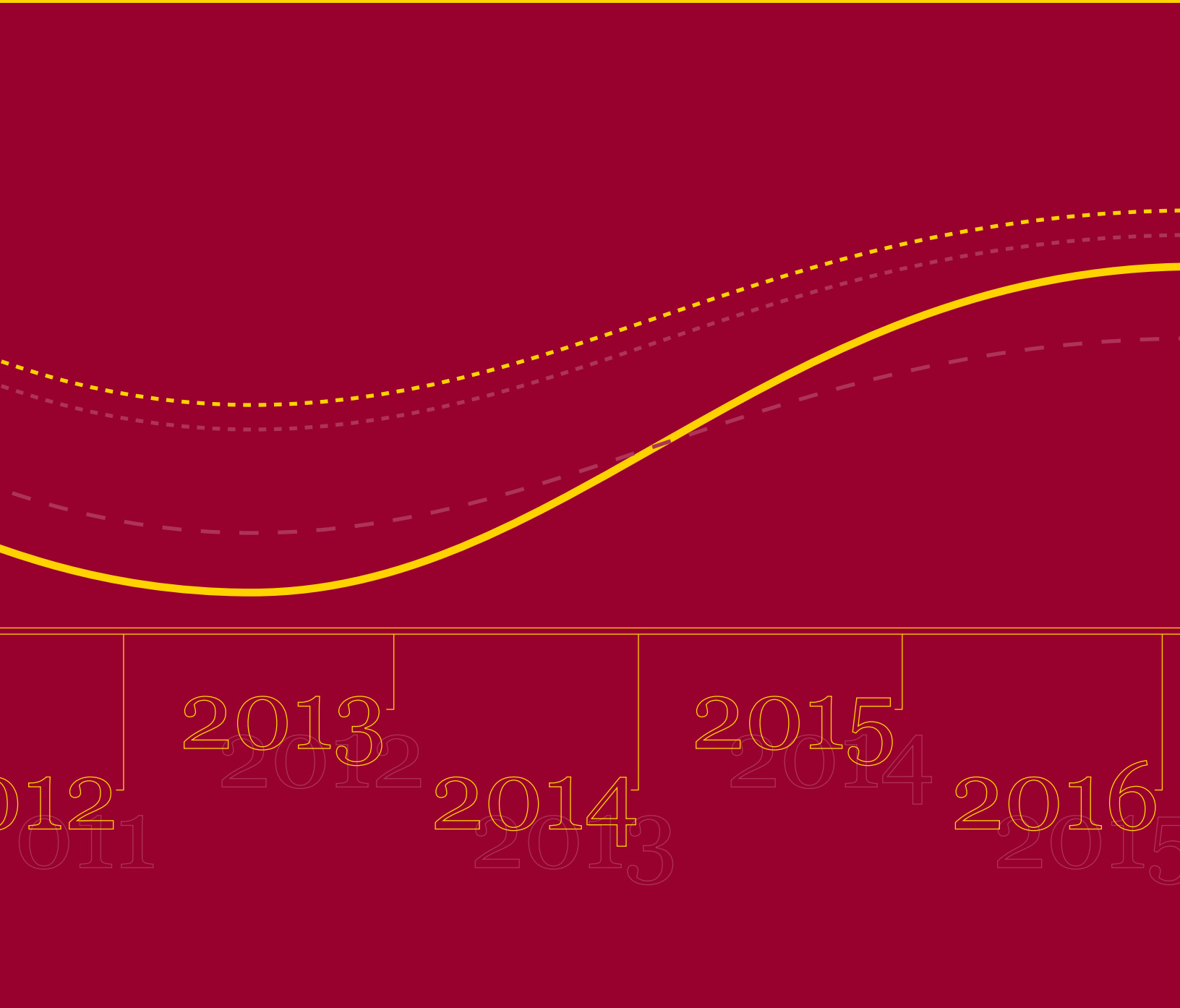
ies NATIONAL CENTER FOR EDUCATION STATISTICS
Institute of Education Sciences

U.S. Department of Education
NCES 2008–060

Projections of Education Statistics to 2016

Thirty-fifth Edition



ies NATIONAL CENTER FOR EDUCATION STATISTICS
Institute of Education Sciences

U.S. Department of Education
NCES 2008-060

Projections of Education Statistics to 2016

Thirty-fifth Edition

December 2007

William J. Hussar
National Center for Education Statistics

Tabitha M. Bailey
Global Insight, Inc.

U.S. Department of Education
Margaret Spellings
Secretary

Institute of Education Sciences
Grover J. Whitehurst
Director

National Center for Education Statistics
Mark Schneider
Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

NCES activities are designed to address high-priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high-quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public. Unless specifically noted, all information contained herein is in the public domain.

We strive to make our products available in a variety of formats and in language that is appropriate to a variety of audiences. You, as our customer, are the best judge of our success in communicating information effectively. If you have any comments or suggestions about this or any other NCES product or report, we would like to hear from you. Please direct your comments to

National Center for Education Statistics
Institute of Education Sciences
U.S. Department of Education
1990 K Street NW
Washington, DC 20006-5651

December 2007

The NCES World Wide Web Home Page address is http://nces.ed.gov.
The NCES World Wide Web Electronic Catalog is http://nces.ed.gov/pubsearch.

Suggested Citation

Hussar. W.J., and Bailey, T.M. (2007). *Projections of Education Statistics to 2016* (NCES 2008-060). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

For ordering information on this report, write to

U.S. Department of Education
ED Pubs
P.O. Box 1398
Jessup, MD 20794-1398

or call toll free 1-877-4ED-Pubs or order online at http://www.edpubs.org.

Content Contact

William J. Hussar
(202) 502-7359
william.hussar@ed.gov

Foreword

Projections of Education Statistics to 2016 is the 35th report in a series begun in 1964. This report provides revisions of projections shown in *Projections of Education Statistics to 2015*. It includes statistics on elementary and secondary schools and degree-granting institutions. Included are projections of enrollment, graduates, teachers, and expenditures to the year 2016. In addition to projections at the national level, the report includes projections of public elementary and secondary school enrollment and public high school graduates to the year 2016 at the state level.

The projections in this report were produced by the National Center for Education Statistics (NCES) to provide researchers, policy analysts, and others with state-level projections developed using a consistent methodology. They are not intended to supplant detailed projections prepared in individual states.

This is the first edition of the *Projections of Education Statistics* to include projections of enrollment at degree-granting institutions by race/ethnicity. Unlike the last two editions of this series, this edition does not contain projections for expenditures at degree-granting institutions. Due to the changes in the accounting standards used to report financial data for both public and private institutions over the last 10 years, there are not yet enough data to produce projections.

Assumptions regarding the population and the economy are the key factors underlying the projections of education statistics. NCES projections do not reflect changes in national, state, or local education policies that may affect enrollment levels.

Appendix A of this report outlines the projection methodology, describing the models and assumptions used to develop the national and state projections. The enrollment models use enrollment data and population estimates and projections from NCES and the U.S. Census Bureau. The models are based on the mathematical projection of past data patterns into the future. The models also use projections of economic variables from Global Insight, Inc., an economic forecasting service.

The projections presented in this report are based on the 2000 census and assumptions for the fertility rate, internal migration, net immigration, and mortality rate. For further information, see appendix A.

Most of the projections of education statistics include three alternatives, based on different assumptions about demographic and economic growth paths. Although the first alternative set of projections (middle alternative projections) in each table is deemed to represent the most likely projections, the low and high alternatives provide a range of outcomes.

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

December 2007

Acknowledgments

Projections of Education Statistics to 2016 was produced by the National Center for Education Statistics (NCES) in the Early Childhood, International, and Crosscutting Studies Division under the general direction of Thomas D. Snyder, Director of the Annual Reports Program. The report was prepared by William J. Hussar of NCES and Tabitha M. Bailey of Global Insight, Inc. They were supported by Mindy Levit, Maria Kulikova, and Oreoluwa Alao of Global Insight, Inc.

Many people have contributed to the development of the *Projections of Education Statistics to 2016*. Michael Stock of MacroSys Research and Technology and Mary Ann Fox of the American Institutes for Research (AIR) coordinated the production and design. The cover was designed by Kalle Culotta of MacroSys Research and Technology.

The technical review was done by Bruce Taylor. Kevin Bromer, Alison Slade, Aparna Sundaram, Wendy Landers, and Zeyu Xu assisted in the technical review of this report. Valuable assistance was also provided by the following reviewers: Frank Johnson, Frank Morgan, and Duc-Le To.

Contents

Contents—Continued

List of Tables

List of Tables—Continued

Table *Page*

List of Tables—Continued

Table *Page*

Appendix A. Methodological Tables

Enrollment

List of Tables—Continued

List of Tables—Continued

List of Figures

Figure *Page*

Summary of Projections

Reference Figures

School-Age Population

Elementary and Secondary Schools

List of Figures—Continued

Figure *Page*

List of Figures—Continued

Figure *Page*

About This Report

Guide to This Edition

This edition of *Projections of Education Statistics* provides projections for key education statistics, including enrollment, graduates, teachers, and expenditures in elementary and secondary schools. Included are national data on enrollment and graduates for the past 15 years and projections to the year 2016, as well as state-level data on enrollment in public elementary and secondary schools and public high school graduates to the year 2016.

State-level data on enrollment and graduates in private schools are not included. Further research and model development are needed to develop reliable projections of private school enrollment and graduates by state. Projections also exclude the number of students who are homeschooled because more data are required to develop reliable projections.

Similar methodologies were used to obtain a uniform set of projections for each of the 50 states and the District of Columbia. These projections are further adjusted to agree with the national projections of public elementary and secondary school enrollment and public high school graduates contained in this report.

The summary of projections provides highlights of the national and state data, while the reference tables and figures present more detail. Although rounded numbers are presented in the tables, percentages are based on unrounded numbers.

Appendix A describes the methodology and assumptions used to develop the projections, appendix B presents supplementary tables, appendix C describes data sources, appendix D is a list of abbreviations, and appendix E is a glossary of terms.

Limitations of Projections

Projections of time series usually differ from the final reported data due to errors from many sources, such as the properties of the projection methodologies, which depend on the validity of many assumptions. Therefore, alternative projections are shown for most statistical series to denote the uncertainty involved in making projections. These alternatives are not statistical confidence limits, but instead represent judgments made by the author as to reasonable upper and lower bounds.

The mean absolute percentage error is one way to express the forecast accuracy of past projections. This measure expresses the average value of the absolute value of errors in percentage terms. For example, the mean absolute percentage errors of public school enrollment in grades PK–12 for lead times of 1, 2, 5, and 10 years were 0.3, 0.6, 1.2, and 2.4 percent, respectively. In contrast, mean absolute percentage errors for bachelor's degrees for lead times of 1, 2, 5, and 10 years were 0.9, 2.0, 6.0, and 11.2 percent, respectively. For more information on mean absolute percentage errors, see table A-2 in appendix A.

Alternative projections are presented for enrollment in degree-granting institutions, earned degrees conferred, elementary and secondary teachers, and expenditures of public educational institutions.

Page intentionally left blank

Summary of Projections

Page intentionally left blank

Section 1. Elementary and Secondary Enrollment

Introduction

Total public and private elementary and secondary school enrollment reached a record 55 million in fall 2004, representing a 15 percent increase since fall 1991. Between 2004, the last year of actual data, and 2016, a further increase of 9 percent is expected, with increases projected in both public and private schools. Increases are expected in the Midwest, South, and West, and a decrease is expected in the Northeast.

Factors affecting the projections

The projected changes in enrollment reflect factors such as internal migration, legal and illegal immigration, the relatively high level of births in the 1990s, and resultant changes in the population (reference figure 1), rather than changes in attendance rates.

Factors that were not considered

The projections do not assume changes in policies or attitudes that may affect enrollment levels. For example, they do not account for changing state and local policies on prekindergarten and kindergarten programs. Expansion of these programs could lead to higher enrollments at the elementary school level. Projections also exclude the number of students who are homeschooled because national data are available for only a limited time period.

National

After increasing by about 15 percent between 1991 and 2004, a period of 13 years, total elementary and secondary enrollment in public and private schools is expected to increase 9 percent between 2004 and 2016, a period of 12 years. Enrollment increases are expected at both the PK–8 and 9–12 grade spans (figures A and B; reference figures 2 and 3 and table 1).

Total enrollment

Total elementary and secondary enrollment

- increased 15 percent between 1991 and 2004; and
- is projected to increase an additional 9 percent between 2004 and 2016.

Enrollment in grades PK–8

Enrollment in prekindergarten through grade 8

- increased 11 percent between 1991 and 2004; and
- is projected to increase an additional 11 percent between 2004 and 2016.

Enrollment in grades 9–12

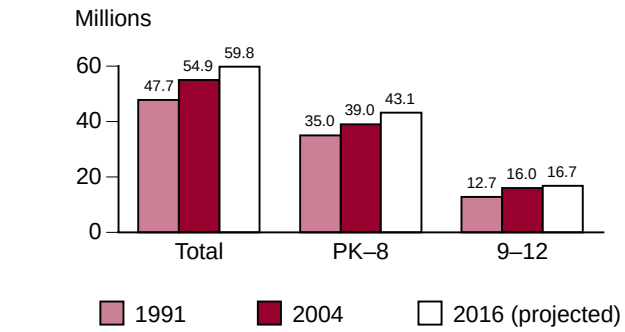
Enrollment in grades 9–12

- increased 26 percent between 1991 and 2004; and
- is projected to increase an additional 4 percent between 2004 and 2016.

The grade progression rate method

The method used to project school enrollments assumes that future trends in factors affecting enrollments will be consistent with past patterns. It implicitly includes the net effect of factors such as dropouts, deaths, nonpromotion, and transfers to and from public schools. See appendix A for more details.

Figure A. Actual and projected numbers for elementary and secondary enrollment, total and by grade level: Selected years, 1991–2016



NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys, various years; Private School Universe Survey, various years; and National Elementary and Secondary School Enrollment Model. (See reference table 1.)

Public elementary and secondary enrollment

Enrollment in public elementary and secondary schools

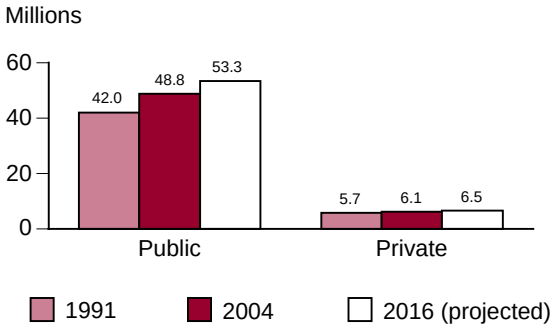
- increased 16 percent between 1991 and 2004; and
- is projected to increase an additional 9 percent between 2004 and 2016.

Private elementary and secondary enrollment

Enrollment in private elementary and secondary schools

- increased 8 percent between 1991 and 2004; and
- is projected to increase an additional 6 percent between 2004 and 2016.

Figure B. Actual and projected numbers for elementary and secondary enrollment, by control of school: Selected years, 1991–2016



SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys, various years; Private School Universe Survey, various years; and National Elementary and Secondary School Enrollment Model. (See reference table 1.)

State and Regional (Public School Data)

Between 2004 and 2016, enrollment in public elementary and secondary schools is expected to increase in 40 states and decrease in 10 states and the District of Columbia (tables A and B; reference figures 5–7 and tables 4–9). In the regions, public school enrollment during the same period is expected to increase in the Midwest, South, and West, and decrease in the Northeast.

States

The expected 9 percent national increase in public school enrollment between 2004 and 2016 plays out differently for most states.

- Increases are projected for 40 states, with
  - increases of more than 15 percent projected for 10 states;
  - increases between 5 and 15 percent projected for 19 states; and
  - increases of less than 5 percent projected for 11 states.

Table A. Projected percent increases in public elementary and secondary school enrollment, by state: 2004 through 2016

State	Percent change	State	Percent change
Nevada	36.6	South Carolina	6.9
Utah	32.4	Kentucky	6.5
Arizona	28.1	Missouri	6.3
Texas	28.1	Maryland	6.1
Idaho	25.6	Kansas	6.0
Georgia	24.7	Wyoming	5.7
Florida	22.9	Montana	5.5
North Carolina	18.3	New Mexico	5.4
Hawaii	16.9	California	5.2
Colorado	15.3	New Jersey	4.4
Delaware	14.0	Louisiana	4.3
Virginia	12.9	Indiana	3.7
Tennessee	12.3	Washington	3.3
Arkansas	10.7	Mississippi	3.2
Nebraska	10.3	Illinois	2.0
Alaska	10.0	New Hampshire	2.0
Minnesota	9.1	West Virginia	1.3
Iowa	8.3	South Dakota	1.2
Oklahoma	8.2	Alabama	0.9
Oregon	7.2	Wisconsin	0.5

SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys and State Public Elementary and Secondary Enrollment Model. (See reference table 5.)

- Decreases are projected for 10 states and the District of Columbia, with
  - decreases of 5 percent or more projected for 3 states; and
  - decreases between 4.99 and 0.1 percent projected for 7 states and the District of Columbia.

Regions

Between 2004 and 2016, public elementary and secondary enrollment is projected to

- increase 17 percent in the South;
- increase 11 percent in the West;
- increase 2 percent in the Midwest; and
- decrease 1 percent in the Northeast.

Table B. Projected percent decreases in public elementary and secondary school enrollment, by state: 2004 through 2016

State	Percent change	State	Percent change
North Dakota	-9.3	Michigan	-2.3
Rhode Island	-7.0	Connecticut	-2.3
Vermont	-6.4	Massachusetts	-2.1
District of Columbia	-3.6	Pennsylvania	-0.9
New York	-2.8	Ohio	-0.7
Maine	-2.5		

SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys and State Public Elementary and Secondary Enrollment Model. (See reference table 5.)

Accuracy of Projections

An analysis of projection errors from the past 22 editions of *Projections of Education Statistics* indicates that the mean absolute percentage errors (MAPEs) for lead times of 1, 2, 5, and 10 years out for projections of public school enrollment in grades PK–12 were 0.3, 0.6, 1.2, and 2.4 percent, respectively. For the 1-year-out prediction, this means that one would expect the projection to be within 0.3 percent of the actual value, on average. For projections of public school enrollment in grades PK–8, the MAPEs for lead times of 1, 2, 5, and 10 years out were 0.4, 0.6, 1.3, and 3.3 percent, respectively, while the MAPEs for projections of public school enrollment in grades 9–12 were 0.4, 0.7, 1.3, and 2.3 percent, respectively, for the same lead times.

Projections of public elementary and secondary enrollment produced by the National Center for Education Statistics (NCES) over the last 23 years have been more accurate than projections of public high school graduates produced by NCES over the same period. For more information, see table A-2 in appendix A.

Section 2. Enrollment in Degree-Granting Institutions

Introduction

Total enrollment in degree-granting institutions is expected to increase between 2005, the last year of actual data, and 2016. Degree-granting institutions are postsecondary institutions that provide study beyond secondary school and offer programs terminating in an associate's, baccalaureate, or higher degree. Differential growth is expected by student characteristics such as age, sex, and attendance status (part-time or full-time). Enrollment is expected to increase in both public and private degree-granting institutions.

Factors affecting the projections

Changes in age-specific enrollment rates and college-age populations will affect enrollment levels between 2005 and 2016. The most important factor is the expected increase in the traditional college-age population of 18- to 24-year-olds.

Three alternative sets of projections

Middle, low, and high sets of projections were made for total enrollment in degree-granting institutions and for enrollment by age, sex, attendance status, level (undergraduate, graduate, or first-professional), and control of institution.

Factors that were not considered

The enrollment projections do not take into account such factors as the cost of a college education, the economic value of an education, and the impact of distance learning due to technological changes. These factors may produce changes in enrollment levels. The racial/ethnic backgrounds of nonresident aliens are not known.

Assumptions underlying the projections

The middle alternative uses a base-line scenario of the economy for projections of disposable income and unemployment rates. The low and high alternatives are based on the low and high scenarios of the economy, respectively, to provide other possible outcomes. For more information, see appendix A.

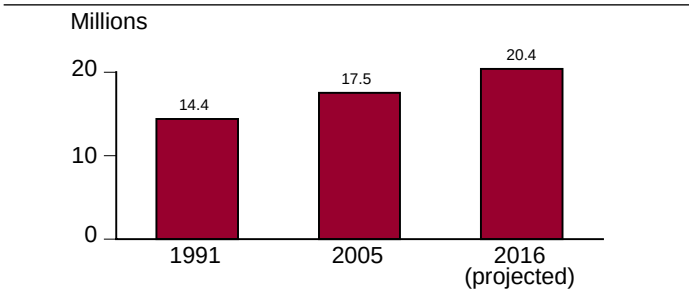
Total Enrollment

Total enrollment in degree-granting institutions increased 22 percent from 1991 to 2005, a period of 14 years (figure C; reference figure 10 and table 10).

Between 2005 and 2016, a period of 11 years, total enrollment is projected to increase

- 17 percent, to 20.4 million, in the middle alternative projections;
- 14 percent, to 20.0 million, in the low alternative projections; and
- 19 percent, to 20.8 million, in the high alternative projections.

Figure C. Actual and middle alternative projected numbers for total enrollment in degree-granting institutions: Selected years, 1991–2016



SOURCE: U.S. Dept. of Education, NCES, Integrated Postsecondary Education Data System (IPEDS), "Fall Enrollment Survey," various years; and Enrollment in Degree-Granting Institutions Model. (See reference table 10.)

Enrollment by Selected Characteristics and Control of Institution

Enrollment by age of student

Between 2005 and 2016, in the middle alternative projections, enrollment (figure D; reference figures 11–13 and tables 11–13) is projected to increase

- 15 percent for students who are 18 to 24 years old; and
- 7 percent for students who are 35 years old and over.

Enrollment by sex of student

Between 2005 and 2016, in the middle alternative projections, enrollment (figure D; reference figure 14 and tables 10–21) is projected to increase

- 10 percent for men; and
- 22 percent for women.

Enrollment by attendance status

Between 2005 and 2016, in the middle alternative projections, enrollment (figure D; reference figure 15 and tables 10–21) is projected to increase

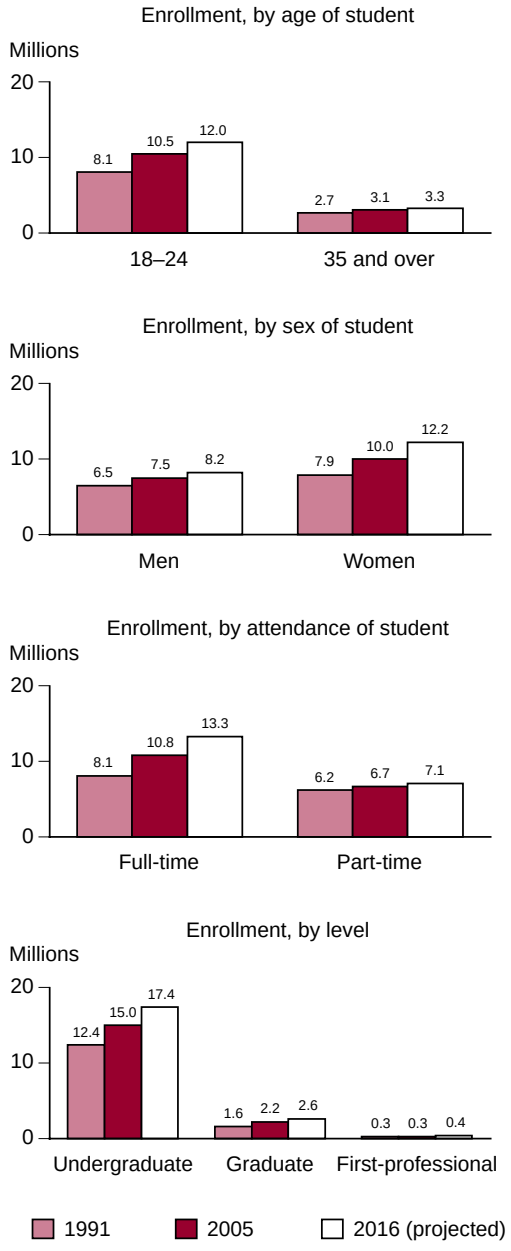
- 23 percent for full-time students; and
- 6 percent for part-time students.

Enrollment by level

Between 2005 and 2016, in the middle alternative projections, enrollment (figure D; reference figures 18 and 19 and tables 19–21) is projected to increase

- 16 percent for undergraduate students;
- 21 percent for graduate students; and
- 31 percent for first-professional students (see page 14 for a definition of first-professional).

Figure D. Actual and middle alternative projected numbers for total enrollment in degree-granting institutions, by selected characteristics: Selected years, 1991–2016



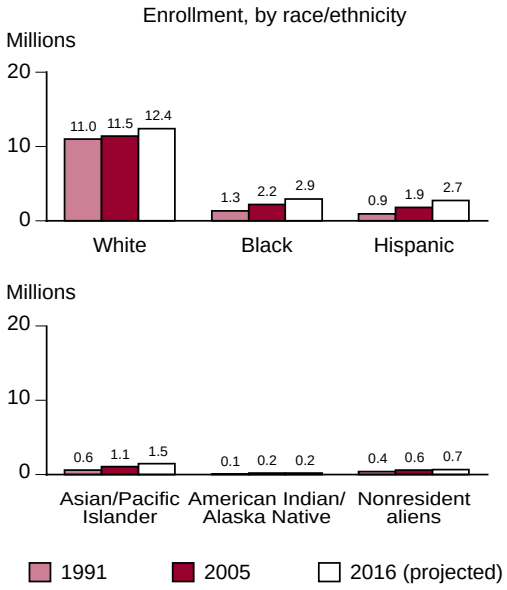
See notes at end of figure (on next page).

Enrollment by race/ethnicity

Between 2005 and 2016, enrollment (figure D, reference figure 20 and table 22) is projected to increase

- 8 percent for students who are White;
- 29 percent for students who are Black;
- 45 percent for students who are Hispanic;
- 32 percent for students who are Asian or Pacific Islanders;
- 34 percent for students who are American Indian or Alaska Native; and
- 15 percent for students who are nonresident aliens.

Figure D. Actual and middle alternative projected numbers for total enrollment in degree-granting institutions, by selected characteristics: Selected years, 1991–2016—Continued



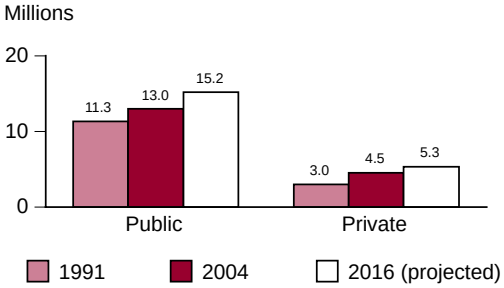
SOURCE: U.S. Dept. of Education, NCES, Integrated Postsecondary Education Data System (IPEDS), "Fall Enrollment Survey," various years; and Enrollment in Degree-Granting Institutions Model. (See reference tables 10 and 22.)

Enrollment in public and private institutions

Between 2005 and 2016, in the middle alternative projections, enrollment (figure E; reference figure 16 and tables 10 and 15–22) is projected to increase

- 17 percent in public institutions; and
- 18 percent in private institutions.

Figure E. Actual and middle alternative projected numbers for total enrollment in degree-granting institutions, by control of institution: Selected years, 1991–2016



NOTE: Race categories exclude persons of Hispanic origin. The racial/ethnic backgrounds of nonresident aliens are not known.
SOURCE: U.S. Dept. of Education, NCES, Integrated Postsecondary Education Data System (IPEDS), "Fall Enrollment Survey," various years; and Enrollment in Degree-Granting Institutions Model. (See reference table 10.)

Accuracy of Projections

For projections of total enrollment in degree-granting institutions, an analysis of projection errors based on the past seven editions of *Projections of Education Statistics* indicates that the mean absolute percentage errors (MAPEs) for lead times of 1, 2, 5, and 10 years out were 1.7, 2.2, 4.6, and 10.6 percent, respectively. For the 1-year-out prediction, this means that one would expect the projection to be within 1.7 percent of the actual value, on average.

NCES projections of college enrollment produced over the past 9 years have been more accurate than projections of master's degrees but less accurate than projections of public elementary and secondary enrollment produced over the same period. For more information, see table A-2 in appendix A.

Section 3. High School Graduates

Introduction

Between 2003–04, the last year of actual data, and 2016–17, the number of high school graduates is projected to increase nationally by 5 percent. Public schools are expected to have increases in high school graduates, while private schools are expected to have decreases. Increases are expected in the West and South and decreases are expected in the Northeast and Midwest.

Factors affecting the projections

Projected increases in the number of graduates reflect changes in the 18-year-old population over the projection period, rather than changes in the graduation rates of 12th-graders. However, projections of graduates could be affected by changes in policies influencing graduation requirements.

Definition

A *high school graduate* is defined as an individual who has received formal recognition from school authorities, by the granting of a diploma, for completing a prescribed course of study. This definition does not include other high school completers or high school equivalency recipients.

National

Total number of high school graduates

The total number of high school graduates (figure F; reference figure 22 and table 24)

- increased 24 percent between 1991–92 and 2003–04, a period of 12 years; and
- is projected to increase an additional 5 percent between 2003–04 and 2016–17, a period of 13 years.

Public high school graduates

The number of public high school graduates

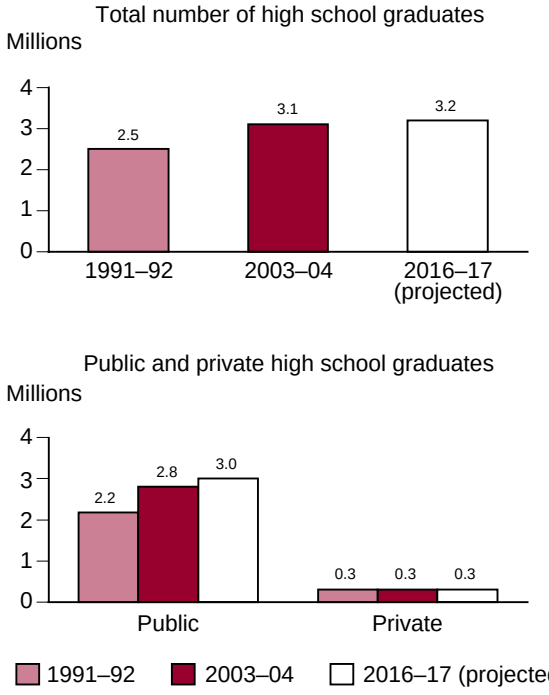
- increased 25 percent between 1991–92 and 2003–04; and
- is projected to increase an additional 6 percent between 2003–04 and 2016–17.

Private high school graduates

The number of private high school graduates

- increased 19 percent between 1991–92 and 2003–04; and
- is projected to decrease 4 percent between 2003–04 and 2016–17.

Figure F. Actual and projected numbers for high school graduates, total and by control of school: Selected years, 1991–92 to 2016–17



SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys, various years; Private School Universe Survey, various years; and National High School Graduates Model. (See reference table 24.)

State and Regional (Public School Data)

Between 2003–04 and 2016–17, the number of public high school graduates is expected to increase in 22 states and decrease in 28 states and the District of Columbia (table C; reference figure 23 and tables 25 and 26). In the regions, the number of public high school graduates is expected to increase in the West, South, and Northeast, and decrease in the Midwest.

States

The expected 6 percent national increase in public high school graduates between 2003–04 and 2016–17 plays out differently among the states.

- Increases are projected for 22 states with
  - increases of more than 15 percent projected for 9 states;
  - increases between 5 and 15 percent projected for 8 states; and
  - increases of less than 5 percent projected for 5 states.
- Decreases are projected for 28 states and the District of Columbia.
  - decreases of 15 percent or more projected for 7 states and the District of Columbia;
  - decreases between 5 and 15 percent projected for 9 states; and
  - decreases between 4.99 and 0.1 percent projected for 12 states (including Alaska which has a projected decrease of 4.97 percent).

Regions

Between 2003–04 and 2016–17, the number of public high school graduates is projected to

- increase 15 percent in the South;
- increase 12 percent in the West;
- increase 1 percent in the Northeast; and
- decrease 4 percent in the Midwest.

Table C. Projected percent changes in the number of public high school graduates, by state: 2003–04 through 2016–17

State	Percent change	State	Percent change
Nevada	68.0	North Dakota	-28.4
Utah	45.1	Vermont	-21.9
Arizona	43.0	South Dakota	-20.1
Florida	32.7	Maine	-18.7
Georgia	27.8	Montana	-17.0
North Carolina	25.9	District of Columbia	-16.5
Idaho	20.1	Wyoming	-16.1
New Jersey	19.1	Wisconsin	-16.1
Texas	19.0	Louisiana	-10.3
Virginia	14.6	New Hampshire	-6.9
Colorado	14.5	Minnesota	-6.6
Indiana	12.7	Hawaii	-6.4
Delaware	9.8	Massachusetts	-6.4
South Carolina	9.3	West Virginia	-6.3
California	8.7	Ohio	-6.3
Tennessee	6.5	Rhode Island	-6.1
Arkansas	5.3	Kansas	-5.0
Connecticut	1.7	Alaska	-5.0
New Mexico	1.2	Pennsylvania	-3.3
Maryland	0.9	Michigan	-3.0
Kentucky	0.8	Washington	-2.5
Illinois	0.1	Missouri	-1.6
		Iowa	-1.6
		Oregon	-1.1
		Nebraska	-0.9
		Alabama	-0.9
		Mississippi	-0.7
		New York	-0.5
		Oklahoma	-0.2

SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys and State Public High School Graduates Model. (See reference table 26.)

Accuracy of Projections

For NCES projections of public high school graduates produced over the last 16 years, the mean absolute percentage errors (MAPEs) for lead times of 1, 2, 5, and 10 years out were 0.8, 0.9, 1.6, and 3.9, respectively. NCES projections of public high school graduates have been less accurate than projections of public elementary and secondary enrollment, but more accurate than projections of earned degrees by level. For more information, see table A-2 in appendix A.

Section 4. Degrees Conferred

Introduction

Continuing growth in enrollment in degree-granting institutions, with particularly large increases among women, has led to a substantial increase in the number of degrees conferred. Increases in the number of degrees conferred are expected to continue between 2004–05, the last year of actual data, and 2016–17.

Three alternative sets of projections

Middle, low, and high sets of projections were developed for the total number of degrees conferred at each level—associate's, bachelor's, master's, doctor's, and first-professional—as well as for the number conferred at each level, by sex of recipient.

About the projections

Projections of degrees by level and sex were based primarily on college-age populations and college enrollment by level and attendance status. Some factors that may affect future numbers of degrees, such as choice of degree and demand for occupations, were not included in the projection models.

Degrees, by Level of Degree and Sex of Recipient

Between 1991–92 and 2004–05, the number and proportion of degrees awarded to women rose at all levels. In 2004–05, women earned the majority of associate's, bachelor's, and master's degrees; 49 percent of doctor's degrees; and slightly less than 50 percent of first-professional degrees. Between 2004–05 and 2016–17, continued increases are expected in the number of degrees awarded to women at all levels (figure G; reference figures 24–28 and tables 27–31).

Associate's degrees

Between 2004–05 and 2016–17, in the middle alternative projections, the number of associate's degrees is projected to

- increase 9 percent overall;
- increase 2 percent for men; and
- increase 14 percent for women.

Bachelor's degrees

Between 2004–05 and 2016–17, in the middle alternative projections, the number of bachelor's degrees is projected to

- increase 26 percent overall;
- increase 16 percent for men; and
- increase 33 percent for women.

Figure G. Actual and middle alternative projected numbers for degrees conferred, by level and sex of recipient: Selected years, 1991–92 to 2016–17

See notes at end of figure (on next page).

Master's degrees

Between 2004–05 and 2016–17, in the middle alternative projections, the number of master's degrees is projected to

- increase 35 percent overall;
- increase 24 percent for men; and
- increase 43 percent for women.

Doctor's degrees

Between 2004–05 and 2016–17, in the middle alternative projections, the number of doctor's degrees is projected to

- increase 32 percent overall;
- increase 10 percent for men; and
- increase 54 percent for women.

Beginning in 2005–06, women are projected to receive more doctor's degrees than men in each set of alternative projections.

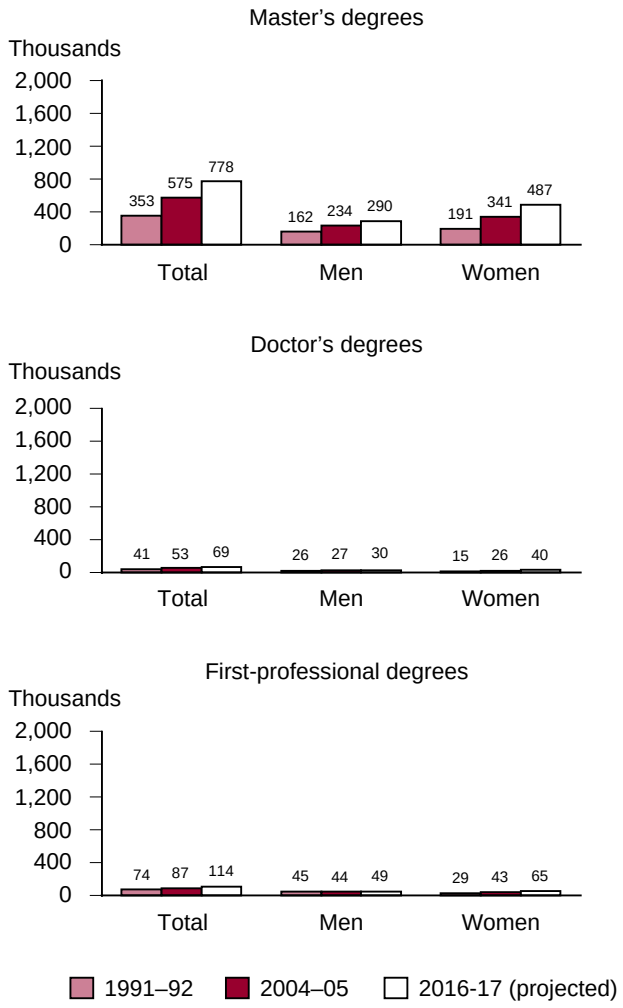
First-professional degrees

Between 2004–05 and 2016–17, in the middle alternative projections, the number of first-professional degrees is projected to

- increase 30 percent overall;
- increase 11 percent for men; and
- increase 49 percent for women.

Beginning in 2005–06, women are projected to receive more first professional degrees than men in each set of alternative projections.

Figure G. Actual and middle alternative projected numbers for degrees conferred, by level and sex of recipient: Selected years, 1991–92 to 2016–17—Continued



NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Dept. of Education, NCES, Integrated Postsecondary Education Data System (IPEDS), "Completions Survey," various years; and Degrees Conferred Model. (See reference tables 27 through 31.)

Definition

A *first-professional degree* is one that signifies both completion of the academic requirements for beginning practice in a given profession and a level of professional skill beyond that required for a bachelor's degree. A first-professional degree is based on a program requiring at least 2 academic years of work beyond the bachelor's degree. Degree fields include dentistry, medicine, law, and theological professions.

Accuracy of Projections

An analysis of projection errors from the past 10 editions of *Projections of Education Statistics* indicates that the mean absolute percentage errors (MAPEs) for associate's degree projections were 2.3 percent for 1 year out, 3.0 percent for 2 years out, 6.0 percent for 5 years out, and 14.8 percent for 10 years out. The MAPEs for bachelor's degree projections were 0.9, 2.0, 6.0, and 11.2 percent, respectively, for lead times of 1, 2, 5, and 10 years out. The MAPEs for master's degrees were 1.6, 3.9, 12.3, and 19.8 percent, respectively. For doctor's degrees, the MAPEs were 2.6, 4.3, 4.1, and 4.5 percent, respectively. For first-professional degrees, the MAPEs were 1.3, 1.4, 5.6, and 12.4 percent, respectively.

NCES projections of degrees by level produced over the last 10 years have been less accurate than NCES projections of public elementary and secondary enrollment produced over the same period. For more information on the MAPEs of different NCES projection series, see table A-2 in appendix A.

Section 5. Elementary and Secondary Teachers

Introduction

Between 2004, the last year of actual data, and 2016, the number of teachers in elementary and secondary schools is projected to rise. The numbers of both public and private school teachers are projected to grow.

Factors affecting the projections

The projected increase in the number of elementary and secondary teachers is related to levels of enrollments and to education revenue receipts from state sources per capita.

Three alternative sets of projections

Middle, low, and high sets of projections were produced for the number of teachers and the pupil/teacher ratio, by control of school (public or private).

Factors that were not considered

The projections do not take into account possible changes in the number of teachers due to the effects of government policies.

Assumptions underlying the projections

In order to provide a range of possible outcomes of the number of public school teachers, the alternative projections make varying economic assumptions about the growth of assistance by state governments to local governments.

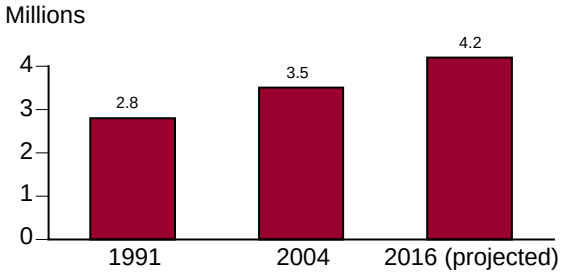
Teachers in Elementary and Secondary Schools

Total elementary and secondary teachers

The total number of elementary and secondary teachers (figure H; reference figure 29 and table 32)

- increased 26 percent between 1991 and 2004, a period of 13 years; and
- is projected to increase an additional 18 percent between 2004 and 2016, a period of 12 years, in the middle alternative projections.

Figure H. Actual and middle alternative projected numbers for elementary and secondary teachers: Selected years, 1991–2016



SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys, various years; Private School Universe survey, various years; and Elementary and Secondary Teacher Model. (See reference table 32.)

Public school teachers

The number of teachers in public elementary and secondary schools (figure I; reference figure 29 and table 32)

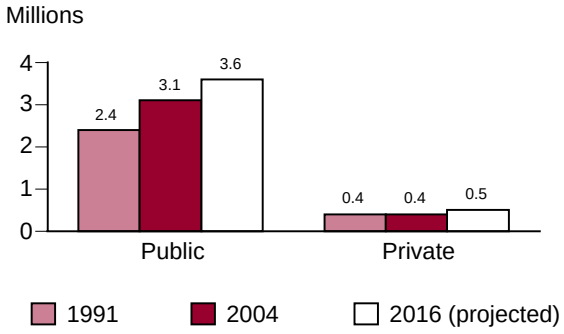
- increased 27 percent between 1991 and 2004; and
- is projected to increase an additional 18 percent between 2004 and 2016 in the middle alternative projections.

Private school teachers

The number of teachers in private elementary and secondary schools

- increased 23 percent between 1991 and 2004; and
- is projected to increase an additional 20 percent between 2004 and 2016 in the middle alternative projections.

Figure I. Actual and middle alternative projected numbers for elementary and secondary teachers, by control of school: Selected years, 1991–2016



SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys, various years; Private School Universe Survey, various years; and Elementary and Secondary Teacher Model. (See reference table 32.)

Pupil/Teacher Ratios

Total elementary and secondary teachers

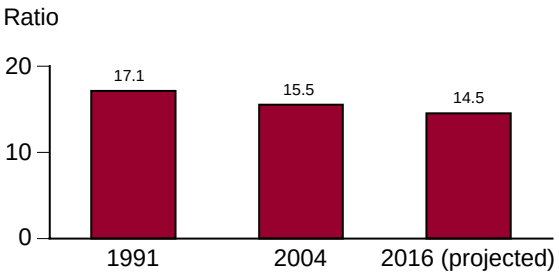
The pupil/teacher ratio in elementary and secondary schools (figure J; table 33)

- decreased from 17.1 to 15.5 between 1991 and 2004; and
- is projected to decrease further to 14.5 in 2016 in the middle alternative projections.

About pupil/teacher ratios

The overall elementary and secondary pupil/teacher ratio and pupil/teacher ratios for public and private schools were computed based on elementary and secondary enrollment and the number of classroom teachers by control of school.

Figure J. Actual and middle alternative projected numbers for the pupil/teacher ratio in elementary and secondary schools: Selected years, 1991–2016



SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys, various years; Private School Universe Survey, various years; and Elementary and Secondary Teacher Model. (See reference table 33.)

Public school teachers

The pupil/teacher ratio in public elementary and secondary schools (figure K; reference figure 30 and table 33)

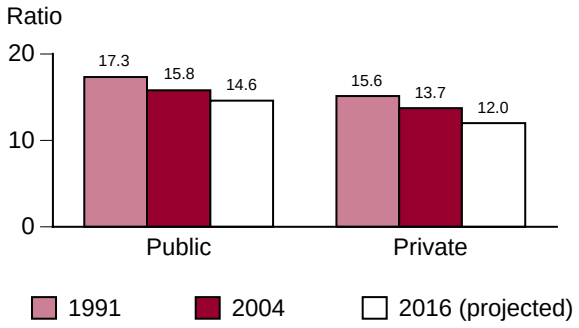
- decreased from 17.3 to 15.8 between 1991 and 2004; and
- is projected to decrease further to 14.6 in 2016 in the middle alternative projections.

Private school teachers

The pupil/teacher ratio in private elementary and secondary schools (figure K; reference figure 30 and table 33)

- decreased from 15.6 to 13.7 between 1991 and 2004; and
- is projected to decrease further to 12.0 in 2016 in the middle alternative projections.

Figure K. Actual and middle alternative projected numbers for the pupil/teacher ratio in elementary and secondary schools, by control of school: Selected years, 1991–2016



SOURCE: U.S. Dept. of Education, NCES, Common Core of Data surveys, various years; Private School Universe Survey, various years; and Elementary and Secondary Teacher Model. (See reference table 33.)

Accuracy of Projections

An analysis of projection errors from the past 16 editions of *Projections of Education Statistics* indicates that the mean absolute percentage errors (MAPEs) for projections of classroom teachers in public elementary and secondary schools were 1.0 percent for 1 year out, 1.6 percent for 2 years out, 2.7 percent for 5 years out, and 5.5 percent for 10 years out. NCES projections of public elementary and secondary teachers produced over the last 16 years have been less accurate than NCES projections of public elementary and secondary enrollment produced over the same period. For more information on the MAPEs of different NCES projection series, see table A-2 in appendix A.

Section 6. Expenditures of Public Elementary and Secondary Schools

Introduction

Current expenditures in public elementary and secondary schools are projected to increase in constant dollars between school years 2003–04, the last year of actual data, and 2016–17.

Three alternative sets of projections

Middle, low, and high sets of projections were made for total current expenditures and current expenditures per pupil.

Assumptions underlying the projections

Each set of projections is based on alternative assumptions concerning economic growth and assistance by state governments to local governments. For more details, see appendix A.

Current Expenditures

Between 2003–04 and 2016–17, increases are expected in the current expenditures and current expenditures per pupil of public elementary and secondary schools (figure L; reference figures 31 and 32 and tables 34 and 35).

Current expenditures

Current expenditures in constant 2004–05 dollars increased 42 percent from 1991–92 to 2003–04, a period of 12 years.

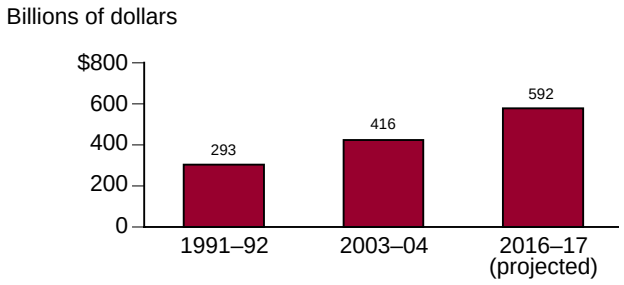
From 2003–04 to 2016–17, a period of 13 years, current expenditures in constant 2004–05 dollars are projected to increase

- 43 percent, to $592 billion, in the middle alternative projections;
- 36 percent, to $565 billion, in the low alternative projections; and
- 49 percent, to $618 billion, in the high alternative projections.

Other factors that may affect the projections

Many factors that may affect future school expenditures and teacher salaries were not considered in the production of these projections. Such factors include policy initiatives, as well as potential changes in the distribution of elementary and secondary teachers as older teachers retire and are replaced by younger teachers.

Figure L. Actual and middle alternative projected numbers for current expenditures in public elementary and secondary schools in 2004–05 dollars: Selected years, 1991–92 through 2016–17



NOTE: Data were placed in constant 2004–05 dollars using the Consumer Price Index for all urban consumers (BLS, U.S. Dept. of Labor).
SOURCE: U.S. Dept. of Education, NCES, Common Core of Data, "National Public Education Finance Survey," various years; National Elementary and Secondary Enrollment Model; and Elementary and Secondary School Current Expenditures Model. (See reference table 34.)

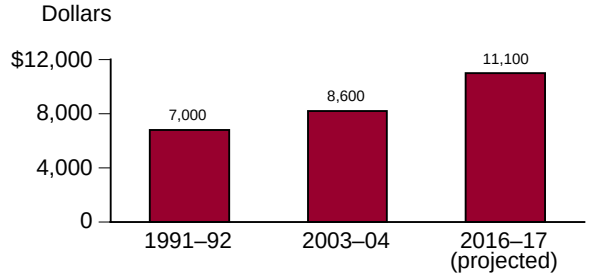
Current expenditures per pupil

Current expenditures per pupil in fall enrollment in constant 2004–05 dollars increased 23 percent from 1991–92 to 2003–04.

From 2003–04 to 2016–17, current expenditures in constant 2004–05 dollars per pupil in fall enrollment are projected to increase

- 30 percent, to $11,100, in the middle alternative projections;
- 24 percent, to $10,600, in the low alternative projections; and
- 35 percent, to $11,600, in the high alternative projections.

Figure M. Actual and middle alternative projected numbers for current expenditures per pupil in public elementary and secondary schools in 2004–05 dollars: Selected years, 1991–92 through 2016–17



NOTE: Data were placed in constant 2004-05 dollars using the Consumer Price Index for all urban consumers (BLS, U.S. Dept. of Labor).
SOURCE: U.S. Dept. of Education, NCES, Common Core of Data, "National Public Education Finance Survey," various years; National Elementary and Secondary Enrollment Model; and Elementary and Secondary School Current Expenditures Model. (See reference table 34.)

Constant versus current dollars

Throughout this section, projections of current expenditures are presented in constant 2004–05 dollars. The reference tables, later in this report, present these data both in constant 2004–05 dollars and in current dollars. The projections were developed in constant dollars and then placed in current dollars using projections for the Consumer Price Index (CPI) (table B-6 in appendix B). Three alternative sets of projections for the CPI were used, one with each set of projections (low, middle, and high).

Accuracy of Projections

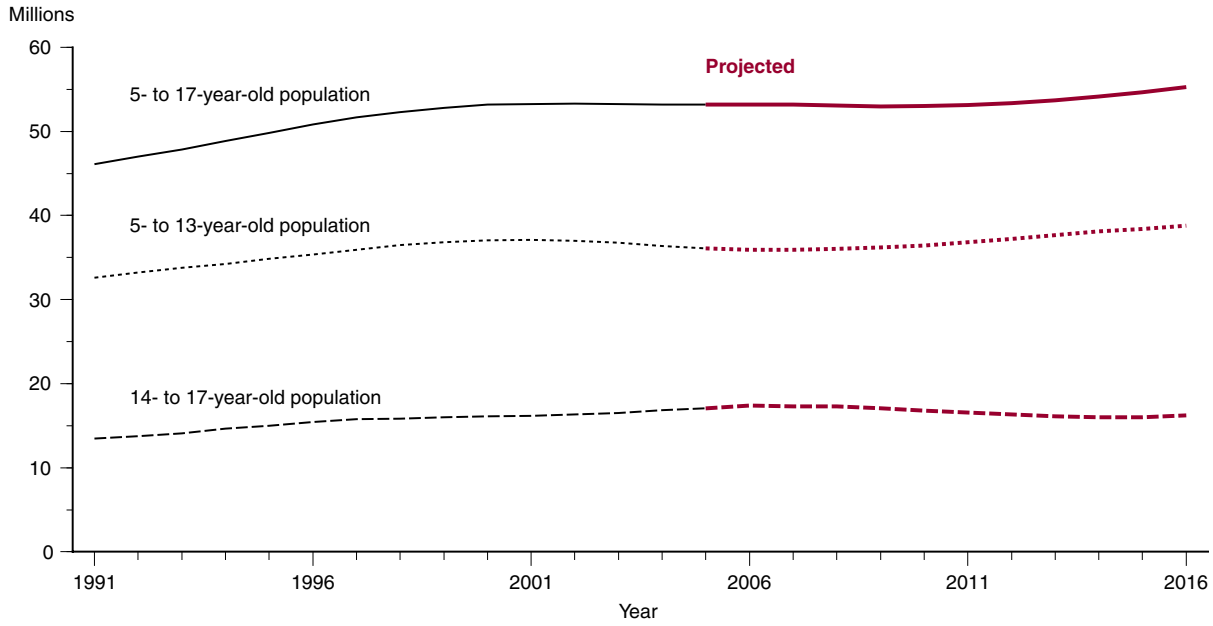
An analysis of projection errors from similar models used in the past sixteen editions of *Projections of Education Statistics* that contained expenditure projections indicates that mean absolute percentage errors (MAPEs) for total current expenditures in constant dollars were 1.4 percent for 1 year out, 2.3 percent for 2 years out, 2.9 percent for 5 years out, and 3.6 percent for 10 years out. MAPEs for current expenditure per pupil in current dollars were 1.4 percent for 1 year out, 2.2 percent for 2 years out, 3.3 percent for 5 years out, and 5.5 percent for 10 years out.

Long-term projections that are economically based, such as projections of current expenditures, are generally less accurate than long-term demographic projections, such as projections of elementary and secondary enrollment. Recent NCES projections of current expenditures generally have been less accurate than recent NCES projections of public elementary and secondary enrollment, but more accurate than projections of bachelor's degrees. See appendix A for further discussion of the accuracy of recent projections of current expenditures, and see table A-2 in appendix A for the mean absolute percentage errors (MAPEs) of these projections.

Reference Figures

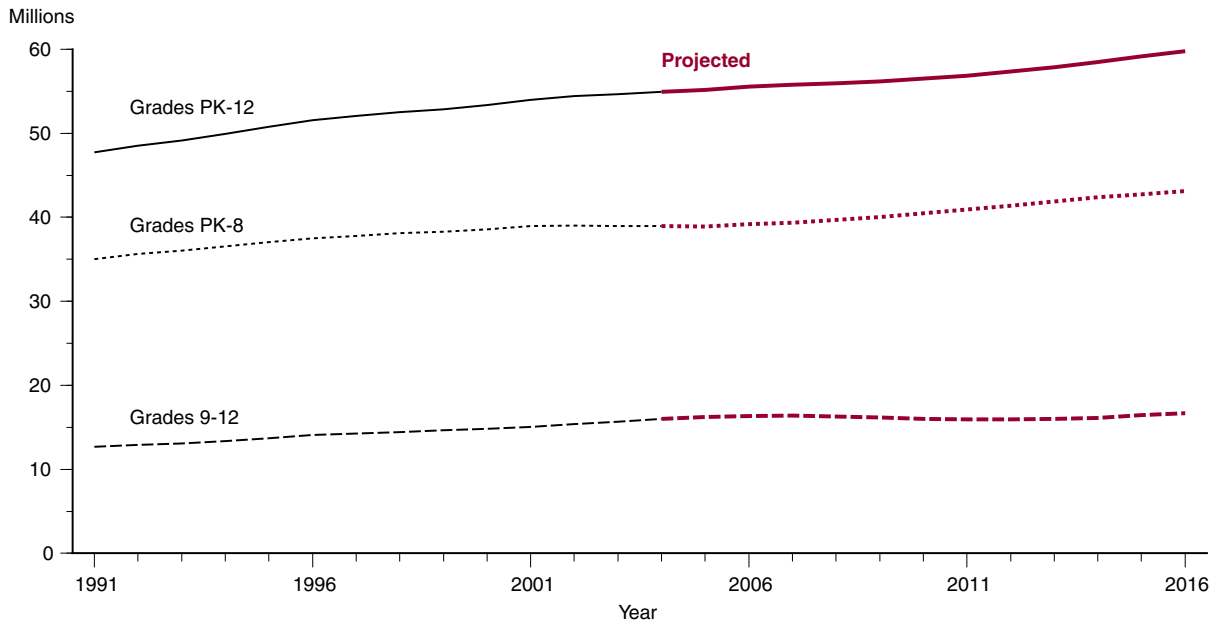
Page intentionally left blank

Figure 1. Actual and projected numbers for school-age populations, by age range: 1991 through 2016



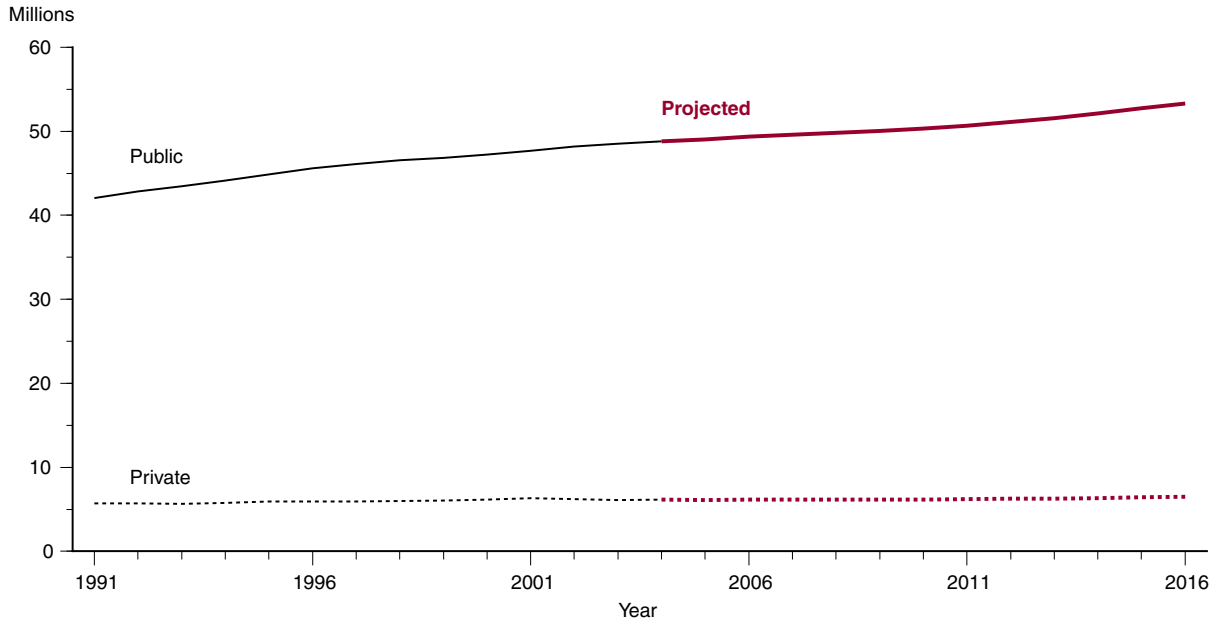
SOURCE: U.S. Department of Commerce, Census Bureau, Population Estimates, retrieved October 10 and 11, 2006, from http://www.census.gov/popest/archives/EST90INTERCENSAL/US-EST90INT-datasets.html and http://www.census.gov/popest/national/asrh/2005_nat_af.html; and Population Projections, retrieved October 10 and 11, 2006, from http://www.census.gov/ipc/www/usinterimproj/.

Figure 2. Actual and projected numbers for enrollment in elementary and secondary schools, by grade level: Fall 1991 through fall 2016



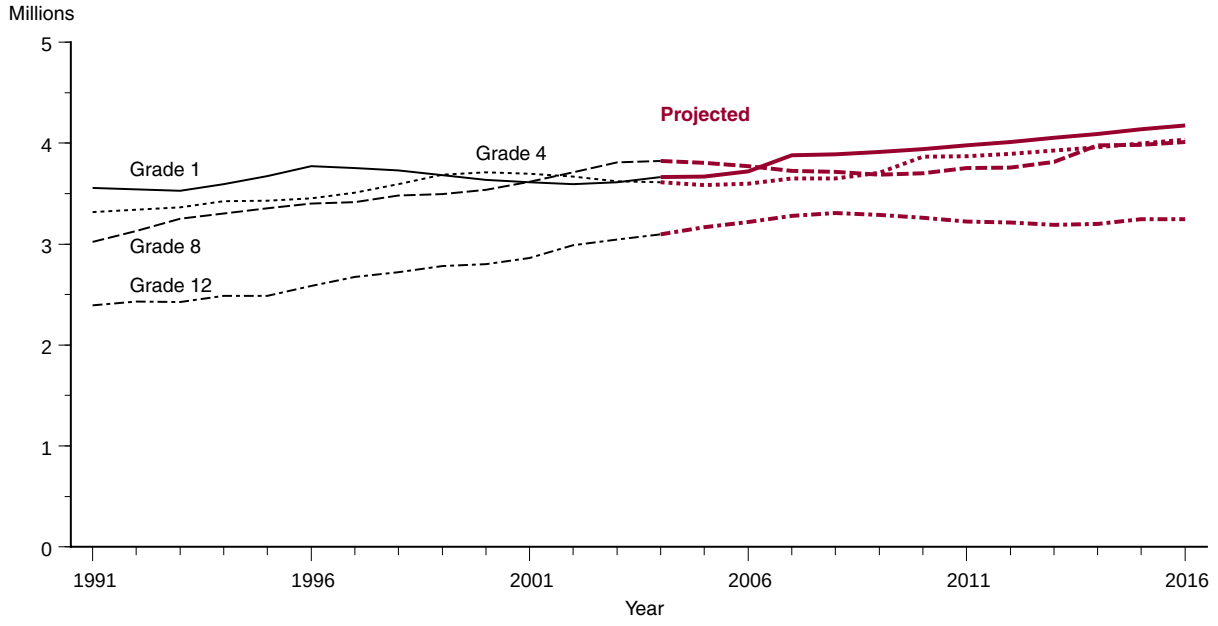
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; Private School Universe Survey (PSS), selected years, 1991–92 through 2003–04; and National Elementary and Secondary Enrollment Model, 1972–2004.

Figure 3. Actual and projected numbers for enrollment in elementary and secondary schools, by control of school: Fall 1991 through fall 2016



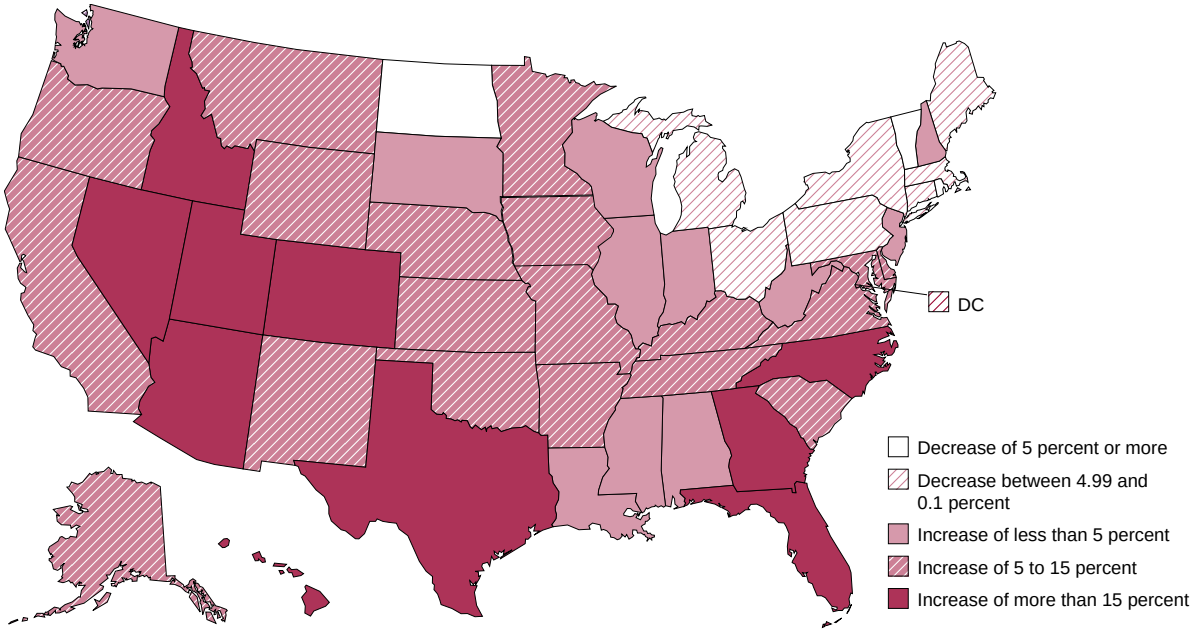
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; Private School Universe Survey (PSS), selected years, 1991–92 through 2003–04; and National Elementary and Secondary School Model, 1972–2004.

Figure 4. Actual and projected numbers for enrollment in elementary and secondary schools, by selected grades: Fall 1991 through fall 2016



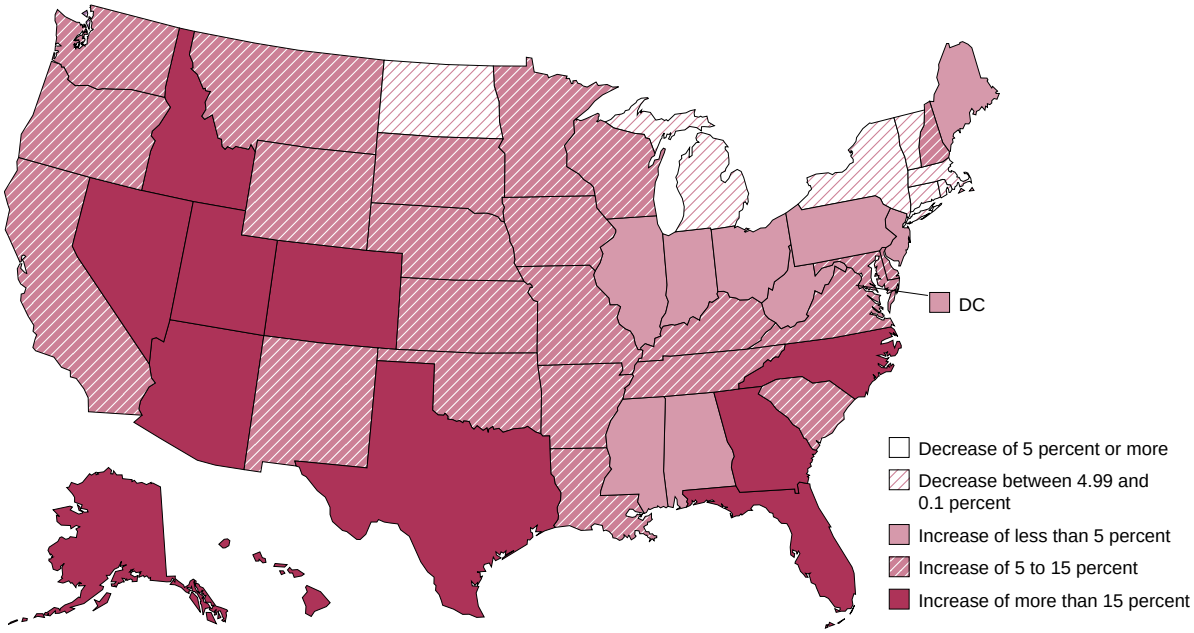
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; and National Elementary and Secondary School Model, 1972–2004.

Figure 5. Projected percentage change in grades PK–12 enrollment in public schools, by state: Fall 2004 through fall 2016



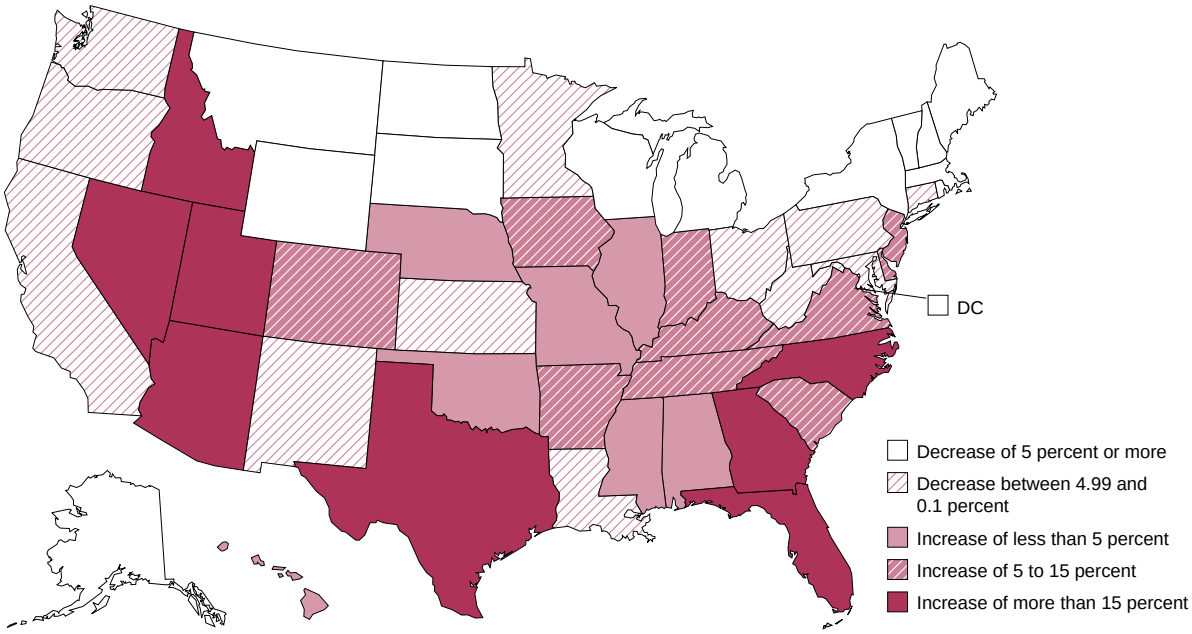
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2004–05; and State Public Elementary and Secondary Enrollment Model, 1980–2004.

Figure 6. Projected percentage change in grades PK–8 enrollment in public schools, by state: Fall 2004 through fall 2016



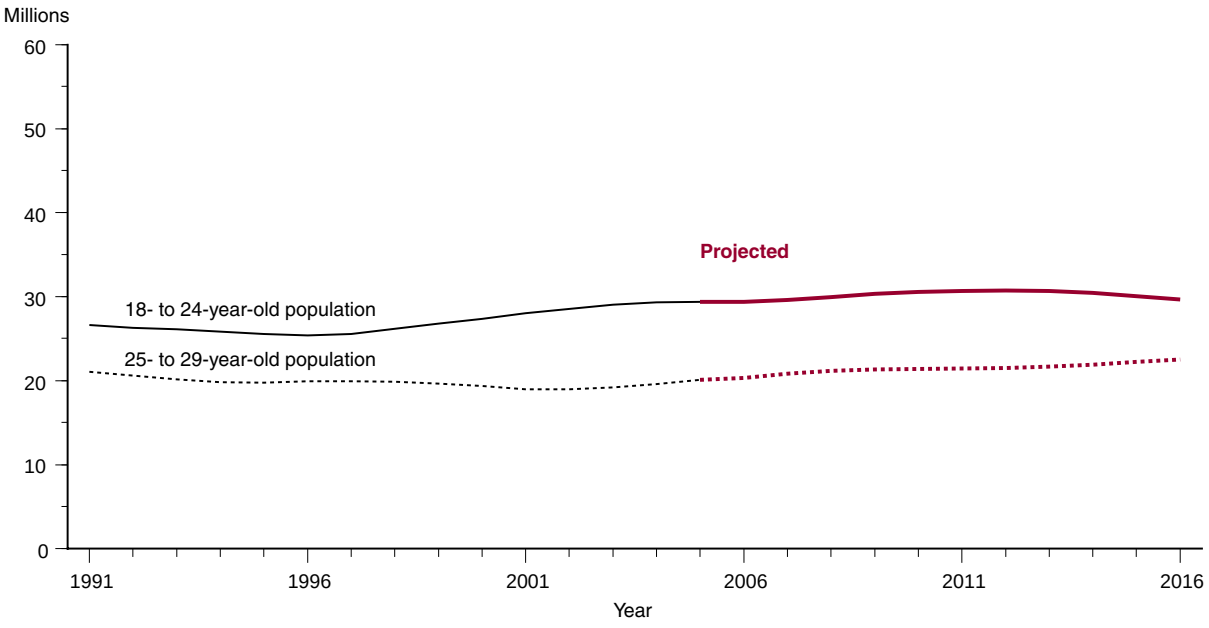
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2004–05; and State Public Elementary and Secondary Enrollment Model, 1980–2004.

Figure 7. Projected percentage change in grades 9–12 enrollment in public schools, by state: Fall 2004 through fall 2016



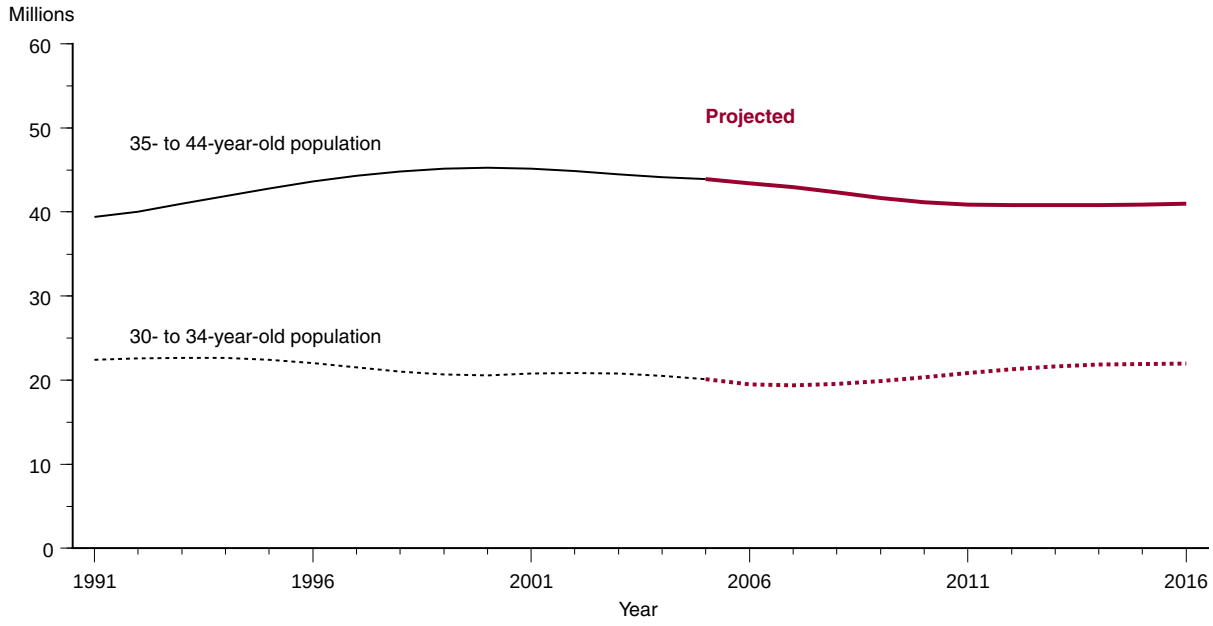
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2004–05; and State Public Elementary and Secondary Enrollment Model, 1980–2004.

Figure 8. Actual and projected numbers for 18–24 year olds and 25–29 year olds: 1991 through 2016



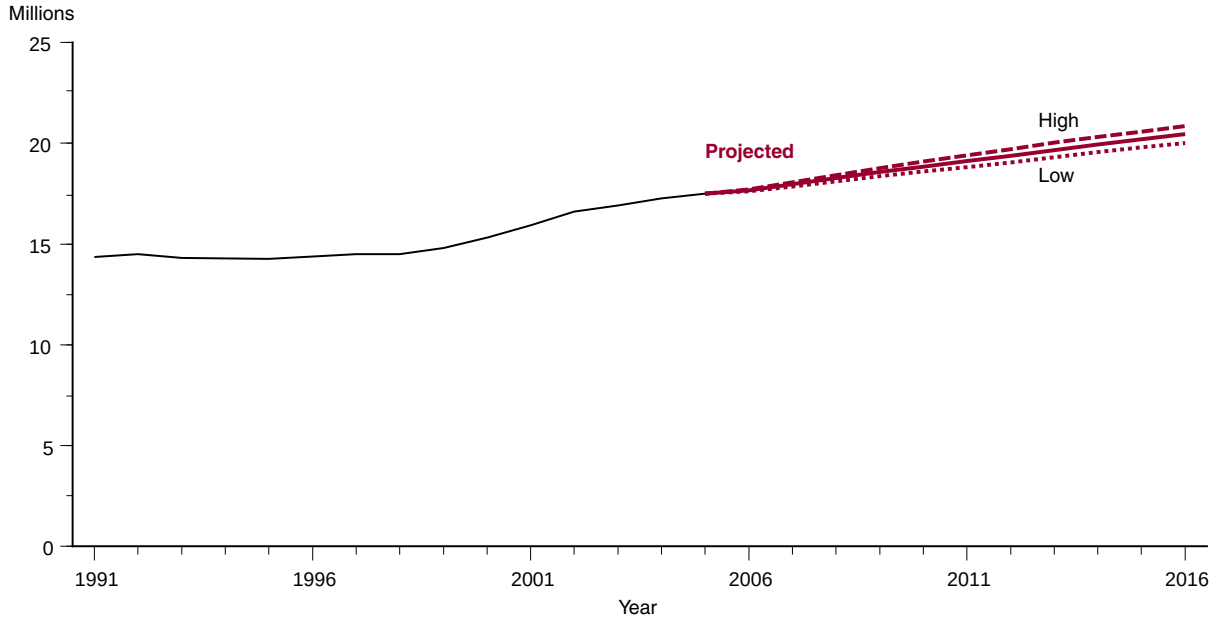
SOURCE: U.S. Department of Commerce, Census Bureau, Population Estimates, retrieved October 10 and 11, 2006, from http://www.census.gov/popest/archives/EST90INTERCENSAL/US-EST90INT-datasets.html and http://www.census.gov/popest/national/asrh/2005_nat_af.html; and Population Projections, retrieved October 10 and 11, 2006, from http://www.census.gov/ipc/www/usinterimproj/.

Figure 9. Actual and projected numbers for 30–34 year olds and 35–44 year olds: 1991 through 2016



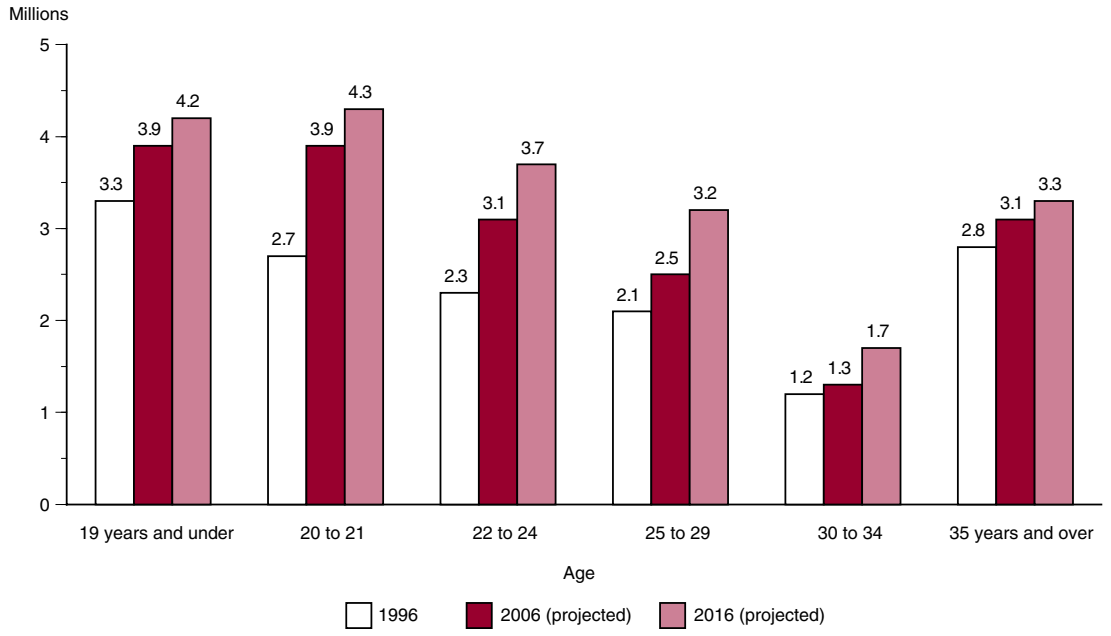
SOURCE: U.S. Department of Commerce, Census Bureau, Population Estimates, retrieved October 10 and 11, 2006, from http://www.census.gov/popest/archives/EST90INTERCENSAL/US-EST90INT-datasets.html and http://www.census.gov/popest/national/asrh/2005_nat_af.html; and Population Projections, retrieved October 10 and 11, 2006, from http://www.census.gov/ipc/www/usinterimproj/.

Figure 10. Actual and alternative projected numbers for enrollment in degree-granting postsecondary institutions: Fall 1991 through fall 2016



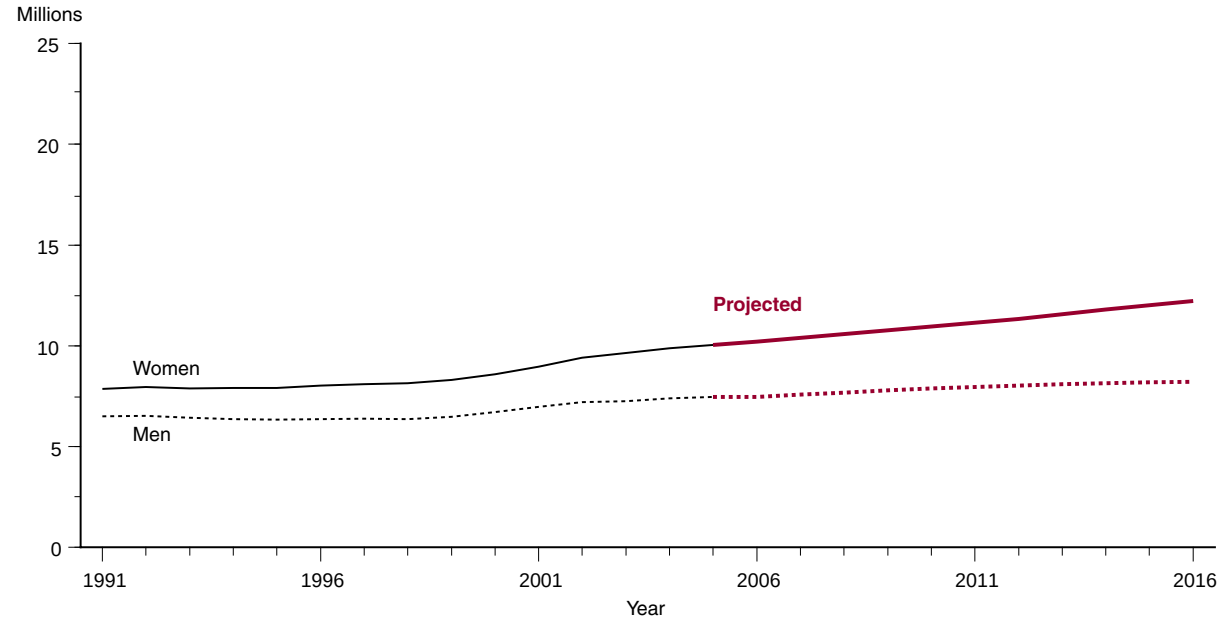
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005.

Figure 11. Actual and middle alternative projected numbers for enrollment in degree-granting postsecondary institutions, by age group: Fall 1996, 2006, and 2016



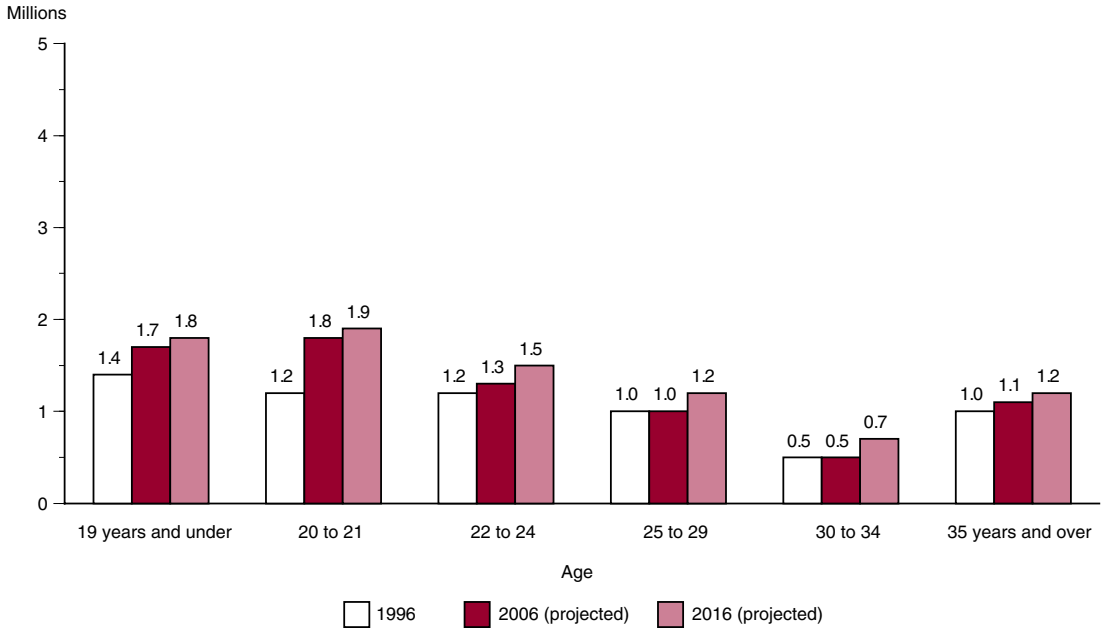
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:96); Enrollment in Degree-Granting Institutions Model, 1980–2005; and U.S. Department of Commerce, Census Bureau, *Current Population Reports*, "Social and Economic Characteristics of Students," various years.

Figure 12. Actual and middle alternative projected numbers for enrollment in degree-granting postsecondary institutions, by sex: Fall 1991 through fall 2016



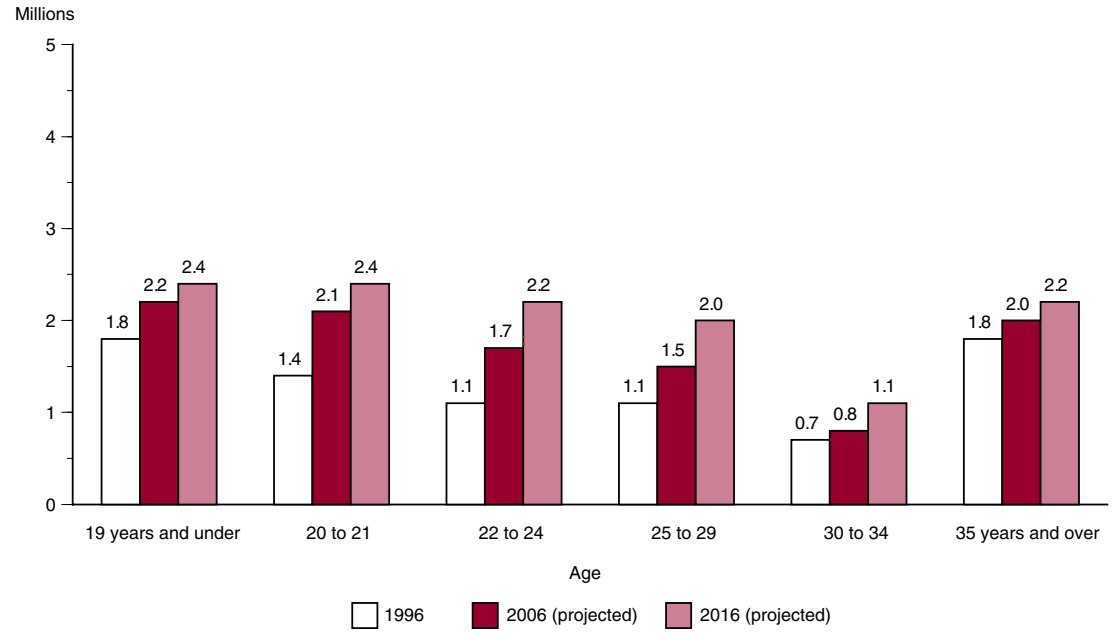
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005.

Figure 13. Actual and middle alternative projected numbers for enrollment of men in degree-granting postsecondary institutions, by age group: Fall 1996, 2006, and 2016



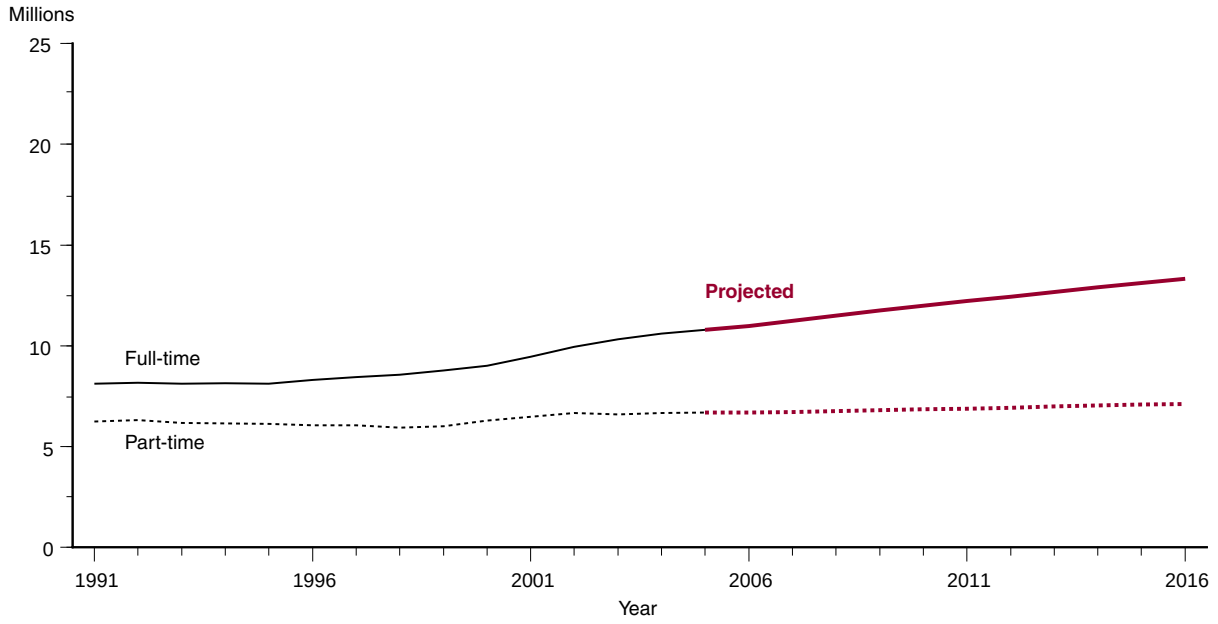
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:96); Enrollment in Degree-Granting Institutions Model, 1980–2005; and U.S. Department of Commerce, Census Bureau, *Current Population Reports*, "Social and Economic Characteristics of Students," various years.

Figure 14. Actual and middle alternative projected numbers for enrollment of women in degree-granting postsecondary institutions, by age group: Fall 1996, 2006, and 2016



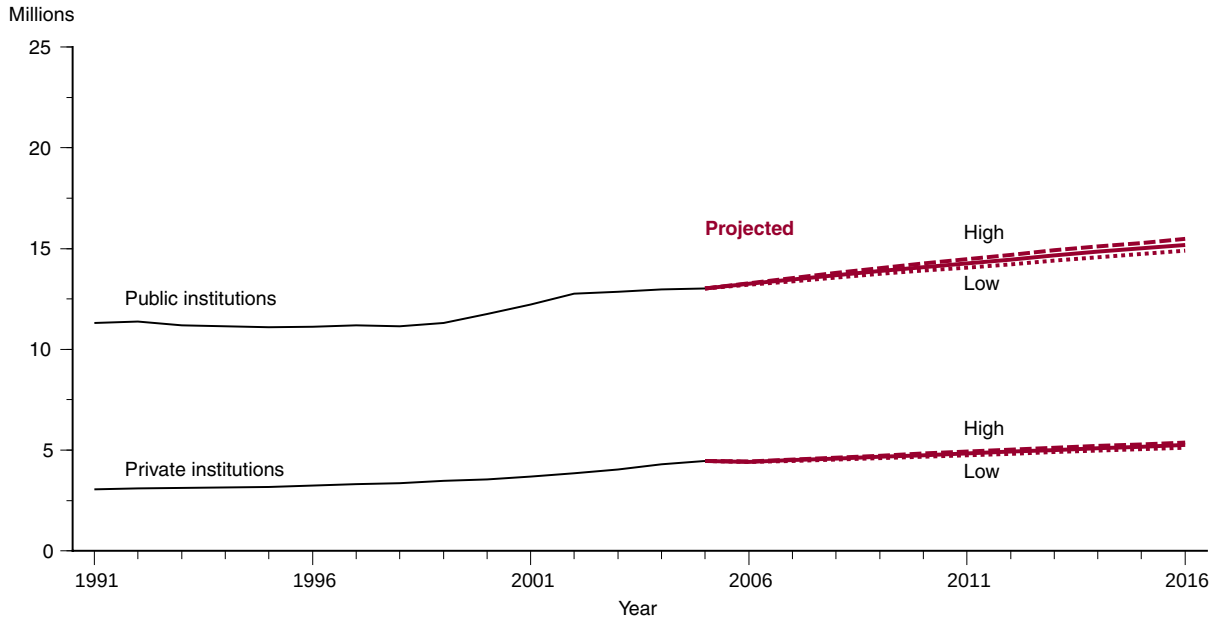
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:96); Enrollment in Degree-Granting Institutions Model, 1980–2005; and U.S. Department of Commerce, Census Bureau, *Current Population Reports*, "Social and Economic Characteristics of Students," various years.

Figure 15. Actual and middle alternative projected numbers for enrollment in degree-granting postsecondary institutions, by attendance status: Fall 1991 through fall 2016



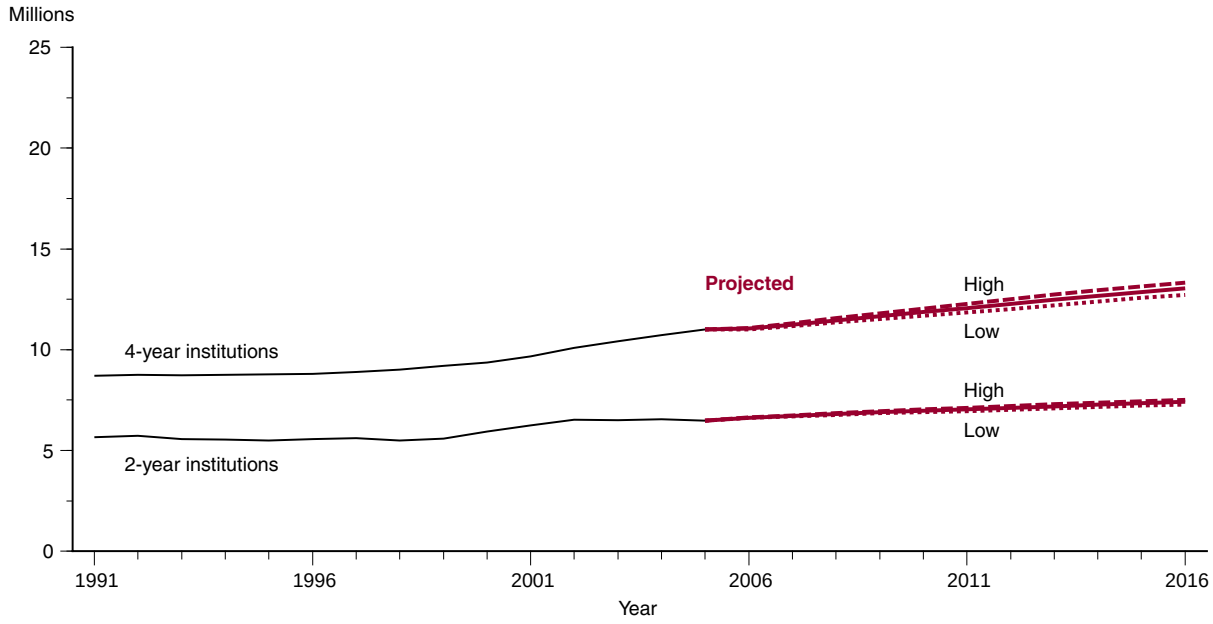
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005.

Figure 16. Actual and alternative projected numbers for enrollment in degree-granting postsecondary institutions, by control of institution: Fall 1991 through fall 2016



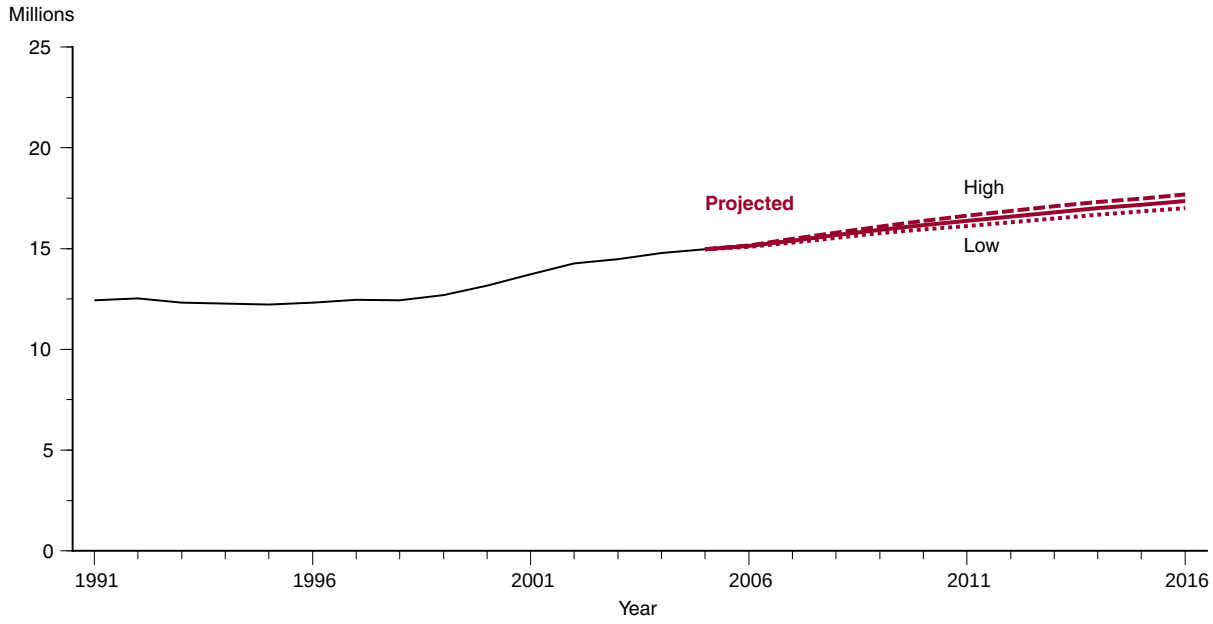
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005.

Figure 17. Actual and alternative projected numbers for enrollment in degree-granting postsecondary institutions, by type of institution: Fall 1991 through fall 2016



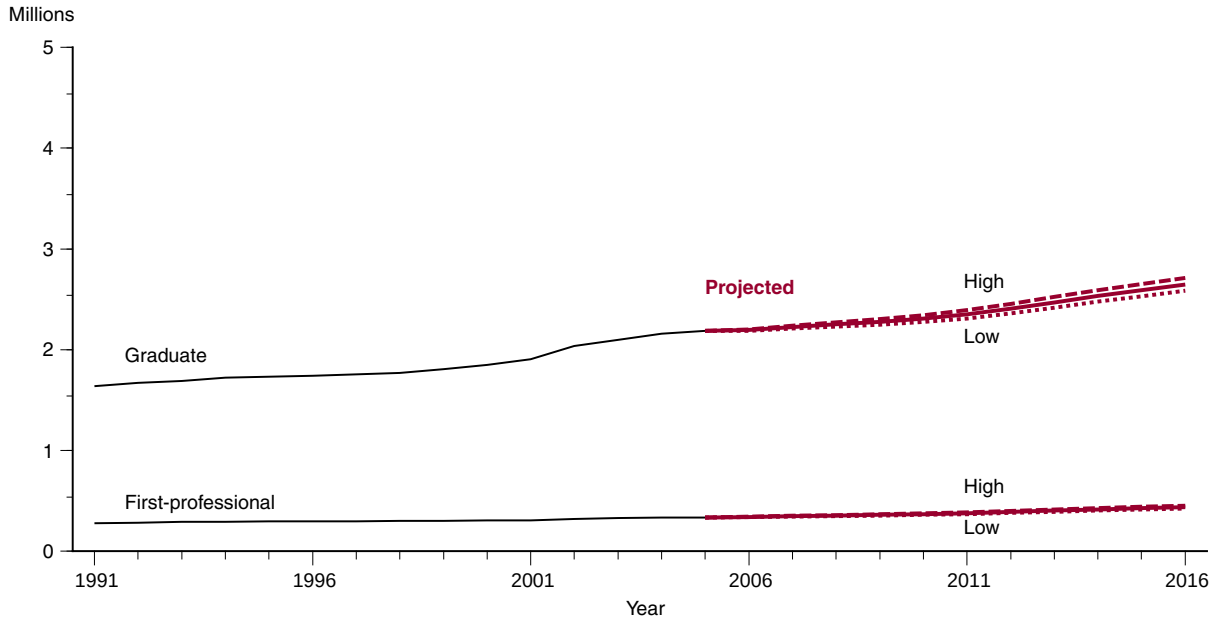
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005.

Figure 18. Actual and alternative projected numbers for undergraduate enrollment in degree-granting postsecondary institutions: Fall 1991 through fall 2016



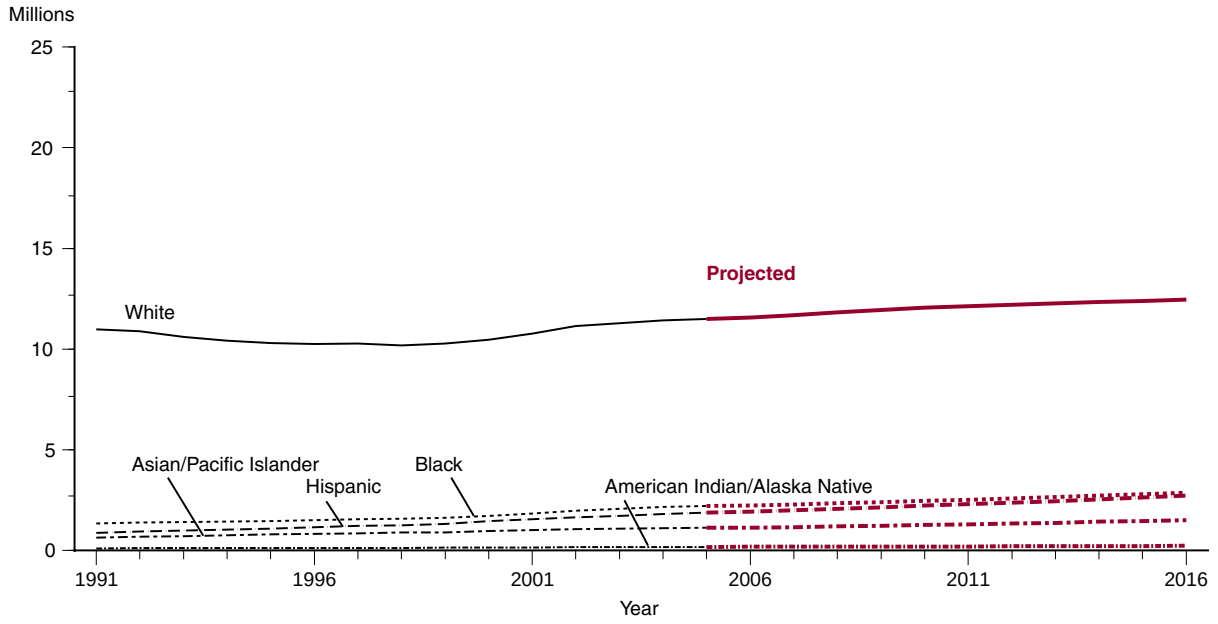
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005.

Figure 19. Actual and alternative projected numbers for postbaccalaureate enrollment in degree-granting postsecondary institutions: Fall 1991 through fall 2016



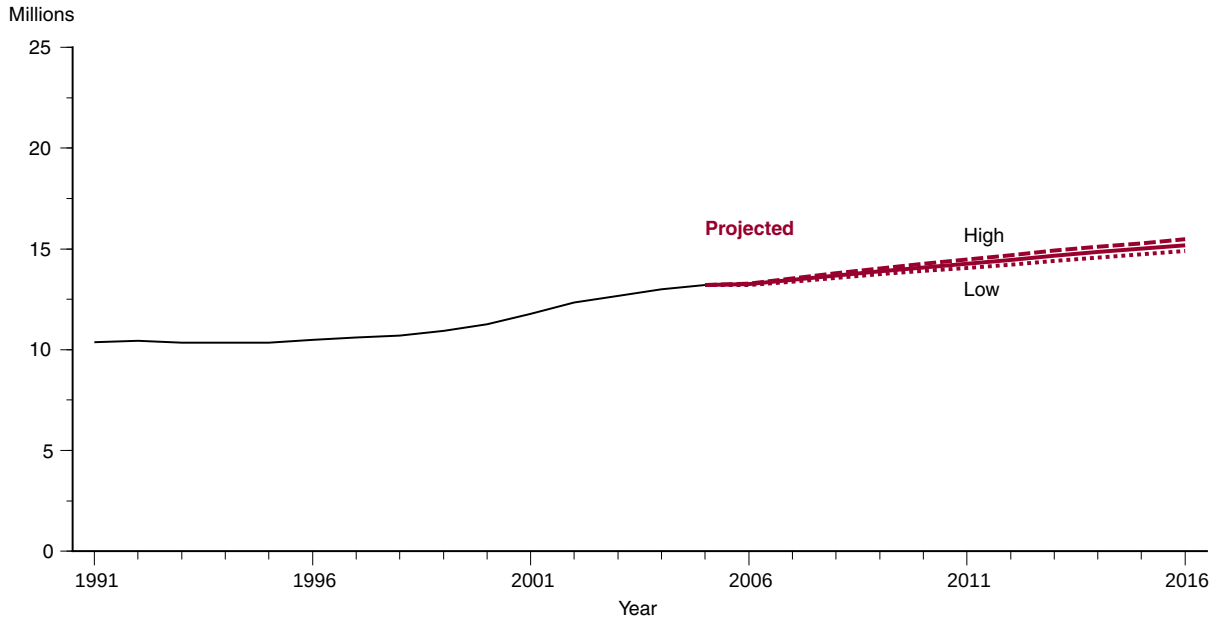
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005.

Figure 20. Actual and projected numbers for enrollment in degree-granting postsecondary institutions, by race/ethnicity: Fall 1991 through fall 2016



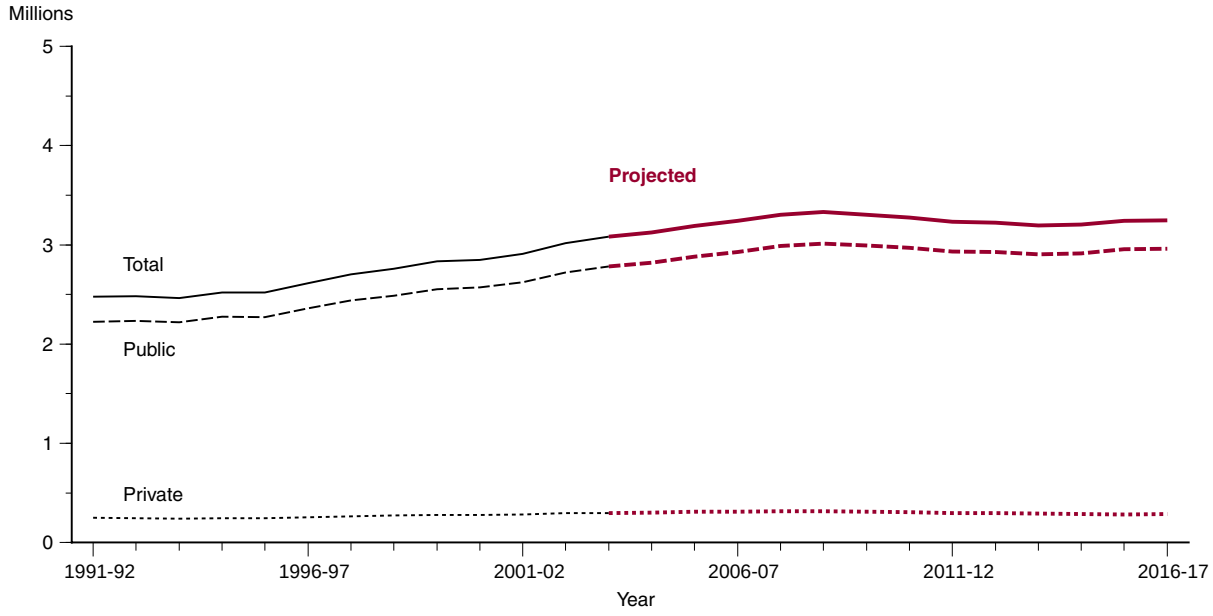
NOTE: Race categories exclude persons of Hispanic origin.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005.

Figure 21. Actual and alternative projected numbers for full-time-equivalent enrollment in degree-granting postsecondary institutions: Fall 1991 through fall 2016



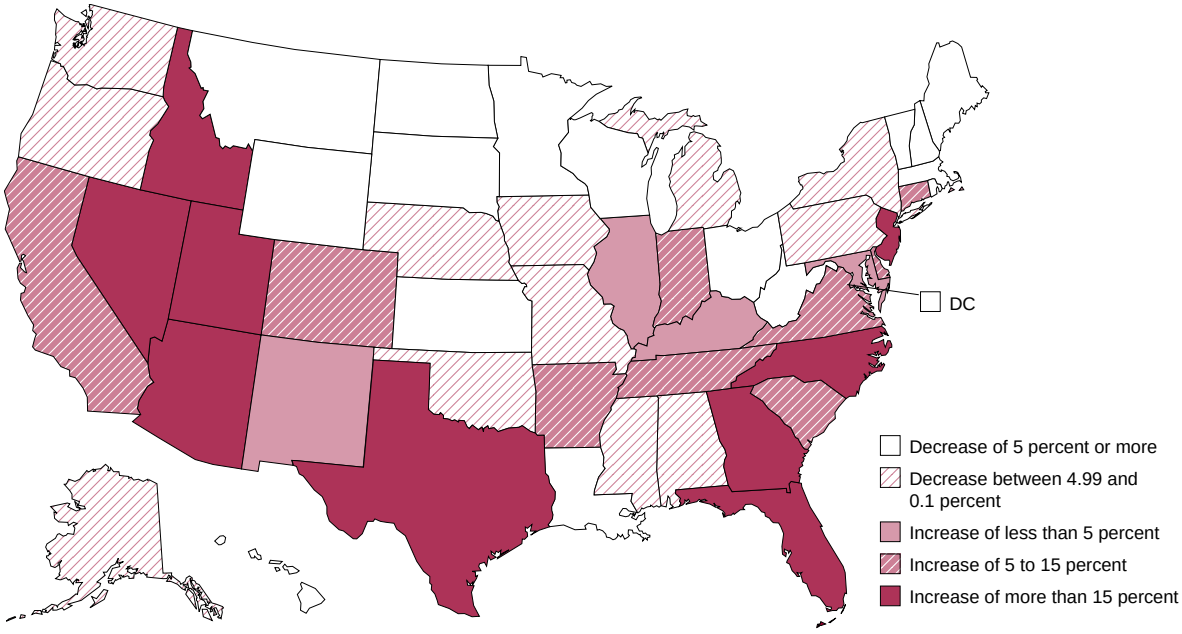
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005.

Figure 22. Actual and projected numbers for high school graduates, by control of school: 1991–92 through 2016–17



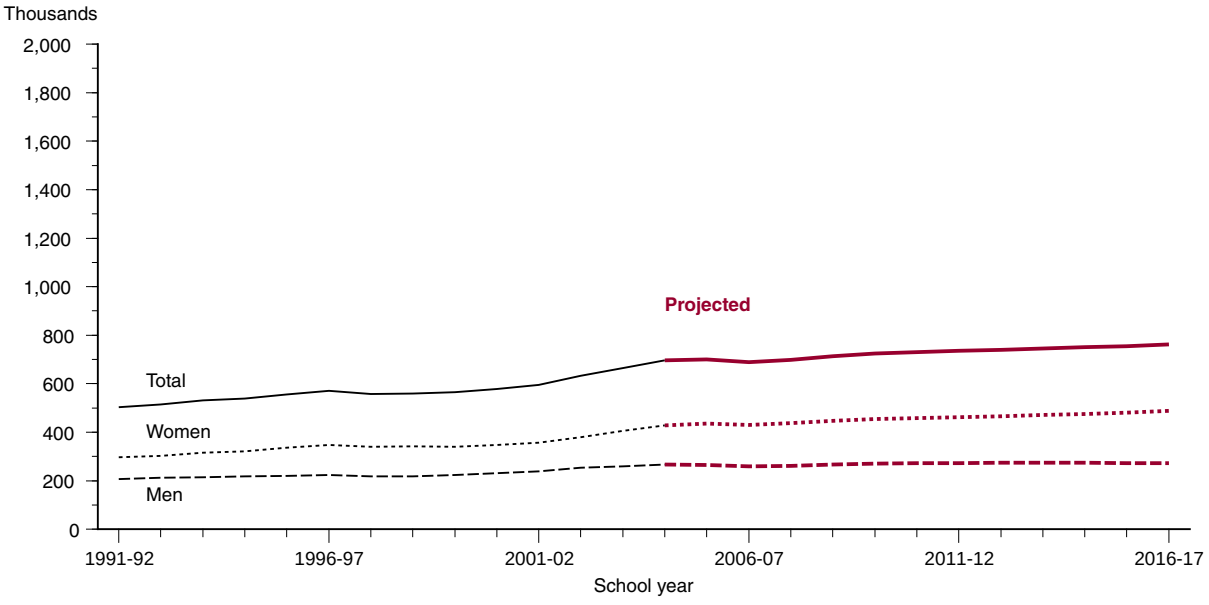
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1992–93 through 2004–05; Private School Universe Survey (PSS), selected years, 1991–92 through 2003–04; Private School Survey Early Estimates, various years; and National Elementary and Secondary High School Graduates Enrollment Model, 1972–73 through 2003–04.

Figure 23. Projected percentage change in public high school graduates, by state: 2003–04 through 2016–17



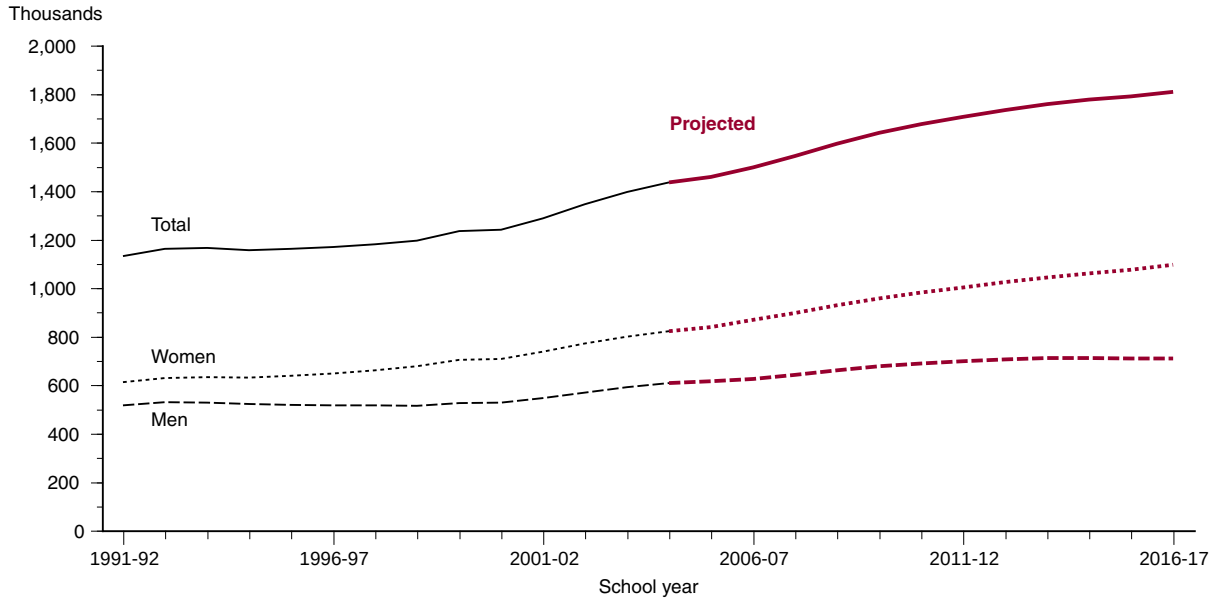
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2004–05; and State Public High School Graduates Model, 1980–81 through 2003–04.

Figure 24. Actual and middle alternative projected numbers for associate's degrees, by sex of recipient: 1991–92 through 2016–17



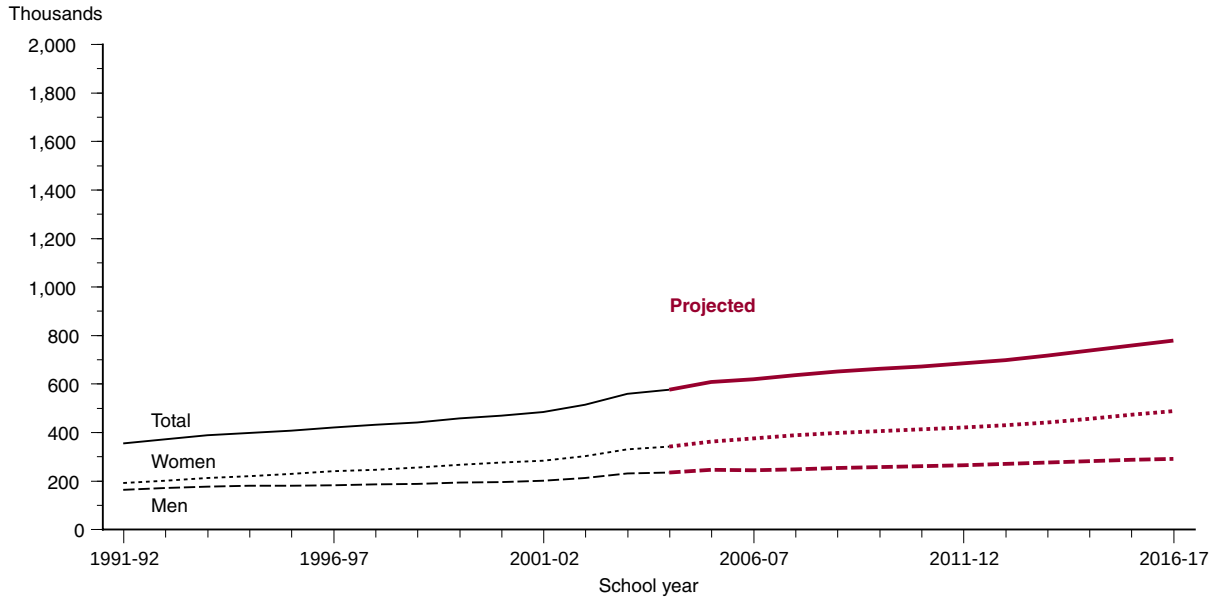
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05.

Figure 25. Actual and middle alternative projected numbers for bachelor's degrees, by sex of recipient: 1991–92 through 2016–17



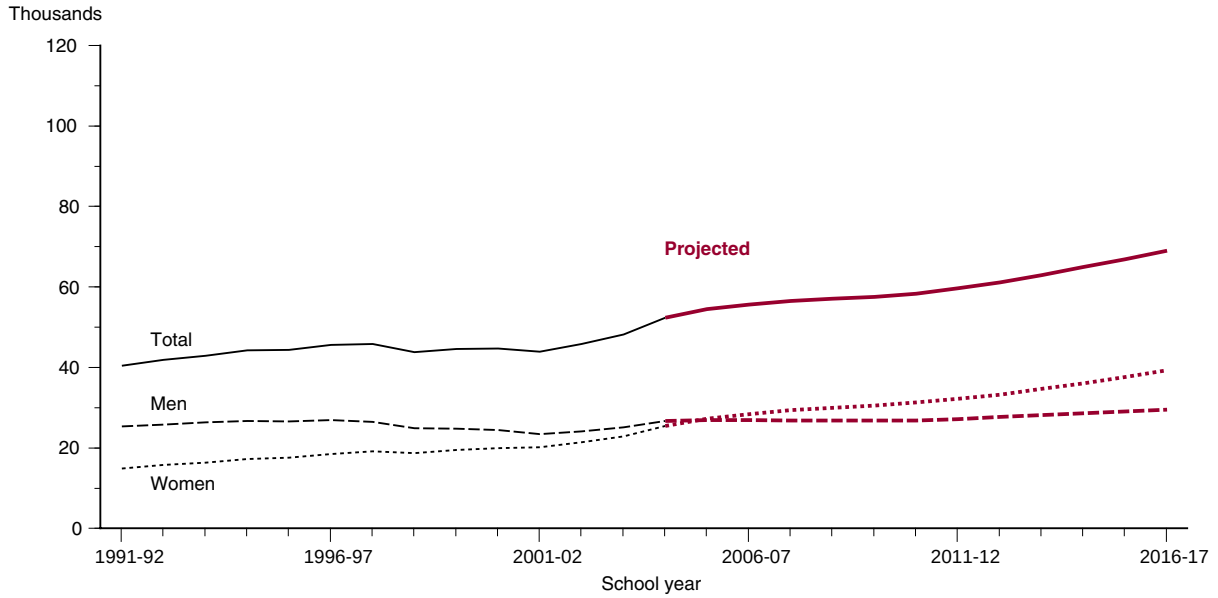
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05.

Figure 26. Actual and middle alternative projected numbers for master's degrees, by sex of recipient: 1991–92 through 2016–17



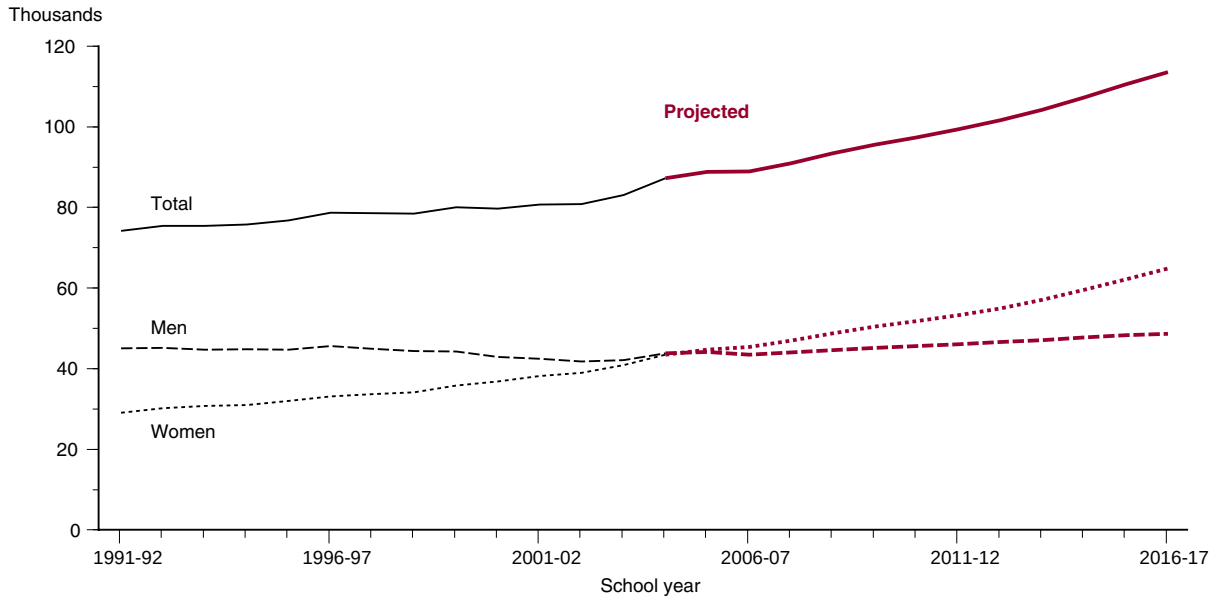
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05.

Figure 27. Actual and middle alternative projected numbers for doctor's degrees, by sex of recipient: 1991–92 through 2016–17



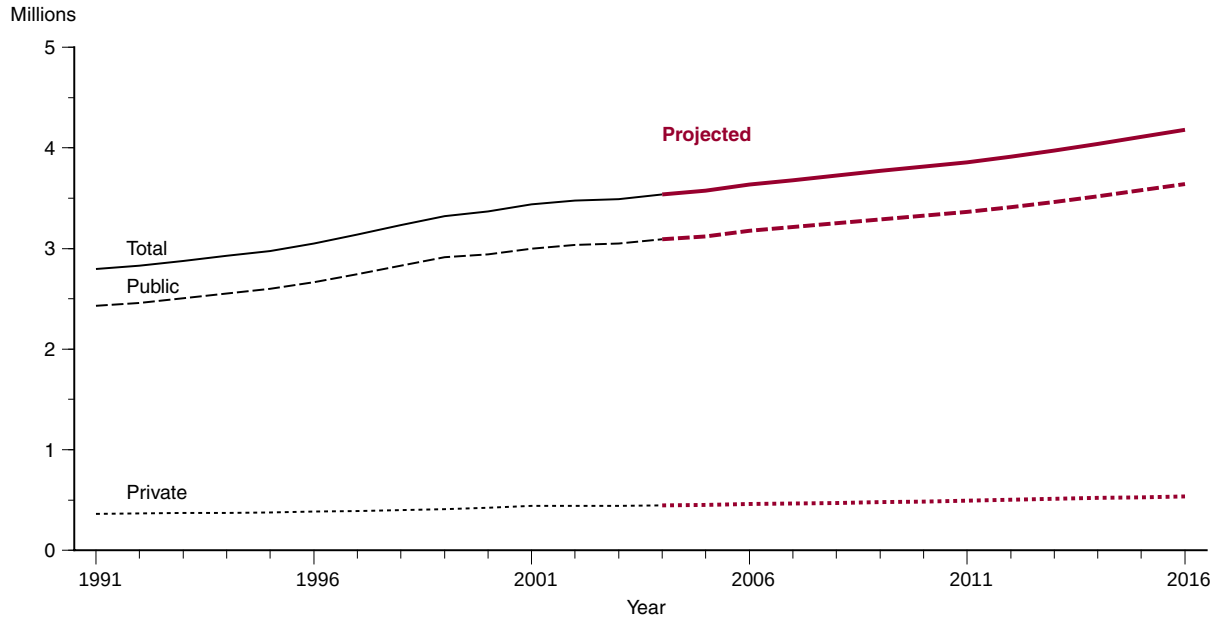
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05.

Figure 28. Actual and middle alternative projected numbers for first-professional degrees, by sex of recipient: 1991–92 through 2016–17



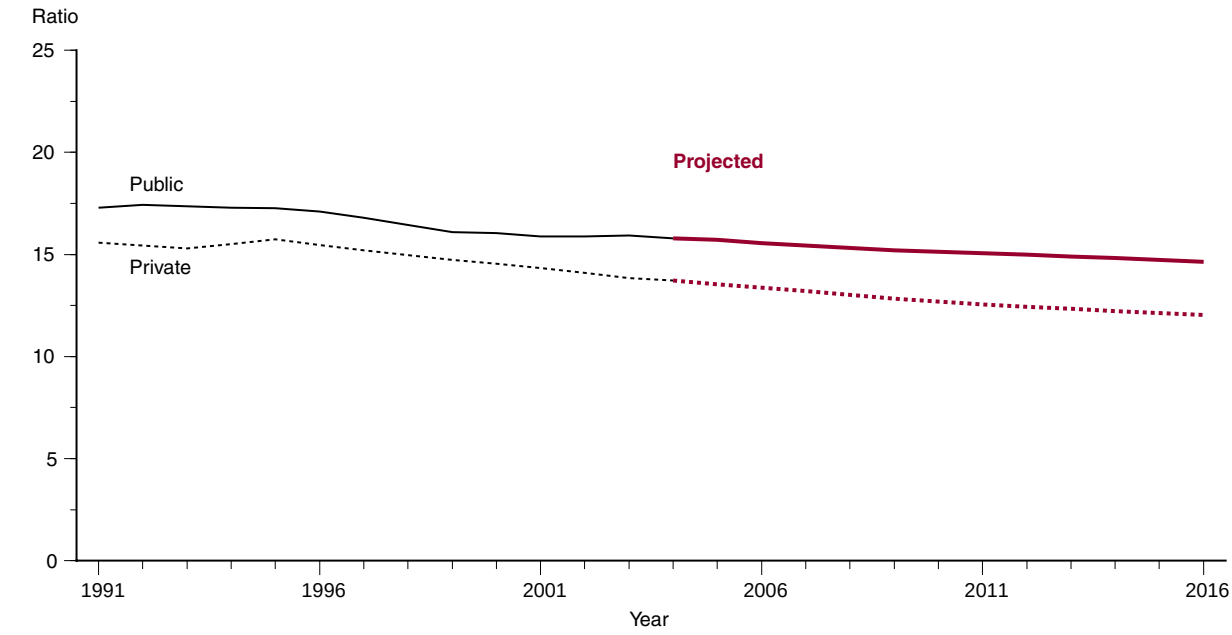
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05.

Figure 29. Actual and middle alternative projected numbers for elementary and secondary teachers, by control of school: Fall 1991 through fall 2016



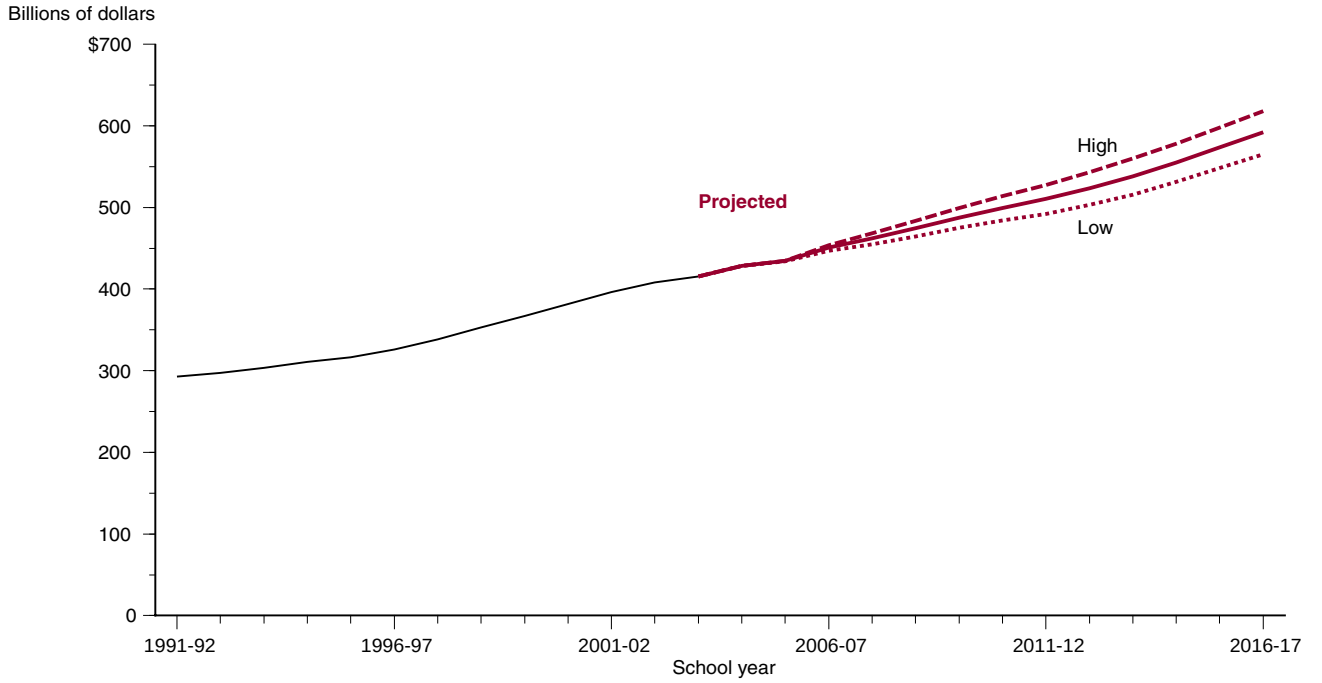
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1990–91 through 2003–04; Private School Universe Survey (PSS), selected years, 1991–92 through 2003–04; and Elementary and Secondary Teacher Model, 1973–2003.

Figure 30. Actual and middle alternative projected numbers for the pupil/teacher ratios in elementary and secondary schools, by control of school: Fall 1991 through fall 2016



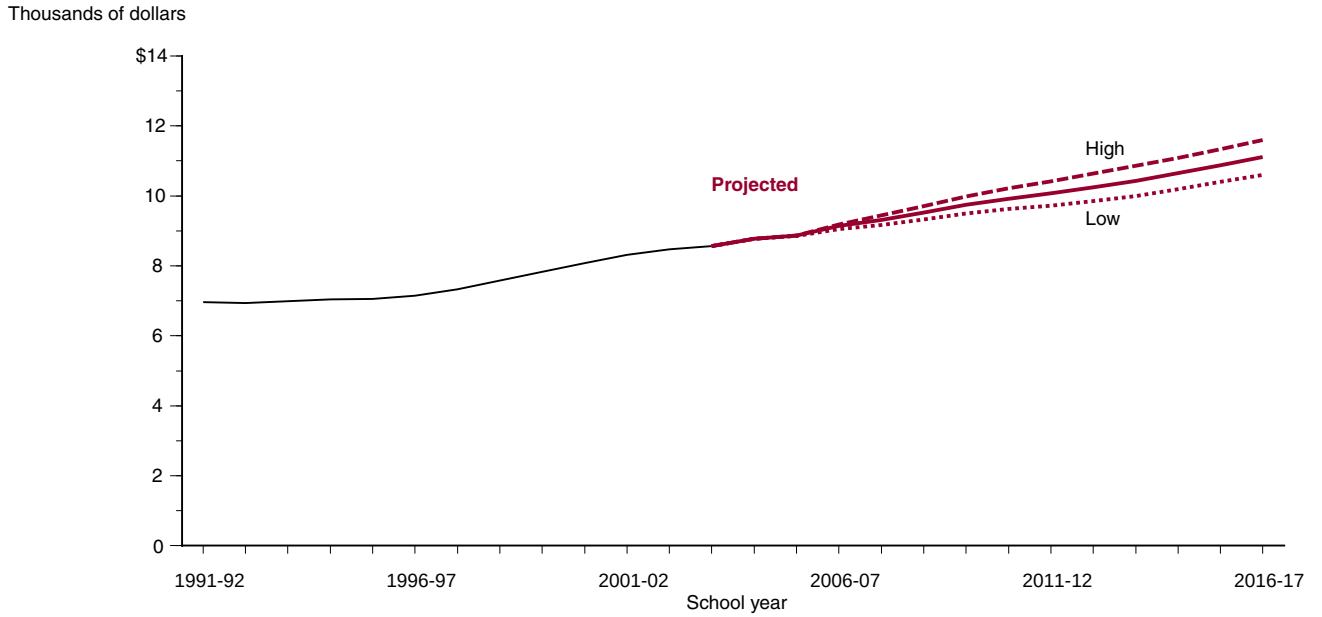
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1990–91 through 2003–04; Private School Universe Survey (PSS), selected years, 1991–92 through 2003–04; and Elementary and Secondary Teacher Model, 1973–2003.

Figure 31. Actual and alternative projected numbers for current expenditures for public elementary and secondary schools (in constant 2004–05 dollars): 1991–92 through 2016–17



SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), National Public Education Financial Survey," 1991–92 through 2003–04, and Elementary and Secondary School Current Expenditures Model, 1969–70 through 2003–04.

Figure 32. Actual and alternative projected numbers for current expenditures per pupil in fall enrollment in public elementary and secondary schools (in constant 2004–05 dollars): 1991–92 through 2016–17



SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; "National Public Education Financial Survey," 1991–92 through 2003–04; National Elementary and Secondary Enrollment Model, 1972–2004; and Elementary and Secondary School Current Expenditures Model, 1969–70 through 2003–04.

Reference Tables

Page intentionally left blank

Table 1. Actual and projected numbers for enrollment in grades PK–12, PK–8, and 9–12 in elementary and secondary schools, by control of school: Fall 1991 through fall 2016

[In thousands]

	Total			Public			Private		
Year	PK–12[1]	PK–8[1]	9–12	PK–12	PK–8	9–12	PK–12[1]	PK–8[1]	9–12
Actual									
1991	47,728	35,024	12,704	42,047	30,506	11,541	5,681	4,518	1,163
1992 [2]	48,500	35,617	12,883	42,823	31,088	11,735	5,677	4,528	1,148
1993	49,133	36,040	13,093	43,465	31,504	11,961	5,668	4,536	1,132
1994 [2]	49,898	36,522	13,376	44,111	31,898	12,213	5,787	4,624	1,162
1995	50,759	37,062	13,697	44,840	32,341	12,500	5,918	4,721	1,197
1996 [2]	51,544	37,484	14,060	45,611	32,764	12,847	5,933	4,720	1,213
1997	52,071	37,799	14,272	46,127	33,073	13,054	5,944	4,726	1,218
1998 [2]	52,526	38,093	14,433	46,539	33,346	13,193	5,988	4,748	1,240
1999	52,875	38,253	14,622	46,857	33,488	13,369	6,018	4,765	1,254
2000 [2]	53,373	38,566	14,807	47,204	33,688	13,515	6,169	4,878	1,292
2001	53,992	38,931	15,061	47,672	33,938	13,734	6,320	4,993	1,326
2002 [2]	54,403	39,002	15,402	48,183	34,116	14,067	6,220	4,886	1,334
2003	54,639	38,964	15,676	48,540	34,202	14,338	6,099	4,761	1,338
2004 [2]	54,928	38,951	15,977	48,795	34,178	14,617	6,133	4,773	1,360
Projected									
2005	55,139	38,910	16,229	49,028	34,174	14,853	6,111	4,736	1,376
2006	55,524	39,166	16,358	49,370	34,387	14,983	6,155	4,779	1,375
2007	55,762	39,376	16,386	49,610	34,592	15,018	6,152	4,784	1,368
2008	55,966	39,678	16,287	49,812	34,873	14,939	6,154	4,805	1,348
2009	56,186	40,028	16,158	50,028	35,195	14,834	6,158	4,834	1,324
2010	56,480	40,454	16,025	50,303	35,581	14,722	6,177	4,873	1,304
2011	56,857	40,915	15,943	50,653	35,994	14,659	6,204	4,921	1,284
2012	57,338	41,372	15,966	51,093	36,397	14,696	6,245	4,975	1,270
2013	57,872	41,873	16,000	51,579	36,841	14,739	6,293	5,032	1,261
2014	58,486	42,360	16,126	52,135	37,271	14,864	6,350	5,088	1,262
2015	59,147	42,711	16,436	52,733	37,578	15,155	6,414	5,133	1,281
2016	59,780	43,097	16,684	53,300	37,917	15,382	6,481	5,179	1,301

[1] Includes private nursery and prekindergarten enrollment in schools that offer kindergarten or higher grades.
[2] Private school numbers are estimated based on data from the Private School Universe Survey.
NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; Private School Universe Survey (PSS), selected years 1991–92 through 2003–04; and National Elementary and Secondary Enrollment Model, 1972–2004. (This table was prepared November 2006.)

Table 2. Actual and projected numbers for enrollment in elementary and secondary schools, by organizational level and control of school: Fall 1991 through fall 2016

[In thousands]

	Total			Public			Private		
Year	PK–12[1]	Elementary	Secondary	PK–12	Elementary	Secondary	PK–12[1]	Elementary	Secondary
Actual									
1991	47,728	32,009	15,719	42,047	27,490	14,557	5,681	4,518	1,163
1992 [2]	48,500	32,478	16,022	42,823	27,950	14,874	5,677	4,528	1,148
1993	49,133	32,805	16,328	43,465	28,269	15,196	5,668	4,536	1,132
1994 [2]	49,898	32,909	16,989	44,111	28,285	15,827	5,787	4,624	1,162
1995	50,759	33,336	17,423	44,840	28,614	16,226	5,918	4,721	1,197
1996 [2]	51,544	33,461	18,083	45,611	28,741	16,870	5,933	4,720	1,213
1997	52,071	33,835	18,237	46,127	29,109	17,018	5,944	4,726	1,218
1998 [2]	52,526	34,005	18,521	46,539	29,257	17,281	5,988	4,748	1,240
1999	52,875	34,183	18,692	46,857	29,419	17,439	6,018	4,765	1,254
2000 [2]	53,373	34,382	18,991	47,204	29,504	17,700	6,169	4,878	1,292
2001	53,992	34,736	19,255	47,672	29,743	17,929	6,320	4,993	1,326
2002 [2]	54,403	34,710	19,694	48,183	29,824	18,359	6,220	4,886	1,334
2003	54,639	34,640	20,000	48,540	29,879	18,662	6,099	4,761	1,338
2004 [2]	54,928	34,704	20,224	48,795	29,931	18,864	6,133	4,773	1,360
Projected									
2005	55,139	34,629	20,510	49,028	29,893	19,135	6,111	4,736	1,376
2006	55,524	34,929	20,595	49,370	30,150	19,220	6,155	4,779	1,375
2007	55,762	35,169	20,592	49,610	30,386	19,224	6,152	4,784	1,368
2008	55,966	35,492	20,474	49,812	30,687	19,125	6,154	4,805	1,348
2009	56,186	35,851	20,335	50,028	31,017	19,011	6,158	4,834	1,324
2010	56,480	36,240	20,239	50,303	31,367	18,936	6,177	4,873	1,304
2011	56,857	36,670	20,188	50,653	31,749	18,904	6,204	4,921	1,284
2012	57,338	37,093	20,245	51,093	32,118	18,975	6,245	4,975	1,270
2013	57,872	37,469	20,403	51,579	32,437	19,142	6,293	5,032	1,261
2014	58,486	37,860	20,625	52,135	32,772	19,363	6,350	5,088	1,262
2015	59,147	38,194	20,953	52,733	33,061	19,672	6,414	5,133	1,281
2016	59,780	38,548	21,232	53,300	33,369	19,931	6,481	5,179	1,301

[1] Includes private nursery and prekindergarten enrollment in schools that offer kindergarten or higher grades.

[2] Private school numbers are estimated based on data from the Private School Universe Survey.

NOTE: Some data have been revised from previously published figures. For private schools, it was assumed that numbers for elementary are the same as those in table 1 for grades PK–8, and numbers for secondary are the same as those in table 1 for grades 9–12. Designation of grades as elementary or secondary varies from school to school. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; Private School Universe Survey (PSS), selected years 1991–92 through 2003–04; and National Elementary and Secondary Enrollment Model, 1972–2004. (This table was prepared November 2006.)

Table 3. Actual and projected numbers for enrollment in public elementary and secondary schools, by grade: Fall 1991 through fall 2016

[In thousands]

		Grade															
Year	Total	PK	K	1	2	3	4	5	6	7	8	9	10	11	12	Elementary unclassified	Secondary unclassified
Actual																	
1991. . .	42,047	375	3,311	3,556	3,360	3,334	3,315	3,268	3,239	3,181	3,020	3,313	2,915	2,645	2,392	545	275
1992. . .	42,823	505	3,313	3,542	3,431	3,361	3,342	3,325	3,303	3,299	3,129	3,352	3,027	2,656	2,431	539	269
1993. . .	43,465	545	3,377	3,529	3,429	3,437	3,361	3,350	3,356	3,355	3,249	3,487	3,050	2,751	2,424	515	248
1994. . .	44,111	603	3,444	3,593	3,440	3,439	3,426	3,372	3,381	3,404	3,302	3,604	3,131	2,748	2,488	494	242
1995. . .	44,840	637	3,536	3,671	3,507	3,445	3,431	3,438	3,395	3,422	3,356	3,704	3,237	2,826	2,487	502	245
1996. . .	45,611	670	3,532	3,770	3,600	3,524	3,454	3,453	3,494	3,464	3,403	3,801	3,323	2,930	2,586	401	206
1997. . .	46,127	695	3,503	3,755	3,689	3,597	3,507	3,458	3,492	3,520	3,415	3,819	3,376	2,972	2,673	442	214
1998. . .	46,539	729	3,443	3,727	3,681	3,696	3,592	3,520	3,497	3,530	3,480	3,856	3,382	3,021	2,722	451	212
1999. . .	46,857	751	3,397	3,684	3,656	3,691	3,686	3,604	3,564	3,541	3,497	3,935	3,415	3,034	2,782	417	203
2000. . .	47,204	776	3,382	3,636	3,634	3,676	3,711	3,707	3,663	3,629	3,538	3,963	3,491	3,083	2,803	336	175
2001. . .	47,672	865	3,379	3,614	3,593	3,653	3,695	3,727	3,769	3,720	3,616	4,012	3,528	3,174	2,863	306	157
2002. . .	48,183	915	3,434	3,594	3,565	3,623	3,669	3,711	3,788	3,821	3,709	4,105	3,584	3,229	2,990	287	160
2003. . .	48,540	950	3,503	3,613	3,544	3,611	3,619	3,685	3,772	3,841	3,809	4,190	3,675	3,277	3,046	256	149
2004. . .	48,795	990	3,544	3,663	3,560	3,580	3,612	3,635	3,735	3,818	3,825	4,281	3,750	3,369	3,094	216	121
Projected																	
2005. . .	49,028	1,005	3,596	3,666	3,610	3,593	3,584	3,627	3,690	3,786	3,803	4,316	3,826	3,425	3,164	214	122
2006. . .	49,370	1,050	3,758	3,721	3,613	3,644	3,597	3,600	3,682	3,740	3,771	4,292	3,857	3,493	3,216	213	124
2007. . .	49,610	1,052	3,763	3,881	3,667	3,647	3,647	3,612	3,654	3,732	3,725	4,255	3,835	3,522	3,281	213	125
2008. . .	49,812	1,059	3,788	3,886	3,825	3,701	3,650	3,663	3,667	3,703	3,717	4,203	3,802	3,502	3,307	214	124
2009. . .	50,028	1,067	3,817	3,912	3,830	3,861	3,705	3,666	3,718	3,716	3,688	4,194	3,756	3,472	3,289	215	123
2010. . .	50,303	1,076	3,850	3,941	3,855	3,866	3,865	3,721	3,721	3,769	3,701	4,162	3,748	3,430	3,261	216	121
2011. . .	50,653	1,086	3,886	3,975	3,884	3,891	3,870	3,882	3,777	3,772	3,753	4,177	3,720	3,422	3,221	218	119
2012. . .	51,093	1,096	3,923	4,012	3,918	3,920	3,895	3,887	3,940	3,828	3,756	4,236	3,733	3,396	3,214	221	117
2013. . .	51,579	1,108	3,963	4,051	3,954	3,954	3,924	3,912	3,945	3,993	3,813	4,239	3,785	3,408	3,190	224	117
2014. . .	52,135	1,119	4,004	4,092	3,992	3,991	3,958	3,941	3,971	3,998	3,977	4,303	3,788	3,456	3,201	226	116
2015. . .	52,733	1,130	4,044	4,135	4,033	4,029	3,995	3,976	4,001	4,024	3,982	4,488	3,845	3,459	3,246	228	117
2016. . .	53,300	1,141	4,081	4,176	4,075	4,071	4,033	4,013	4,036	4,055	4,008	4,494	4,011	3,511	3,248	230	119

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics: Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–1992 through 2004–2005; and National Elementary and Secondary Enrollment Model, 1972–2004. (This table was prepared November 2006.)

Table 4. Actual and projected numbers for enrollment in grades PK–12 in public elementary and secondary schools, by region and state: Fall 1998 through fall 2016

[In thousands]

	Actual							Projected		
Region and state	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
United States	**46,539**	**46,857**	**47,204**	**47,672**	**48,183**	**48,540**	**48,795**	**49,028**	**49,370**	**49,610**
Northeast	8,145	8,196	8,222	8,250	8,297	8,292	8,271	8,237	8,234	8,209
Connecticut	545	554	562	570	570	577	577	575	575	572
Maine	211	209	207	206	204	202	199	195	194	192
Massachusetts	962	971	975	973	983	980	976	969	969	965
New Hampshire	205	207	208	207	208	207	207	205	205	203
New Jersey	1,269	1,289	1,313	1,342	1,367	1,381	1,393	1,399	1,404	1,411
New York	2,877	2,888	2,882	2,872	2,888	2,865	2,836	2,822	2,818	2,806
Pennsylvania	1,816	1,817	1,814	1,822	1,817	1,821	1,828	1,821	1,820	1,812
Rhode Island	155	156	157	158	159	159	156	156	154	152
Vermont	105	105	102	101	100	99	98	96	96	94
Midwest	10,722	10,726	10,730	10,745	10,819	10,809	10,775	10,754	10,810	10,803
Illinois	2,012	2,028	2,049	2,071	2,084	2,101	2,098	2,113	2,121	2,125
Indiana	989	989	989	996	1,004	1,011	1,021	1,031	1,038	1,041
Iowa	498	497	495	486	482	481	478	478	486	488
Kansas	472	472	471	470	471	470	469	465	469	469
Michigan	1,720	1,726	1,721	1,731	1,785	1,758	1,751	1,742	1,747	1,738
Minnesota	856	854	854	851	847	843	839	835	843	844
Missouri	913	914	913	910	906	906	905	903	911	913
Nebraska	291	288	286	285	285	286	286	285	289	291
North Dakota	115	113	109	106	104	102	101	98	97	95
Ohio	1,842	1,837	1,835	1,831	1,838	1,845	1,840	1,831	1,836	1,832
South Dakota	132	131	129	128	130	126	123	121	121	120
Wisconsin	880	878	879	879	881	880	865	852	852	846
South	16,713	16,842	17,007	17,237	17,471	17,673	17,892	18,083	18,327	18,532
Alabama	748	741	740	737	739	731	730	730	735	735
Arkansas	452	451	450	450	451	455	463	465	471	474
Delaware	113	113	115	116	116	118	119	120	122	124
District of Columbia	72	77	69	75	76	78	77	77	76	74
Florida	2,338	2,381	2,435	2,500	2,540	2,588	2,639	2,694	2,719	2,754
Georgia	1,401	1,423	1,445	1,471	1,496	1,523	1,553	1,584	1,620	1,653
Kentucky	656	648	666	654	661	663	675	675	685	688
Louisiana	769	757	743	731	730	728	724	720	723	723
Maryland	842	847	853	861	867	869	866	867	868	868
Mississippi	502	501	498	494	493	494	495	494	499	501
North Carolina	1,255	1,276	1,294	1,315	1,336	1,360	1,386	1,409	1,429	1,447
Oklahoma	628	627	623	622	625	626	629	625	632	636
South Carolina	665	667	677	676	694	699	704	709	713	714
Tennessee	905	916	909	925	928	937	941	943	958	965
Texas	3,945	3,992	4,060	4,163	4,260	4,332	4,405	4,475	4,566	4,659
Virginia	1,124	1,134	1,145	1,163	1,177	1,192	1,205	1,217	1,229	1,238
West Virginia	298	292	286	283	282	281	280	279	281	281
West	10,959	11,093	11,244	11,440	11,596	11,766	11,857	11,954	11,999	12,066
Alaska	135	134	133	134	134	134	133	132	132	131
Arizona	848	853	878	922	938	1,012	1,043	1,067	1,086	1,108
California	5,926	6,039	6,141	6,248	6,354	6,414	6,442	6,480	6,462	6,468
Colorado	699	708	725	742	752	758	766	775	783	792
Hawaii	188	186	184	185	184	184	183	182	184	186
Idaho	245	245	245	247	249	252	256	259	266	271
Montana	160	158	155	152	150	148	147	144	145	144
Nevada	311	326	341	357	369	385	400	412	422	434
New Mexico	329	324	320	320	320	323	326	326	325	325
Oregon	543	545	546	551	554	551	552	551	552	552
Utah	481	480	481	485	489	496	504	525	542	559
Washington	998	1,004	1,005	1,009	1,015	1,021	1,020	1,016	1,015	1,012
Wyoming	95	92	90	88	88	87	85	84	84	84

See notes at end of table.

Table 4. Actual and projected numbers for enrollment in grades PK–12 in public elementary and secondary schools, by region and state: Fall 1998 through fall 2016—Continued

[In thousands]

	Projected—Continued								
Region and state	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
United States	**49,812**	**50,028**	**50,303**	**50,653**	**51,093**	**51,579**	**52,135**	**52,733**	**53,300**
Northeast	8,172	8,135	8,106	8,087	8,083	8,092	8,116	8,151	8,185
Connecticut	569	566	564	562	561	561	562	563	564
Maine	190	189	188	188	189	190	191	192	194
Massachusetts	960	956	952	950	949	949	951	953	955
New Hampshire	202	201	201	202	202	204	206	208	211
New Jersey	1,416	1,419	1,422	1,425	1,430	1,435	1,442	1,449	1,455
New York	2,790	2,772	2,756	2,744	2,737	2,736	2,739	2,749	2,757
Pennsylvania	1,803	1,792	1,785	1,781	1,780	1,784	1,792	1,802	1,811
Rhode Island	150	148	146	145	144	144	144	145	145
Vermont	92	91	90	90	89	90	90	91	92
Midwest	10,778	10,758	10,750	10,762	10,793	10,837	10,899	10,966	11,029
Illinois	2,126	2,125	2,124	2,124	2,124	2,122	2,126	2,132	2,140
Indiana	1,043	1,043	1,044	1,046	1,049	1,052	1,054	1,057	1,059
Iowa	489	491	493	496	501	505	510	515	518
Kansas	470	472	474	477	480	484	489	494	497
Michigan	1,721	1,707	1,697	1,691	1,689	1,691	1,697	1,704	1,710
Minnesota	845	847	851	857	865	876	888	901	915
Missouri	915	916	917	921	929	937	946	955	962
Nebraska	292	294	297	299	302	306	309	312	315
North Dakota	94	93	92	91	91	91	91	91	91
Ohio	1,823	1,814	1,809	1,805	1,806	1,809	1,816	1,823	1,828
South Dakota	120	119	119	120	120	121	122	123	124
Wisconsin	841	836	833	834	837	843	851	860	869
South	18,747	18,963	19,192	19,449	19,745	20,041	20,355	20,672	20,960
Alabama	733	731	730	730	731	732	735	736	737
Arkansas	478	481	485	490	495	501	505	509	513
Delaware	125	126	126	127	129	130	132	134	136
District of Columbia	72	73	73	72	72	72	72	73	74
Florida	2,793	2,841	2,887	2,939	3,007	3,063	3,122	3,186	3,244
Georgia	1,681	1,708	1,738	1,769	1,802	1,837	1,872	1,907	1,938
Kentucky	692	695	698	702	706	710	714	717	719
Louisiana	726	729	730	733	739	742	748	752	756
Maryland	865	863	863	866	871	880	890	904	918
Mississippi	502	503	504	505	506	507	510	511	511
North Carolina	1,465	1,481	1,499	1,520	1,541	1,565	1,591	1,617	1,639
Oklahoma	640	644	648	653	659	665	672	677	681
South Carolina	718	720	722	725	730	736	742	748	752
Tennessee	971	978	985	994	1,006	1,017	1,031	1,045	1,057
Texas	4,756	4,854	4,957	5,065	5,179	5,294	5,412	5,529	5,641
Virginia	1,247	1,254	1,264	1,275	1,289	1,305	1,323	1,342	1,360
West Virginia	282	282	282	283	283	284	284	284	284
West	12,115	12,173	12,255	12,355	12,472	12,610	12,765	12,943	13,126
Alaska	131	131	131	133	135	137	140	143	146
Arizona	1,129	1,149	1,172	1,196	1,222	1,249	1,276	1,305	1,336
California	6,463	6,463	6,477	6,496	6,523	6,564	6,620	6,695	6,777
Colorado	800	808	816	826	837	849	860	873	883
Hawaii	188	190	193	196	199	203	206	210	214
Idaho	275	280	285	290	297	303	309	316	322
Montana	144	144	144	145	147	149	151	153	155
Nevada	446	457	469	481	494	507	519	533	547
New Mexico	325	325	326	328	331	334	338	341	344
Oregon	552	552	554	558	563	569	576	584	592
Utah	573	587	601	614	628	640	651	660	667
Washington	1,006	1,004	1,003	1,005	1,012	1,019	1,030	1,042	1,054
Wyoming	84	84	85	85	86	87	88	89	90

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1998–99 through 2004–05; and State Elementary and Secondary Enrollment Model, 1980–2004. (This table was prepared December 2006.)

Table 5. Actual and projected percentage changes in PK–12 enrollment in public schools, by region and state: Selected years, fall 1998 through fall 2016

Region and state	Actual 1998–2004	Projected		
		2004-2010	2010-2016	2004-2016
United States	**4.8**	**3.1**	**6.0**	**9.2**
Northeast	1.5	-2.0	1.0	-1.0
Connecticut	6.0	-2.3	0.1	-2.3
Maine	-5.8	-5.4	3.0	-2.5
Massachusetts	1.4	-2.4	0.3	-2.1
New Hampshire	1.0	-2.8	4.9	2.0
New Jersey	9.8	2.1	2.3	4.4
New York	-1.4	-2.8	#	-2.8
Pennsylvania	0.6	-2.4	1.5	-0.9
Rhode Island	1.1	-6.4	-0.7	-7.0
Vermont	-6.4	-8.6	2.4	-6.4
Midwest	0.5	-0.2	2.6	2.4
Illinois	4.3	1.3	0.8	2.0
Indiana	3.3	2.2	1.5	3.7
Iowa	-4.0	3.1	5.0	8.3
Kansas	-0.7	0.9	5.0	6.0
Michigan	1.8	-3.1	0.8	-2.3
Minnesota	-2.1	1.5	7.5	9.1
Missouri	-0.9	1.3	4.9	6.3
Nebraska	-1.8	3.8	6.3	10.3
North Dakota	-12.5	-8.3	-1.1	-9.3
Ohio	-0.1	-1.7	1.0	-0.7
South Dakota	-7.3	-2.9	4.3	1.2
Wisconsin	-1.7	-3.6	4.2	0.5
South	7.1	7.3	9.2	17.1
Alabama	-2.4	#	0.9	0.9
Arkansas	2.4	4.8	5.6	10.7
Delaware	5.1	6.2	7.4	14.0
District of Columbia	6.7	-5.3	1.8	-3.6
Florida	12.9	9.4	12.3	22.9
Georgia	10.9	11.9	11.5	24.7
Kentucky	2.9	3.5	2.9	6.5
Louisiana	-5.8	0.9	3.4	4.3
Maryland	2.8	-0.3	6.4	6.1
Mississippi	-1.4	1.7	1.5	3.2
North Carolina	10.4	8.2	9.4	18.3
Oklahoma	0.2	2.9	5.1	8.2
South Carolina	5.9	2.5	4.2	6.9
Tennessee	3.9	4.7	7.3	12.3
Texas	11.7	12.5	13.8	28.1
Virginia	7.2	4.9	7.7	12.9
West Virginia	-5.8	0.8	0.6	1.3
West	8.2	3.4	7.1	10.7
Alaska	-1.8	-1.3	11.5	10.0
Arizona	23.0	12.3	14.0	28.1
California	8.7	0.5	4.6	5.2
Colorado	9.6	6.6	8.2	15.3
Hawaii	-2.6	5.4	10.9	16.9
Idaho	4.6	11.2	12.9	25.6
Montana	-8.3	-1.7	7.3	5.5
Nevada	28.6	17.2	16.5	36.6
New Mexico	-0.8	#	5.4	5.4
Oregon	1.8	0.3	6.9	7.2
Utah	4.7	19.2	11.0	32.4
Washington	2.2	-1.7	5.1	3.3
Wyoming	-11.0	#	5.8	5.7

Rounds to zero.

NOTE: Calculations are based on unrounded numbers. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," selected years, 1998–99 through 2004–05; and State Elementary and Secondary Enrollment Model, 1980–2004. (This table was prepared December 2006.)

Table 6. Actual and projected numbers for enrollment in grades PK–8 in public elementary and secondary schools, by region and state: Fall 1998 through fall 2016

[In thousands]

	Actual							Projected		
Region and state	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
United States	**33,346**	**33,488**	**33,688**	**33,938**	**34,116**	**34,202**	**34,178**	**34,174**	**34,387**	**34,592**
Northeast	5,820	5,841	5,841	5,824	5,810	5,752	5,690	5,631	5,622	5,607
Connecticut	399	404	406	410	406	408	404	401	401	400
Maine	151	149	146	144	142	139	136	134	134	133
Massachusetts	705	706	703	699	701	692	682	674	676	675
New Hampshire	147	147	147	144	144	142	140	138	138	138
New Jersey	936	954	968	972	979	979	976	972	973	977
New York	2,028	2,034	2,029	2,017	2,017	1,979	1,943	1,920	1,912	1,903
Pennsylvania	1,267	1,262	1,258	1,255	1,242	1,236	1,235	1,222	1,220	1,214
Rhode Island	112	114	114	113	113	111	107	106	104	103
Vermont	73	72	70	69	68	67	66	64	64	64
Midwest	7,565	7,551	7,523	7,517	7,535	7,502	7,439	7,388	7,429	7,430
Illinois	1,452	1,462	1,474	1,484	1,488	1,493	1,484	1,487	1,488	1,488
Indiana	697	699	703	711	714	717	720	721	724	726
Iowa	337	336	334	330	326	327	324	322	329	332
Kansas	327	326	323	322	322	323	321	319	323	325
Michigan	1,245	1,245	1,222	1,223	1,254	1,229	1,211	1,197	1,197	1,190
Minnesota	587	580	578	573	568	564	558	555	565	568
Missouri	651	649	645	643	635	632	629	623	627	629
Nebraska	200	197	195	195	195	195	195	194	197	200
North Dakota	77	75	72	70	69	68	67	65	65	64
Ohio	1,301	1,296	1,294	1,287	1,284	1,278	1,267	1,253	1,259	1,255
South Dakota	91	90	88	87	89	86	84	83	83	83
Wisconsin	601	596	595	592	592	590	578	569	571	571
South	12,127	12,191	12,314	12,454	12,573	12,675	12,780	12,866	13,042	13,216
Alabama	542	539	539	536	533	525	522	518	522	521
Arkansas	319	318	318	318	319	322	328	328	333	336
Delaware	80	80	81	81	82	83	84	83	85	86
District of Columbia	57	60	54	58	59	59	57	56	53	51
Florida	1,704	1,725	1,760	1,797	1,809	1,832	1,858	1,888	1,902	1,932
Georgia	1,029	1,044	1,060	1,075	1,089	1,103	1,118	1,135	1,163	1,188
Kentucky	464	459	471	473	477	478	486	484	493	496
Louisiana	558	548	547	537	537	536	534	528	531	532
Maryland	607	607	609	611	610	606	597	593	592	592
Mississippi	365	365	364	362	360	361	361	358	361	362
North Carolina	921	935	945	956	964	974	986	999	1,011	1,026
Oklahoma	448	447	445	446	449	450	453	448	453	457
South Carolina	478	484	493	487	500	501	504	505	507	509
Tennessee	665	664	668	675	673	675	671	669	681	688
Texas	2,868	2,896	2,943	3,016	3,080	3,133	3,184	3,236	3,310	3,386
Virginia	815	817	816	826	832	837	840	842	848	856
West Virginia	206	203	201	200	200	199	198	195	197	198
West	7,834	7,904	8,010	8,143	8,198	8,273	8,270	8,289	8,295	8,340
Alaska	97	96	94	95	94	94	92	91	91	91
Arizona	623	624	641	672	660	704	722	729	737	750
California	4,270	4,337	4,408	4,479	4,526	4,540	4,508	4,501	4,468	4,463
Colorado	501	507	517	529	534	536	541	547	552	560
Hawaii	135	133	132	132	131	130	129	128	129	131
Idaho	169	169	170	171	173	175	178	180	186	190
Montana	110	107	105	103	101	100	99	97	98	98
Nevada	229	240	251	262	271	281	289	297	303	311
New Mexico	232	229	225	225	224	226	228	227	226	226
Oregon	380	378	379	382	382	378	377	375	377	378
Utah	329	329	333	338	343	349	355	369	381	393
Washington	696	695	694	696	697	699	695	691	690	689
Wyoming	64	62	60	59	60	60	57	57	57	58

See notes at end of table.

Table 6. Actual and projected numbers for enrollment in grades PK–8 in public elementary and secondary schools, by region and state: Fall 1998 through fall 2016—Continued

[In thousands]

	Projected—Continued								
Region and state	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
United States	**34,873**	**35,195**	**35,581**	**35,994**	**36,397**	**36,841**	**37,271**	**37,578**	**37,917**
Northeast	5,597	5,597	5,608	5,628	5,646	5,672	5,693	5,700	5,714
Connecticut	398	398	397	397	397	397	397	397	399
Maine	133	134	134	135	136	137	138	139	140
Massachusetts	676	676	677	679	680	683	684	682	681
New Hampshire	138	138	139	141	142	144	146	148	150
New Jersey	982	986	992	997	1,002	1,006	1,011	1,014	1,016
New York	1,895	1,892	1,892	1,898	1,902	1,909	1,916	1,913	1,914
Pennsylvania	1,210	1,210	1,213	1,218	1,223	1,230	1,236	1,239	1,246
Rhode Island	102	101	100	100	100	101	102	102	103
Vermont	63	63	63	63	63	64	64	65	66
Midwest	7,440	7,463	7,500	7,544	7,590	7,650	7,683	7,703	7,734
Illinois	1,485	1,481	1,482	1,484	1,488	1,498	1,507	1,511	1,515
Indiana	728	729	730	732	733	734	735	734	737
Iowa	335	339	343	348	351	355	355	355	356
Kansas	328	331	335	339	342	345	346	348	349
Michigan	1,183	1,180	1,181	1,183	1,186	1,191	1,194	1,195	1,200
Minnesota	572	578	585	593	601	613	620	627	635
Missouri	635	641	649	656	662	670	674	677	681
Nebraska	203	206	209	212	215	217	219	219	220
North Dakota	63	63	63	63	63	64	64	64	65
Ohio	1,254	1,256	1,261	1,267	1,271	1,278	1,278	1,277	1,277
South Dakota	83	84	85	86	87	88	89	89	89
Wisconsin	571	574	578	583	590	597	601	606	610
South	13,445	13,675	13,925	14,166	14,391	14,623	14,844	14,992	15,151
Alabama	522	523	526	528	530	532	531	528	528
Arkansas	342	347	352	356	359	363	365	366	367
Delaware	86	87	89	90	91	93	94	95	95
District of Columbia	50	52	53	54	55	56	57	58	59
Florida	1,983	2,020	2,065	2,106	2,144	2,184	2,239	2,279	2,320
Georgia	1,214	1,242	1,271	1,297	1,322	1,346	1,367	1,379	1,392
Kentucky	501	506	511	514	517	520	520	518	518
Louisiana	539	543	550	556	562	567	569	569	570
Maryland	592	596	601	608	618	628	638	647	657
Mississippi	364	367	370	373	375	377	377	375	373
North Carolina	1,042	1,059	1,078	1,096	1,112	1,127	1,143	1,154	1,168
Oklahoma	463	470	476	482	486	491	494	497	498
South Carolina	512	516	522	526	530	533	537	538	540
Tennessee	697	706	717	729	739	749	755	759	765
Texas	3,473	3,563	3,655	3,744	3,833	3,925	4,012	4,079	4,141
Virginia	864	875	888	902	914	927	940	950	960
West Virginia	199	201	203	204	205	206	205	203	201
West	8,390	8,459	8,548	8,656	8,770	8,896	9,052	9,183	9,318
Alaska	92	93	94	96	98	100	103	105	108
Arizona	766	783	799	817	837	857	882	904	926
California	4,458	4,467	4,491	4,531	4,580	4,636	4,718	4,783	4,850
Colorado	569	578	587	596	604	611	619	624	629
Hawaii	134	137	141	145	149	153	156	158	159
Idaho	194	199	203	208	212	217	220	223	226
Montana	99	100	102	103	105	107	108	109	110
Nevada	320	328	337	345	353	361	371	381	391
New Mexico	227	229	232	234	237	239	242	245	247
Oregon	380	383	386	390	395	400	406	411	418
Utah	404	413	422	429	434	439	443	446	449
Washington	689	691	694	699	704	711	720	730	742
Wyoming	59	60	61	62	63	63	64	64	64

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1998–99 through 2004–05; and State Elementary and Secondary Enrollment Model, 1980–2004. (This table was prepared December 2006.)

Table 7. Actual and projected percentage changes in PK–8 enrollment in public schools, by region and state: Selected years, fall 1998 through fall 2016

Region and state	Actual 1998–2004	Projected		
		2004-2010	2010-2016	2004-2016
United States	**2.5**	**4.1**	**6.6**	**10.9**
Northeast	-2.2	-1.4	1.9	0.4
Connecticut	1.2	-1.8	0.4	-1.4
Maine	-10.0	-1.5	4.0	2.4
Massachusetts	-3.2	-0.8	0.6	-0.1
New Hampshire	-4.4	-0.6	7.4	6.8
New Jersey	4.2	1.6	2.4	4.1
New York	-4.2	-2.6	1.2	-1.5
Pennsylvania	-2.6	-1.8	2.7	0.9
Rhode Island	-4.8	-6.2	3.0	-3.4
Vermont	-10.0	-4.9	5.0	-0.1
Midwest	-1.7	0.8	3.1	4.0
Illinois	2.2	-0.1	2.2	2.1
Indiana	3.3	1.4	0.9	2.3
Iowa	-3.7	6.0	3.6	9.7
Kansas	-1.9	4.1	4.4	8.8
Michigan	-2.7	-2.5	1.6	-1.0
Minnesota	-4.8	4.7	8.5	13.7
Missouri	-3.4	3.2	5.1	8.4
Nebraska	-2.5	7.2	5.3	12.9
North Dakota	-12.7	-6.2	2.5	-3.8
Ohio	-2.6	-0.5	1.2	0.8
South Dakota	-7.7	1.2	5.3	6.5
Wisconsin	-3.8	-0.1	5.7	5.6
South	5.4	9.0	8.8	18.5
Alabama	-3.8	0.9	0.2	1.1
Arkansas	2.8	7.1	4.4	11.8
Delaware	4.6	5.9	7.6	14.0
District of Columbia	0.7	-7.0	10.4	2.7
Florida	9.0	11.1	12.4	24.9
Georgia	8.6	13.6	9.5	24.4
Kentucky	4.6	5.1	1.4	6.6
Louisiana	-4.4	3.1	3.5	6.7
Maryland	-1.5	0.6	9.3	9.9
Mississippi	-1.2	2.5	0.8	3.3
North Carolina	7.0	9.4	8.3	18.5
Oklahoma	1.1	5.1	4.6	9.9
South Carolina	5.5	3.4	3.5	7.0
Tennessee	0.9	6.9	6.6	14.0
Texas	11.0	14.8	13.3	30.1
Virginia	3.0	5.8	8.1	14.3
West Virginia	-4.0	2.6	-0.6	2.0
West	5.6	3.4	9.0	12.7
Alaska	-5.2	2.4	14.4	17.2
Arizona	16.0	10.6	15.8	28.2
California	5.6	-0.4	8.0	7.6
Colorado	7.8	8.5	7.2	16.4
Hawaii	-4.4	9.4	12.9	23.5
Idaho	5.7	13.9	11.2	26.6
Montana	-9.9	3.0	8.6	11.8
Nevada	25.9	16.6	16.0	35.3
New Mexico	-2.0	1.7	6.5	8.3
Oregon	-0.8	2.4	8.3	10.9
Utah	8.2	18.7	6.4	26.3
Washington	-0.1	-0.1	6.9	6.8
Wyoming	-10.4	5.9	5.4	11.6

NOTE: Calculations are based on unrounded numbers. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," selected years, 1998–99 through 2004–05; and State Elementary and Secondary Enrollment Model, 1980–2004. (This table was prepared December 2006.)

Table 8. Actual and projected numbers for enrollment in grades 9–12 in public elementary and secondary schools, by region and state: Fall 1998 through fall 2016

[In thousands]

	Actual							Projected		
Region and state	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
United States	**13,193**	**13,369**	**13,515**	**13,734**	**14,067**	**14,338**	**14,617**	**14,853**	**14,983**	**15,018**
Northeast	2,326	2,355	2,381	2,427	2,486	2,540	2,582	2,605	2,613	2,602
Connecticut	145	150	156	160	164	169	173	174	174	173
Maine	60	60	61	62	63	63	63	62	61	59
Massachusetts	258	265	273	274	282	288	293	294	294	290
New Hampshire	58	60	61	62	64	65	67	67	67	66
New Jersey	333	335	346	370	389	402	417	426	431	434
New York	849	854	853	855	871	886	893	901	906	903
Pennsylvania	549	555	556	567	575	586	593	599	601	598
Rhode Island	42	43	44	45	47	48	49	50	50	49
Vermont	32	32	32	32	32	32	32	32	31	30
Midwest	3,156	3,175	3,207	3,228	3,284	3,307	3,337	3,366	3,381	3,374
Illinois	560	565	575	587	597	608	614	626	633	637
Indiana	292	289	286	285	290	294	301	310	313	316
Iowa	162	161	161	156	156	154	154	156	157	156
Kansas	145	146	147	148	149	148	148	147	146	145
Michigan	475	481	498	508	531	528	539	545	549	548
Minnesota	270	274	277	278	279	279	280	280	279	277
Missouri	263	265	268	267	272	274	277	280	284	284
Nebraska	91	91	91	90	90	90	91	91	92	91
North Dakota	38	38	37	36	35	34	33	33	32	32
Ohio	541	540	541	544	554	567	573	578	577	577
South Dakota	42	41	41	41	41	40	39	38	38	37
Wisconsin	279	281	285	288	290	290	287	284	280	275
South	4,586	4,650	4,693	4,783	4,898	4,997	5,112	5,217	5,285	5,316
Alabama	206	202	201	202	206	206	208	211	213	213
Arkansas	133	133	132	132	132	133	135	137	138	137
Delaware	33	33	34	34	34	35	35	37	37	38
District of Columbia	15	17	15	17	17	19	20	21	22	23
Florida	634	656	675	703	731	755	782	806	817	822
Georgia	372	379	385	395	407	419	435	448	457	465
Kentucky	191	189	194	181	184	185	189	191	192	192
Louisiana	210	209	197	194	194	191	191	191	192	192
Maryland	235	239	244	250	256	263	268	274	277	276
Mississippi	137	135	134	132	132	133	134	136	138	139
North Carolina	334	341	348	359	372	386	400	410	418	421
Oklahoma	181	180	178	176	176	176	177	178	179	178
South Carolina	187	183	184	189	194	198	199	204	206	205
Tennessee	241	252	241	250	254	261	270	275	277	277
Texas	1,077	1,096	1,117	1,147	1,180	1,199	1,221	1,239	1,256	1,272
Virginia	309	317	329	337	346	355	365	374	381	383
West Virginia	92	88	85	83	82	82	83	83	84	83
West	3,125	3,189	3,234	3,297	3,398	3,493	3,587	3,665	3,704	3,726
Alaska	38	39	39	39	40	40	41	41	41	40
Arizona	226	229	237	251	277	308	321	338	350	358
California	1,656	1,702	1,733	1,769	1,828	1,874	1,934	1,979	1,994	2,005
Colorado	198	202	208	213	217	221	225	228	230	231
Hawaii	53	53	52	53	53	54	54	55	55	54
Idaho	76	76	75	75	75	77	78	79	80	81
Montana	50	50	50	49	49	48	48	47	47	46
Nevada	82	86	90	94	99	105	111	115	119	123
New Mexico	96	96	95	95	96	97	98	99	99	99
Oregon	163	167	167	170	172	173	176	176	175	174
Utah	153	151	148	147	147	147	148	156	161	166
Washington	302	309	310	313	318	322	325	325	325	323
Wyoming	31	30	30	29	28	28	27	27	27	26

See notes at end of table.

Table 8. Actual and projected numbers for enrollment in grades 9–12 in public elementary and secondary schools, by region and state: Fall 1998 through fall 2016—Continued

[In thousands]

	Projected—Continued								
Region and state	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
United States	**14,939**	**14,834**	**14,722**	**14,659**	**14,696**	**14,739**	**14,864**	**15,155**	**15,382**
Northeast	2,575	2,538	2,497	2,460	2,437	2,420	2,423	2,451	2,470
Connecticut	171	169	167	165	164	164	165	166	166
Maine	57	55	54	53	53	52	53	54	54
Massachusetts	285	281	275	272	270	266	267	271	274
New Hampshire	64	63	62	61	60	59	60	60	61
New Jersey	434	433	430	428	429	429	431	435	439
New York	894	880	864	847	835	826	824	835	843
Pennsylvania	592	582	572	562	557	554	556	562	565
Rhode Island	48	47	46	45	44	43	43	42	42
Vermont	29	28	27	27	26	26	26	26	26
Midwest	3,338	3,295	3,251	3,217	3,203	3,187	3,216	3,264	3,295
Illinois	641	644	642	641	635	624	619	621	625
Indiana	315	313	314	314	316	318	319	322	323
Iowa	154	152	150	149	149	150	155	159	162
Kansas	142	141	139	138	139	139	143	146	148
Michigan	538	527	516	508	503	499	503	509	510
Minnesota	272	269	266	264	264	263	268	274	280
Missouri	280	274	269	265	266	267	272	277	281
Nebraska	90	89	88	87	88	88	90	93	95
North Dakota	31	30	29	28	28	27	27	27	27
Ohio	569	558	548	538	534	531	537	546	551
South Dakota	36	35	34	34	33	33	34	34	35
Wisconsin	270	262	256	251	248	246	250	254	258
South	5,301	5,287	5,267	5,283	5,354	5,418	5,512	5,680	5,809
Alabama	211	208	204	202	201	200	203	208	209
Arkansas	136	134	134	135	136	138	141	143	146
Delaware	39	38	38	38	37	37	38	40	41
District of Columbia	22	21	20	18	17	16	15	15	15
Florida	810	821	823	833	863	879	884	907	924
Georgia	467	466	467	472	480	492	505	528	546
Kentucky	191	188	188	188	189	191	194	199	201
Louisiana	187	186	180	177	178	176	179	183	186
Maryland	273	267	262	258	254	252	252	257	262
Mississippi	138	136	134	132	131	130	132	136	138
North Carolina	423	422	421	424	430	439	448	463	471
Oklahoma	177	175	172	171	173	174	177	180	183
South Carolina	206	203	200	199	200	202	205	210	212
Tennessee	274	271	268	265	267	268	276	286	292
Texas	1,283	1,291	1,302	1,321	1,345	1,369	1,400	1,450	1,499
Virginia	382	379	375	373	374	378	383	393	400
West Virginia	82	81	80	79	78	78	80	81	82
West	3,725	3,714	3,707	3,699	3,702	3,714	3,713	3,761	3,808
Alaska	39	38	37	37	37	37	37	38	38
Arizona	363	367	373	379	385	392	394	402	410
California	2,005	1,996	1,986	1,965	1,943	1,928	1,902	1,912	1,927
Colorado	231	230	229	230	233	237	241	248	254
Hawaii	54	53	52	51	50	50	50	53	55
Idaho	81	81	82	83	85	87	90	93	96
Montana	45	44	43	42	41	41	42	43	44
Nevada	126	129	132	136	141	145	148	152	156
New Mexico	98	96	94	94	94	95	96	96	97
Oregon	171	169	168	167	168	169	171	173	174
Utah	170	174	179	185	194	201	208	214	218
Washington	317	313	308	307	308	308	310	312	312
Wyoming	26	25	24	24	24	24	25	25	26

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1998–99 through 2004–05; and State Elementary and Secondary Enrollment Model, 1980–2004. (This table was prepared December 2006.)

Table 9. Actual and projected percentage changes in 9–12 enrollment in public schools, by region and state: Selected years, fall 1998 through fall 2016

Region and state	Actual 1998–2004	Projected		
		2004-2010	2010-2016	2004-2016
United States	**10.8**	**0.7**	**4.5**	**5.2**
Northeast	11.0	-3.3	-1.1	-4.3
Connecticut	19.2	-3.6	-0.7	-4.3
Maine	4.9	-13.9	0.7	-13.3
Massachusetts	13.9	-6.1	-0.6	-6.7
New Hampshire	14.9	-7.5	-0.7	-8.2
New Jersey	25.5	3.1	2.1	5.2
New York	5.2	-3.3	-2.5	-5.7
Pennsylvania	8.0	-3.6	-1.2	-4.7
Rhode Island	16.9	-6.9	-8.7	-15.0
Vermont	1.7	-16.3	-3.4	-19.1
Midwest	5.7	-2.6	1.4	-1.2
Illinois	9.6	4.6	-2.7	1.8
Indiana	3.3	4.1	2.9	7.1
Iowa	-4.6	-2.8	8.4	5.4
Kansas	2.1	-6.0	6.3	-0.1
Michigan	13.6	-4.3	-1.2	-5.4
Minnesota	3.8	-5.0	5.1	-0.1
Missouri	5.4	-3.0	4.7	1.5
Nebraska	-0.5	-3.4	8.4	4.8
North Dakota	-12.1	-12.6	-8.9	-20.3
Ohio	5.9	-4.4	0.5	-3.9
South Dakota	-6.5	-11.8	1.8	-10.2
Wisconsin	2.9	-10.8	0.9	-9.9
South	11.5	3.0	10.3	13.6
Alabama	1.3	-2.1	2.7	0.5
Arkansas	1.4	-0.9	8.9	8.0
Delaware	6.6	6.7	7.0	14.2
District of Columbia	29.2	-0.2	-21.7	-21.9
Florida	23.3	5.3	12.2	18.2
Georgia	17.0	7.4	16.9	25.5
Kentucky	-1.2	-0.7	7.1	6.4
Louisiana	-9.4	-5.4	3.1	-2.4
Maryland	14.0	-2.2	-0.2	-2.4
Mississippi	-1.9	-0.5	3.5	3.0
North Carolina	19.8	5.2	12.0	17.8
Oklahoma	-2.2	-2.7	#	3.8
South Carolina	6.8	0.3	6.1	6.4
Tennessee	12.2	-0.8	9.1	8.2
Texas	13.4	6.6	15.2	22.8
Virginia	18.2	2.9	6.6	9.7
West Virginia	-9.9	-3.7	3.6	-0.2
West	14.8	3.4	2.7	6.2
Alaska	6.8	-9.8	4.0	-6.1
Arizona	42.4	16.1	10.1	27.8
California	16.8	2.7	-2.9	-0.3
Colorado	14.0	1.8	10.8	12.8
Hawaii	1.9	-4.2	5.5	1.2
Idaho	2.3	4.9	17.4	23.1
Montana	-4.8	-11.3	4.2	-7.6
Nevada	36.1	18.8	17.8	40.0
New Mexico	2.0	-3.9	2.9	-1.2
Oregon	7.6	-4.3	3.7	-0.8
Utah	-2.9	20.6	21.9	47.1
Washington	7.4	-5.0	1.0	-4.0
Wyoming	-12.3	-12.4	6.8	-6.4

#Rounds to zero.

NOTE: Calculations are based on unrounded numbers. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," selected years, 1998–99 through 2004–05; and State Elementary and Secondary Enrollment Model, 1980–2004. (This table was prepared December 2006.)

Table 10. Actual and alternative projected numbers for total enrollment in all degree-granting postsecondary institutions, by sex, attendance status, and control of institution: Fall 1991 through fall 2016

[In thousands]

Year	Total	Sex		Attendance status		Control	
		Men	Women	Full-time	Part-time	Public	Private
Actual							
1991	14,359	6,502	7,857	8,115	6,244	11,310	3,049
1992	14,486	6,524	7,963	8,161	6,325	11,385	3,102
1993	14,305	6,427	7,877	8,128	6,177	11,189	3,116
1994	14,279	6,372	7,907	8,138	6,141	11,134	3,145
1995	14,262	6,343	7,919	8,129	6,133	11,092	3,169
1996	14,368	6,353	8,015	8,303	6,065	11,121	3,247
1997	14,502	6,396	8,106	8,438	6,064	11,196	3,306
1998	14,507	6,369	8,138	8,563	5,944	11,138	3,369
1999	14,791	6,491	8,301	8,786	6,005	11,309	3,482
2000	15,312	6,722	8,591	9,010	6,303	11,753	3,560
2001	15,928	6,961	8,967	9,448	6,480	12,233	3,695
2002	16,612	7,202	9,410	9,946	6,665	12,752	3,860
2003	16,900	7,256	9,645	10,312	6,589	12,857	4,043
2004	17,272	7,387	9,885	10,610	6,662	12,980	4,292
2005	17,487	7,456	10,032	10,797	6,690	13,022	4,466
Middle alternative projections							
2006	17,672	7,470	10,202	10,982	6,689	13,252	4,420
2007	17,958	7,574	10,385	11,233	6,725	13,457	4,501
2008	18,264	7,685	10,579	11,497	6,768	13,677	4,587
2009	18,567	7,793	10,774	11,757	6,810	13,895	4,672
2010	18,839	7,884	10,955	11,995	6,844	14,085	4,754
2011	19,105	7,967	11,139	12,222	6,883	14,269	4,836
2012	19,374	8,035	11,339	12,442	6,932	14,453	4,921
2013	19,662	8,096	11,566	12,672	6,989	14,651	5,010
2014	19,944	8,149	11,796	12,903	7,041	14,846	5,098
2015	20,192	8,183	12,009	13,113	7,079	15,015	5,177
2016	20,442	8,222	12,220	13,325	7,117	15,186	5,256
Low alternative projections							
2006	17,621	7,460	10,161	10,940	6,681	13,216	4,405
2007	17,849	7,548	10,301	11,140	6,709	13,380	4,469
2008	18,110	7,646	10,464	11,364	6,746	13,569	4,541
2009	18,371	7,743	10,628	11,587	6,784	13,757	4,614
2010	18,589	7,821	10,768	11,778	6,812	13,910	4,679
2011	18,803	7,891	10,912	11,957	6,846	14,057	4,745
2012	19,036	7,951	11,085	12,145	6,891	14,217	4,819
2013	19,292	8,004	11,288	12,347	6,945	14,393	4,899
2014	19,558	8,053	11,505	12,562	6,996	14,576	4,982
2015	19,786	8,083	11,703	12,754	7,032	14,732	5,055
2016	20,012	8,117	11,895	12,943	7,069	14,886	5,126
High alternative projections							
2006	17,704	7,477	10,226	11,008	6,696	13,275	4,429
2007	18,065	7,600	10,465	11,324	6,741	13,532	4,533
2008	18,420	7,724	10,696	11,631	6,789	13,787	4,633
2009	18,767	7,844	10,924	11,931	6,837	14,036	4,732
2010	19,087	7,947	11,140	12,212	6,875	14,259	4,828
2011	19,399	8,040	11,358	12,479	6,919	14,475	4,924
2012	19,711	8,120	11,591	12,739	6,972	14,689	5,022
2013	20,029	8,187	11,842	12,997	7,032	14,908	5,121
2014	20,317	8,239	12,078	13,234	7,084	15,106	5,211
2015	20,573	8,275	12,299	13,452	7,121	15,280	5,293
2016	20,850	8,319	12,531	13,688	7,162	15,470	5,380

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 11. Actual and middle alternative projected numbers for total enrollment in all degree-granting postsecondary institutions, by sex, age, and attendance status: Fall 1991 through fall 2016

[In thousands]

Sex, age, and attendance status	Actual												
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total enrollment	**14,359**	**14,486**	**14,305**	**14,279**	**14,262**	**14,368**	**14,502**	**14,507**	**14,791**	**15,312**	**15,928**	**16,612**	**16,900**
14 to 17 years old	125	186	127	138	148	231	171	119	143	145	133	202	150
18 and 19 years old	2,864	2,784	2,840	2,787	2,894	3,038	3,061	3,382	3,414	3,531	3,595	3,571	3,475
20 and 21 years old	2,920	2,883	2,674	2,724	2,705	2,659	2,875	2,811	2,989	3,045	3,408	3,366	3,469
22 to 24 years old	2,306	2,527	2,570	2,482	2,411	2,324	2,475	2,377	2,435	2,617	2,760	2,932	3,480
25 to 29 years old	2,072	1,985	2,002	1,985	2,120	2,128	1,999	1,991	1,870	1,960	2,014	2,102	2,105
30 to 34 years old	1,415	1,456	1,345	1,414	1,236	1,196	1,109	1,195	1,145	1,265	1,290	1,300	1,368
35 years old and over	2,656	2,665	2,747	2,750	2,747	2,791	2,814	2,632	2,796	2,749	2,727	3,139	2,852
Men	**6,502**	**6,524**	**6,427**	**6,372**	**6,343**	**6,353**	**6,396**	**6,369**	**6,491**	**6,722**	**6,961**	**7,202**	**7,256**
14 to 17 years old	50	89	54	62	61	92	56	45	72	63	54	82	60
18 and 19 years old	1,299	1,305	1,288	1,302	1,338	1,354	1,414	1,535	1,541	1,583	1,629	1,616	1,556
20 and 21 years old	1,387	1,342	1,284	1,264	1,282	1,228	1,374	1,374	1,392	1,382	1,591	1,562	1,490
22 to 24 years old	1,232	1,272	1,344	1,238	1,153	1,177	1,200	1,127	1,090	1,293	1,312	1,342	1,604
25 to 29 years old	1,049	955	903	936	962	991	972	908	874	862	905	890	929
30 to 34 years old	614	627	584	601	561	477	443	463	517	527	510	547	592
35 years old and over	870	933	970	969	986	1,033	938	917	1,005	1,012	961	1,164	1,025
Women	**7,857**	**7,963**	**7,877**	**7,907**	**7,919**	**8,015**	**8,106**	**8,138**	**8,301**	**8,591**	**8,967**	**9,410**	**9,645**
14 to 17 years old	76	97	73	75	87	139	115	74	72	82	79	121	91
18 and 19 years old	1,565	1,479	1,552	1,485	1,557	1,684	1,647	1,847	1,874	1,948	1,966	1,955	1,919
20 and 21 years old	1,533	1,541	1,391	1,461	1,424	1,430	1,501	1,437	1,597	1,663	1,817	1,804	1,979
22 to 24 years old	1,074	1,255	1,226	1,243	1,258	1,147	1,275	1,250	1,344	1,324	1,448	1,590	1,876
25 to 29 years old	1,022	1,030	1,098	1,049	1,159	1,137	1,027	1,083	995	1,099	1,110	1,212	1,176
30 to 34 years old	800	828	761	812	675	719	666	732	627	738	780	753	776
35 years old and over	1,786	1,732	1,777	1,781	1,760	1,758	1,877	1,715	1,791	1,736	1,767	1,976	1,827
Full-time, total	**8,115**	**8,161**	**8,128**	**8,138**	**8,129**	**8,303**	**8,438**	**8,563**	**8,786**	**9,010**	**9,448**	**9,946**	**10,312**
14 to 17 years old	117	179	92	118	123	166	123	93	129	125	122	161	120
18 and 19 years old	2,466	2,382	2,370	2,321	2,387	2,553	2,534	2,794	2,848	2,932	2,929	2,942	2,949
20 and 21 years old	2,342	2,267	2,148	2,178	2,109	2,117	2,275	2,271	2,362	2,401	2,662	2,759	2,763
22 to 24 years old	1,467	1,594	1,612	1,551	1,517	1,598	1,606	1,564	1,662	1,653	1,757	1,922	2,141
25 to 29 years old	830	731	839	869	908	911	897	890	854	878	883	1,013	1,070
30 to 34 years old	382	409	424	440	430	383	377	367	338	422	494	465	511
35 years old and over	513	598	643	660	653	575	626	584	593	599	602	684	757
Men	**3,929**	**3,926**	**3,891**	**3,855**	**3,807**	**3,851**	**3,890**	**3,934**	**4,026**	**4,111**	**4,300**	**4,501**	**4,632**
14 to 17 years old	41	86	37	51	54	72	48	39	63	51	43	65	50
18 and 19 years old	1,141	1,130	1,079	1,081	1,091	1,126	1,154	1,240	1,271	1,250	1,329	1,327	1,306
20 and 21 years old	1,103	1,084	1,003	1,029	999	969	1,074	1,129	1,125	1,106	1,249	1,275	1,216
22 to 24 years old	817	854	896	811	789	858	770	777	788	839	854	936	1,040
25 to 29 years old	465	378	443	457	454	444	475	424	416	415	397	467	502
30 to 34 years old	174	174	180	193	183	143	160	141	149	195	216	183	242
35 years old and over	187	220	253	232	238	240	210	184	213	256	212	247	276
Women	**4,186**	**4,235**	**4,237**	**4,283**	**4,321**	**4,452**	**4,548**	**4,630**	**4,761**	**4,899**	**5,148**	**5,445**	**5,680**
14 to 17 years old	76	93	55	67	69	95	75	54	66	74	78	96	71
18 and 19 years old	1,325	1,253	1,291	1,240	1,296	1,426	1,380	1,555	1,577	1,682	1,600	1,615	1,643
20 and 21 years old	1,239	1,183	1,145	1,149	1,111	1,148	1,201	1,142	1,237	1,296	1,413	1,484	1,546
22 to 24 years old	650	739	716	740	729	740	836	787	875	814	903	985	1,101
25 to 29 years old	364	353	396	412	455	467	422	466	437	463	486	546	568
30 to 34 years old	208	235	244	247	247	240	217	226	190	227	277	282	270
35 years old and over	325	377	390	428	415	336	416	400	380	343	390	437	481
Part-time, total	**6,244**	**6,325**	**6,177**	**6,141**	**6,133**	**6,065**	**6,064**	**5,944**	**6,005**	**6,303**	**6,480**	**6,665**	**6,589**
14 to 17 years old	9	7	35	19	25	65	48	26	14	20	11	41	30
18 and 19 years old	399	402	470	466	507	485	526	588	566	599	666	628	526
20 and 21 years old	578	616	526	546	596	542	600	540	627	644	746	607	707
22 to 24 years old	840	933	958	930	894	727	869	813	772	964	1,003	1,010	1,339
25 to 29 years old	1,242	1,254	1,163	1,116	1,212	1,217	1,101	1,101	1,016	1,083	1,132	1,088	1,035
30 to 34 years old	1,033	1,046	921	973	805	813	732	828	806	843	796	835	857
35 years old and over	2,143	2,068	2,104	2,091	2,093	2,216	2,188	2,048	2,203	2,150	2,126	2,456	2,095
Men	**2,572**	**2,597**	**2,537**	**2,517**	**2,535**	**2,502**	**2,506**	**2,436**	**2,465**	**2,611**	**2,661**	**2,701**	**2,624**
14 to 17 years old	9	4	17	11	7	20	9	5	8	11	11	17	10
18 and 19 years old	158	176	210	220	246	228	260	296	269	333	300	288	250
20 and 21 years old	285	258	281	235	283	260	300	245	267	276	342	287	274
22 to 24 years old	415	417	448	427	365	319	430	350	302	454	458	405	565
25 to 29 years old	584	577	460	479	508	547	497	485	458	447	508	423	427
30 to 34 years old	440	453	404	408	378	334	283	322	369	332	294	364	350
35 years old and over	682	713	717	737	748	793	728	733	791	757	749	917	748
Women	**3,671**	**3,728**	**3,640**	**3,624**	**3,598**	**3,563**	**3,559**	**3,508**	**3,540**	**3,692**	**3,820**	**3,964**	**3,965**
14 to 17 years old	0	3	18	8	18	45	39	21	6	9	1	24	20
18 and 19 years old	241	226	261	245	261	257	267	292	297	266	366	340	276
20 and 21 years old	294	358	245	311	313	282	300	295	360	368	404	320	433
22 to 24 years old	425	516	510	504	529	407	439	463	470	510	545	605	774
25 to 29 years old	658	677	702	637	704	670	605	617	558	636	624	666	608
30 to 34 years old	593	593	517	565	427	479	449	506	438	511	502	471	507
35 years old and over	1,461	1,355	1,386	1,354	1,345	1,423	1,460	1,315	1,411	1,393	1,377	1,539	1,347

See notes at end of table.

Table 11. Actual and middle alternative projected numbers for total enrollment in all degree-granting postsecondary institutions, by sex, age, and attendance status: Fall 1991 through fall 2016—Continued

[In thousands]

Sex, age, and attendance status	Actual		Projected (middle alternative)										
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total enrollment	**17,272**	**17,487**	**17,672**	**17,958**	**18,264**	**18,567**	**18,839**	**19,105**	**19,374**	**19,662**	**19,944**	**20,192**	**20,442**
14 to 17 years old	200	199	172	178	178	177	177	176	177	179	180	184	190
18 and 19 years old	3,578	3,610	3,710	3,812	3,932	4,020	4,018	3,996	3,980	3,978	3,996	4,000	4,010
20 and 21 years old	3,651	3,778	3,855	3,904	3,968	4,069	4,203	4,294	4,300	4,294	4,285	4,286	4,299
22 to 24 years old	3,036	3,072	3,060	3,109	3,160	3,211	3,277	3,364	3,495	3,606	3,675	3,705	3,715
25 to 29 years old	2,386	2,384	2,452	2,533	2,599	2,650	2,688	2,729	2,785	2,861	2,957	3,065	3,168
30 to 34 years old	1,329	1,354	1,331	1,337	1,360	1,397	1,443	1,501	1,557	1,613	1,662	1,702	1,741
35 years old and over	3,092	3,090	3,092	3,086	3,067	3,043	3,034	3,046	3,079	3,131	3,190	3,250	3,319
Men	**7,387**	**7,456**	**7,470**	**7,574**	**7,685**	**7,793**	**7,884**	**7,967**	**8,035**	**8,096**	**8,149**	**8,183**	**8,222**
14 to 17 years old	78	78	80	83	83	82	81	80	80	80	79	80	82
18 and 19 years old	1,551	1,592	1,626	1,668	1,717	1,750	1,742	1,727	1,714	1,704	1,702	1,693	1,687
20 and 21 years old	1,743	1,778	1,792	1,808	1,833	1,875	1,931	1,966	1,959	1,947	1,933	1,923	1,919
22 to 24 years old	1,380	1,355	1,330	1,347	1,361	1,376	1,397	1,428	1,475	1,509	1,525	1,524	1,516
25 to 29 years old	1,045	978	989	1,018	1,043	1,059	1,071	1,082	1,096	1,115	1,140	1,170	1,198
30 to 34 years old	518	545	530	532	540	553	569	589	608	626	640	650	660
35 years old and over	1,073	1,130	1,122	1,118	1,110	1,099	1,093	1,095	1,103	1,116	1,130	1,143	1,161
Women	**9,885**	**10,032**	**10,202**	**10,385**	**10,579**	**10,774**	**10,955**	**11,139**	**11,339**	**11,566**	**11,796**	**12,009**	**12,220**
14 to 17 years old	122	121	91	95	96	96	96	96	97	99	100	104	108
18 and 19 years old	2,027	2,018	2,084	2,144	2,215	2,270	2,276	2,269	2,267	2,275	2,294	2,308	2,323
20 and 21 years old	1,908	2,000	2,064	2,096	2,136	2,195	2,272	2,328	2,341	2,348	2,352	2,363	2,380
22 to 24 years old	1,657	1,717	1,730	1,762	1,799	1,836	1,879	1,936	2,020	2,096	2,151	2,181	2,199
25 to 29 years old	1,341	1,406	1,463	1,515	1,556	1,590	1,617	1,646	1,688	1,746	1,816	1,895	1,970
30 to 34 years old	812	809	801	805	820	844	874	912	949	987	1,022	1,052	1,081
35 years old and over	2,018	1,960	1,970	1,967	1,957	1,944	1,941	1,951	1,976	2,015	2,060	2,107	2,159
Full-time, total	**10,610**	**10,797**	**10,982**	**11,233**	**11,497**	**11,757**	**11,995**	**12,222**	**12,442**	**12,672**	**12,903**	**13,113**	**13,325**
14 to 17 years old	165	131	107	111	112	111	111	112	113	115	117	120	125
18 and 19 years old	3,028	3,037	3,126	3,219	3,327	3,406	3,411	3,401	3,398	3,407	3,434	3,449	3,469
20 and 21 years old	2,911	3,030	3,099	3,147	3,205	3,293	3,411	3,495	3,513	3,522	3,528	3,543	3,567
22 to 24 years old	2,074	2,097	2,098	2,143	2,185	2,226	2,283	2,357	2,464	2,555	2,618	2,655	2,679
25 to 29 years old	1,131	1,136	1,179	1,227	1,266	1,299	1,327	1,360	1,403	1,459	1,526	1,602	1,676
30 to 34 years old	490	549	545	552	564	584	608	639	671	704	735	763	790
35 years old and over	812	818	828	835	837	837	844	858	881	912	945	980	1,019
Men	**4,739**	**4,803**	**4,836**	**4,919**	**5,009**	**5,096**	**5,170**	**5,231**	**5,276**	**5,311**	**5,340**	**5,357**	**5,377**
14 to 17 years old	63	36	43	44	44	43	43	43	43	43	43	43	44
18 and 19 years old	1,313	1,357	1,387	1,424	1,467	1,496	1,490	1,478	1,468	1,461	1,461	1,455	1,452
20 and 21 years old	1,385	1,460	1,473	1,488	1,509	1,545	1,593	1,624	1,620	1,612	1,603	1,596	1,595
22 to 24 years old	960	951	935	948	960	971	988	1,012	1,048	1,073	1,085	1,086	1,083
25 to 29 years old	509	439	445	460	472	481	487	494	503	513	527	543	558
30 to 34 years old	201	238	233	234	238	245	252	262	272	281	288	294	300
35 years old and over	310	321	320	321	319	317	316	318	322	328	333	339	346
Women	**5,871**	**5,994**	**6,146**	**6,314**	**6,487**	**6,660**	**6,826**	**6,991**	**7,166**	**7,362**	**7,563**	**7,756**	**7,948**
14 to 17 years old	103	94	64	67	68	68	68	69	70	72	74	77	80
18 and 19 years old	1,716	1,680	1,739	1,795	1,860	1,911	1,921	1,923	1,929	1,946	1,973	1,994	2,017
20 and 21 years old	1,526	1,569	1,626	1,658	1,696	1,748	1,818	1,871	1,892	1,910	1,926	1,947	1,973
22 to 24 years old	1,113	1,146	1,164	1,194	1,225	1,256	1,295	1,345	1,416	1,482	1,533	1,569	1,596
25 to 29 years old	622	697	733	767	794	818	840	866	900	946	1,000	1,059	1,118
30 to 34 years old	289	311	312	317	326	339	356	377	399	423	446	469	491
35 years old and over	502	497	508	515	518	521	528	540	559	584	612	641	673
Part-time, total	**6,662**	**6,690**	**6,689**	**6,725**	**6,768**	**6,810**	**6,844**	**6,883**	**6,932**	**6,989**	**7,041**	**7,079**	**7,117**
14 to 17 years old	35	68	65	67	67	66	65	64	64	64	63	64	65
18 and 19 years old	549	573	584	593	605	614	607	595	583	571	562	551	542
20 and 21 years old	741	748	756	757	763	776	793	799	788	773	757	743	732
22 to 24 years old	963	976	962	966	975	985	994	1,008	1,031	1,051	1,057	1,049	1,036
25 to 29 years old	1,255	1,248	1,273	1,306	1,333	1,351	1,361	1,369	1,382	1,402	1,430	1,463	1,493
30 to 34 years old	839	805	787	786	795	813	835	862	887	909	927	939	950
35 years old and over	2,280	2,272	2,264	2,251	2,230	2,206	2,190	2,187	2,198	2,219	2,244	2,269	2,301
Men	**2,648**	**2,653**	**2,634**	**2,654**	**2,676**	**2,697**	**2,715**	**2,736**	**2,759**	**2,785**	**2,809**	**2,827**	**2,845**
14 to 17 years old	15	41	38	39	39	38	38	37	37	37	37	37	37
18 and 19 years old	239	235	239	244	250	255	252	249	245	242	241	238	235
20 and 21 years old	358	318	319	320	323	330	338	342	339	335	330	327	324
22 to 24 years old	419	405	396	398	401	405	409	416	427	436	440	437	433
25 to 29 years old	536	539	544	558	571	579	584	588	594	602	613	628	640
30 to 34 years old	317	306	298	298	301	308	316	327	336	345	351	356	360
35 years old and over	764	809	802	798	791	782	777	777	781	788	796	804	815
Women	**4,014**	**4,038**	**4,056**	**4,070**	**4,092**	**4,114**	**4,129**	**4,148**	**4,173**	**4,204**	**4,233**	**4,252**	**4,272**
14 to 17 years old	19	27	27	28	28	28	27	27	27	27	27	27	27
18 and 19 years old	311	338	344	349	355	360	354	346	337	329	321	314	306
20 and 21 years old	382	430	437	437	440	446	454	457	449	438	426	416	407
22 to 24 years old	543	571	566	568	574	580	585	592	604	615	618	612	603
25 to 29 years old	720	709	729	748	762	772	777	781	788	800	817	836	852
30 to 34 years old	523	499	489	488	494	505	519	535	551	564	575	583	590
35 years old and over	1,516	1,464	1,462	1,453	1,439	1,424	1,413	1,411	1,417	1,431	1,448	1,465	1,486

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data by age are based on the distribution by age from the Census Bureau. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.)

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; Enrollment in Degree-Granting Institutions Model, 1980–2005; and U.S. Department of Commerce, Census Bureau, Current Population Reports, "Social and Economic Characteristics of Students," various years. (This table was prepared November 2006.)

Table 12. Actual and low alternative projected numbers for total enrollment in all degree-granting postsecondary institutions, by sex, age, and attendance status: Selected years, fall 1996 through fall 2016

[In thousands]

Sex, age, and attendance status	Actual			Projected (low alternative)	
	1996	2001	2005	2011	2016
Total enrollment	**14,368**	**15,928**	**17,487**	**18,803**	**20,012**
14 to 17 years old	231	133	199	173	184
18 and 19 years old	3,038	3,595	3,610	3,940	3,940
20 and 21 years old	2,659	3,408	3,778	4,237	4,227
22 to 24 years old	2,324	2,760	3,072	3,304	3,628
25 to 29 years old	2,128	2,014	2,384	2,678	3,087
30 to 34 years old	1,196	1,290	1,354	1,474	1,697
35 years old and over	2,791	2,727	3,090	2,998	3,248
Men	**6,353**	**6,961**	**7,456**	**7,891**	**8,117**
14 to 17 years old	92	54	78	79	81
18 and 19 years old	1,354	1,629	1,592	1,712	1,668
20 and 21 years old	1,228	1,591	1,778	1,950	1,898
22 to 24 years old	1,177	1,312	1,355	1,413	1,495
25 to 29 years old	991	905	978	1,071	1,181
30 to 34 years old	477	510	545	582	650
35 years old and over	1,033	961	1,130	1,084	1,145
Women	**8,015**	**8,967**	**10,032**	**10,912**	**11,895**
14 to 17 years old	139	79	121	93	104
18 and 19 years old	1,684	1,966	2,018	2,228	2,272
20 and 21 years old	1,430	1,817	2,000	2,287	2,329
22 to 24 years old	1,147	1,448	1,717	1,892	2,133
25 to 29 years old	1,137	1,110	1,406	1,607	1,906
30 to 34 years old	719	780	809	891	1,047
35 years old and over	1,758	1,767	1,960	1,914	2,103
Full-time, total	**8,303**	**9,448**	**10,797**	**11,957**	**12,943**
14 to 17 years old	166	122	131	109	120
18 and 19 years old	2,553	2,929	3,037	3,342	3,394
20 and 21 years old	2,117	2,662	3,030	3,435	3,491
22 to 24 years old	1,598	1,757	2,097	2,300	2,596
25 to 29 years old	911	883	1,136	1,319	1,609
30 to 34 years old	383	494	549	619	758
35 years old and over	575	602	818	831	975
Men	**3,851**	**4,300**	**4,803**	**5,173**	**5,296**
14 to 17 years old	72	43	36	42	44
18 and 19 years old	1,126	1,329	1,357	1,464	1,433
20 and 21 years old	969	1,249	1,460	1,609	1,575
22 to 24 years old	858	854	951	999	1,065
25 to 29 years old	444	397	439	487	547
30 to 34 years old	143	216	238	258	294
35 years old and over	240	212	321	313	339
Women	**4,452**	**5,148**	**5,994**	**6,784**	**7,647**
14 to 17 years old	95	78	94	67	77
18 and 19 years old	1,426	1,600	1,680	1,879	1,961
20 and 21 years old	1,148	1,413	1,569	1,826	1,916
22 to 24 years old	740	903	1,146	1,301	1,531
25 to 29 years old	467	486	697	832	1,062
30 to 34 years old	240	277	311	361	464
35 years old and over	336	390	497	518	636
Part-time, total	**6,065**	**6,480**	**6,690**	**6,846**	**7,069**
14 to 17 years old	65	11	68	64	64
18 and 19 years old	485	666	573	597	546
20 and 21 years old	542	746	748	802	736
22 to 24 years old	727	1,003	976	1,004	1,032
25 to 29 years old	1,217	1,132	1,248	1,358	1,479
30 to 34 years old	813	796	805	854	939
35 years old and over	2,216	2,126	2,272	2,167	2,273
Men	**2,502**	**2,661**	**2,653**	**2,718**	**2,821**
14 to 17 years old	20	11	41	37	37
18 and 19 years old	228	300	235	248	235
20 and 21 years old	260	342	318	341	323
22 to 24 years old	319	458	405	414	430
25 to 29 years old	547	508	539	584	634
30 to 34 years old	334	294	306	324	356
35 years old and over	793	749	809	770	806
Women	**3,563**	**3,820**	**4,038**	**4,128**	**4,248**
14 to 17 years old	45	1	27	27	27
18 and 19 years old	257	366	338	349	311
20 and 21 years old	282	404	430	460	413
22 to 24 years old	407	545	571	591	602
25 to 29 years old	670	624	709	775	845
30 to 34 years old	479	502	499	530	583
35 years old and over	1,423	1,377	1,464	1,396	1,467

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data by age are based on the distribution by age from the Census Bureau. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:96), Spring 2002 and Spring 2006; Enrollment in Degree-Granting Institutions Model, 1980–2005; and U.S. Department of Commerce, Census Bureau, Current Population Reports, "Social and Economic Characteristics of Students," various years. (This table was prepared November 2006.)

Table 13. Actual and high alternative projected numbers for total enrollment in all degree-granting postsecondary institutions, by sex, age, and attendance status: Selected years, fall 1996 through fall 2016

[In thousands]

Sex, age, and attendance status	Actual			Projected (high alternative)	
	1996	2001	2005	2011	2016
Total enrollment	**14,368**	**15,928**	**17,487**	**19,399**	**20,850**
14 to 17 years old	231	133	199	179	194
18 and 19 years old	3,038	3,595	3,610	4,050	4,076
20 and 21 years old	2,659	3,408	3,778	4,349	4,366
22 to 24 years old	2,324	2,760	3,072	3,422	3,797
25 to 29 years old	2,128	2,014	2,384	2,779	3,246
30 to 34 years old	1,196	1,290	1,354	1,527	1,783
35 years old and over	2,791	2,727	3,090	3,092	3,388
Men	**6,353**	**6,961**	**7,456**	**8,040**	**8,319**
14 to 17 years old	92	54	78	81	83
18 and 19 years old	1,354	1,629	1,592	1,742	1,705
20 and 21 years old	1,228	1,591	1,778	1,982	1,937
22 to 24 years old	1,177	1,312	1,355	1,442	1,535
25 to 29 years old	991	905	978	1,093	1,214
30 to 34 years old	477	510	545	595	669
35 years old and over	1,033	961	1,130	1,105	1,175
Women	**8,015**	**8,967**	**10,032**	**11,358**	**12,531**
14 to 17 years old	139	79	121	98	112
18 and 19 years old	1,684	1,966	2,018	2,309	2,370
20 and 21 years old	1,430	1,817	2,000	2,367	2,428
22 to 24 years old	1,147	1,448	1,717	1,980	2,262
25 to 29 years old	1,137	1,110	1,406	1,685	2,033
30 to 34 years old	719	780	809	932	1,114
35 years old and over	1,758	1,767	1,960	1,987	2,213
Full-time, total	**8,303**	**9,448**	**10,797**	**12,479**	**13,688**
14 to 17 years old	166	122	131	114	129
18 and 19 years old	2,553	2,929	3,037	3,458	3,538
20 and 21 years old	2,117	2,662	3,030	3,553	3,639
22 to 24 years old	1,598	1,757	2,097	2,411	2,759
25 to 29 years old	911	883	1,136	1,400	1,741
30 to 34 years old	383	494	549	658	822
35 years old and over	575	602	818	885	1,061
Men	**3,851**	**4,300**	**4,803**	**5,288**	**5,451**
14 to 17 years old	72	43	36	43	45
18 and 19 years old	1,126	1,329	1,357	1,492	1,469
20 and 21 years old	969	1,249	1,460	1,639	1,612
22 to 24 years old	858	854	951	1,024	1,099
25 to 29 years old	444	397	439	501	568
30 to 34 years old	143	216	238	266	305
35 years old and over	240	212	321	323	352
Women	**4,452**	**5,148**	**5,994**	**7,192**	**8,237**
14 to 17 years old	95	78	94	71	84
18 and 19 years old	1,426	1,600	1,680	1,966	2,069
20 and 21 years old	1,148	1,413	1,569	1,914	2,026
22 to 24 years old	740	903	1,146	1,388	1,659
25 to 29 years old	467	486	697	899	1,173
30 to 34 years old	240	277	311	392	517
35 years old and over	336	390	497	562	709
Part-time, total	**6,065**	**6,480**	**6,690**	**6,919**	**7,162**
14 to 17 years old	65	11	68	65	65
18 and 19 years old	485	666	573	592	538
20 and 21 years old	542	746	748	796	727
22 to 24 years old	727	1,003	976	1,011	1,039
25 to 29 years old	1,217	1,132	1,248	1,379	1,506
30 to 34 years old	813	796	805	870	961
35 years old and over	2,216	2,126	2,272	2,207	2,327
Men	**2,502**	**2,661**	**2,653**	**2,753**	**2,868**
14 to 17 years old	20	11	41	38	38
18 and 19 years old	228	300	235	250	236
20 and 21 years old	260	342	318	343	325
22 to 24 years old	319	458	405	418	436
25 to 29 years old	547	508	539	592	646
30 to 34 years old	334	294	306	329	364
35 years old and over	793	749	809	783	823
Women	**3,563**	**3,820**	**4,038**	**4,167**	**4,294**
14 to 17 years old	45	1	27	27	28
18 and 19 years old	257	366	338	343	302
20 and 21 years old	282	404	430	453	402
22 to 24 years old	407	545	571	593	602
25 to 29 years old	670	624	709	786	859
30 to 34 years old	479	502	499	540	597
35 years old and over	1,423	1,377	1,464	1,424	1,504

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data by age are based on the distribution by age from the Census Bureau. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:96), Spring 2002 and Spring 2006; Enrollment in Degree-Granting Institutions Model, 1980–2005; and U.S. Department of Commerce, Census Bureau, Current Population Reports, "Social and Economic Characteristics of Students," various years. (This table was prepared November 2006.)

Table 14. Actual and alternative projected numbers for enrollment in all degree-granting postsecondary institutions, by sex and attendance status: Fall 1991 through fall 2016

[In thousands]

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
Actual					
1991	14,359	3,929	2,572	4,186	3,671
1992	14,486	3,926	2,597	4,235	3,728
1993	14,305	3,891	2,537	4,237	3,640
1994	14,279	3,855	2,517	4,283	3,624
1995	14,262	3,807	2,535	4,321	3,598
1996	14,368	3,851	2,502	4,452	3,563
1997	14,502	3,890	2,506	4,548	3,559
1998	14,507	3,934	2,436	4,630	3,508
1999	14,791	4,026	2,465	4,761	3,540
2000	15,312	4,111	2,611	4,899	3,692
2001	15,928	4,300	2,661	5,148	3,820
2002	16,612	4,501	2,701	5,445	3,964
2003	16,900	4,632	2,624	5,680	3,965
2004	17,272	4,739	2,648	5,871	4,014
2005	17,487	4,803	2,653	5,994	4,038
Middle alternative projections					
2006	17,672	4,836	2,634	6,146	4,056
2007	17,958	4,919	2,654	6,314	4,070
2008	18,264	5,009	2,676	6,487	4,092
2009	18,567	5,096	2,697	6,660	4,114
2010	18,839	5,170	2,715	6,826	4,129
2011	19,105	5,231	2,736	6,991	4,148
2012	19,374	5,276	2,759	7,166	4,173
2013	19,662	5,311	2,785	7,362	4,204
2014	19,944	5,340	2,809	7,563	4,233
2015	20,192	5,357	2,827	7,756	4,252
2016	20,442	5,377	2,845	7,948	4,272
Low alternative projections					
2006	17,621	4,829	2,631	6,111	4,050
2007	17,849	4,900	2,648	6,239	4,061
2008	18,110	4,980	2,666	6,384	4,080
2009	18,371	5,058	2,685	6,529	4,099
2010	18,589	5,121	2,700	6,656	4,112
2011	18,803	5,173	2,718	6,784	4,128
2012	19,036	5,211	2,740	6,934	4,151
2013	19,292	5,240	2,764	7,106	4,181
2014	19,558	5,266	2,786	7,295	4,210
2015	19,786	5,280	2,803	7,474	4,229
2016	20,012	5,296	2,821	7,647	4,248
High alternative projections					
2006	17,704	4,841	2,636	6,166	4,060
2007	18,065	4,939	2,661	6,385	4,079
2008	18,420	5,039	2,685	6,592	4,104
2009	18,767	5,135	2,709	6,795	4,128
2010	19,087	5,217	2,729	6,995	4,146
2011	19,399	5,288	2,753	7,192	4,167
2012	19,711	5,341	2,779	7,398	4,193
2013	20,029	5,381	2,806	7,616	4,226
2014	20,317	5,410	2,830	7,824	4,254
2015	20,573	5,427	2,848	8,025	4,273
2016	20,850	5,451	2,868	8,237	4,294

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 15. Actual and alternative projected numbers for enrollment in public 4-year degree-granting postsecondary institutions, by sex and attendance status: Fall 1991 through fall 2016

[In thousands]

		Men		Women	
Year	**Total**	**Full-time**	**Part-time**	**Full-time**	**Part-time**
Actual					
1991	5,905	2,006	765	2,083	1,051
1992	5,900	2,005	760	2,090	1,045
1993	5,852	1,989	750	2,085	1,027
1994	5,825	1,966	738	2,100	1,022
1995	5,815	1,951	720	2,134	1,009
1996	5,806	1,943	703	2,163	997
1997	5,835	1,951	687	2,214	984
1998	5,892	1,959	685	2,260	988
1999	5,970	1,984	686	2,309	991
2000	6,055	2,009	683	2,363	1,001
2001	6,236	2,082	687	2,450	1,017
2002	6,482	2,167	706	2,557	1,052
2003	6,649	2,225	713	2,639	1,073
2004	6,737	2,260	717	2,684	1,076
2005	6,838	2,295	724	2,726	1,091
Middle alternative projections					
2006	6,930	2,316	710	2,823	1,082
2007	7,054	2,355	715	2,899	1,085
2008	7,186	2,397	720	2,978	1,090
2009	7,318	2,439	725	3,058	1,095
2010	7,444	2,477	731	3,136	1,100
2011	7,566	2,508	738	3,213	1,106
2012	7,685	2,531	746	3,293	1,115
2013	7,809	2,548	755	3,379	1,126
2014	7,930	2,562	763	3,468	1,137
2015	8,036	2,569	770	3,552	1,145
2016	8,142	2,578	776	3,635	1,153
Low alternative projections					
2006	6,908	2,312	709	2,806	1,080
2007	7,006	2,346	713	2,865	1,082
2008	7,118	2,383	717	2,931	1,086
2009	7,232	2,421	722	2,999	1,090
2010	7,334	2,454	727	3,060	1,094
2011	7,432	2,481	733	3,120	1,099
2012	7,536	2,500	741	3,187	1,108
2013	7,646	2,514	749	3,264	1,119
2014	7,759	2,526	757	3,347	1,129
2015	7,857	2,532	763	3,425	1,137
2016	7,953	2,539	769	3,500	1,145
High alternative projections					
2006	6,943	2,318	710	2,832	1,083
2007	7,100	2,364	717	2,931	1,088
2008	7,254	2,411	723	3,025	1,094
2009	7,406	2,458	729	3,119	1,100
2010	7,553	2,500	735	3,213	1,105
2011	7,695	2,536	743	3,304	1,112
2012	7,834	2,562	752	3,397	1,122
2013	7,971	2,582	761	3,494	1,134
2014	8,094	2,595	769	3,585	1,144
2015	8,203	2,602	776	3,673	1,152
2016	8,321	2,613	782	3,765	1,161

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 16. Actual and alternative projected numbers for enrollment in public 2-year degree-granting postsecondary institutions, by sex and attendance status: Fall 1991 through fall 2016

[In thousands]

		Men		Women	
Year	Total	Full-time	Part-time	Full-time	Part-time
Actual					
1991	5,405	882	1,414	1,004	2,105
1992	5,485	878	1,431	1,037	2,138
1993	5,337	859	1,386	1,030	2,063
1994	5,308	848	1,379	1,038	2,044
1995	5,278	819	1,417	1,022	2,020
1996	5,314	833	1,423	1,039	2,019
1997	5,361	842	1,444	1,049	2,026
1998	5,246	841	1,383	1,040	1,981
1999	5,339	868	1,404	1,063	2,005
2000	5,697	891	1,549	1,109	2,148
2001	5,997	962	1,596	1,194	2,245
2002	6,270	1,035	1,605	1,299	2,332
2003	6,208	1,058	1,516	1,343	2,291
2004	6,244	1,065	1,518	1,360	2,300
2005	6,184	1,055	1,514	1,332	2,283
Middle alternative projections					
2006	6,322	1,079	1,516	1,403	2,324
2007	6,403	1,099	1,529	1,442	2,333
2008	6,492	1,121	1,542	1,482	2,347
2009	6,577	1,140	1,555	1,521	2,361
2010	6,642	1,153	1,564	1,555	2,369
2011	6,704	1,162	1,574	1,589	2,378
2012	6,768	1,168	1,585	1,627	2,388
2013	6,842	1,174	1,596	1,672	2,401
2014	6,917	1,179	1,606	1,719	2,412
2015	6,979	1,181	1,614	1,765	2,418
2016	7,044	1,185	1,622	1,812	2,425
Low alternative projections					
2006	6,308	1,078	1,514	1,395	2,321
2007	6,374	1,095	1,525	1,425	2,329
2008	6,451	1,114	1,537	1,459	2,341
2009	6,525	1,132	1,548	1,491	2,354
2010	6,576	1,142	1,556	1,516	2,361
2011	6,625	1,150	1,565	1,542	2,369
2012	6,681	1,154	1,574	1,574	2,378
2013	6,747	1,158	1,584	1,613	2,391
2014	6,817	1,163	1,594	1,658	2,402
2015	6,874	1,165	1,601	1,700	2,408
2016	6,933	1,168	1,609	1,742	2,414
High alternative projections					
2006	6,332	1,081	1,517	1,408	2,326
2007	6,432	1,103	1,532	1,459	2,338
2008	6,533	1,127	1,547	1,507	2,353
2009	6,630	1,148	1,561	1,553	2,368
2010	6,707	1,163	1,572	1,594	2,377
2011	6,780	1,175	1,583	1,635	2,386
2012	6,856	1,183	1,595	1,681	2,397
2013	6,937	1,189	1,607	1,730	2,411
2014	7,013	1,194	1,618	1,779	2,422
2015	7,077	1,197	1,626	1,827	2,427
2016	7,149	1,201	1,635	1,879	2,434

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 17. Actual and alternative projected numbers for enrollment in private 4-year degree-granting postsecondary institutions, by sex and attendance status: Fall 1991 through fall 2016

[In thousands]

Year	Total	Men		Women	
		Full-time	Part-time	Full-time	Part-time
Actual					
1991	2,802	962	367	990	483
1992	2,864	970	375	1,016	503
1993	2,887	973	369	1,037	508
1994	2,924	978	367	1,063	516
1995	2,955	978	364	1,089	523
1996	2,998	991	356	1,133	518
1997	3,061	1,008	360	1,170	523
1998	3,126	1,038	353	1,220	514
1999	3,229	1,073	360	1,276	519
2000	3,308	1,107	365	1,315	522
2001	3,441	1,151	365	1,389	536
2002	3,601	1,199	377	1,468	557
2003	3,758	1,246	382	1,556	574
2004	3,990	1,313	400	1,670	607
2005	4,162	1,354	402	1,774	632
Middle alternative projections					
2006	4,115	1,336	396	1,763	620
2007	4,190	1,359	398	1,811	622
2008	4,268	1,383	401	1,860	624
2009	4,347	1,406	403	1,910	627
2010	4,424	1,428	406	1,960	629
2011	4,501	1,448	410	2,010	633
2012	4,580	1,463	415	2,064	639
2013	4,664	1,475	420	2,123	646
2014	4,746	1,485	425	2,183	652
2015	4,820	1,492	429	2,241	658
2016	4,893	1,499	433	2,298	663
Low alternative projections					
2006	4,101	1,334	395	1,753	619
2007	4,160	1,353	397	1,790	620
2008	4,226	1,374	399	1,830	622
2009	4,293	1,396	402	1,872	624
2010	4,355	1,415	404	1,910	626
2011	4,417	1,431	407	1,950	629
2012	4,487	1,445	412	1,996	634
2013	4,561	1,455	417	2,048	641
2014	4,638	1,464	422	2,105	647
2015	4,706	1,470	425	2,158	653
2016	4,772	1,476	429	2,210	658
High alternative projections					
2006	4,123	1,338	396	1,769	621
2007	4,219	1,364	399	1,832	624
2008	4,311	1,391	402	1,891	627
2009	4,402	1,417	405	1,949	630
2010	4,492	1,442	409	2,009	633
2011	4,582	1,464	413	2,069	637
2012	4,674	1,481	418	2,132	643
2013	4,767	1,495	424	2,198	650
2014	4,850	1,505	429	2,260	657
2015	4,927	1,512	433	2,320	662
2016	5,007	1,520	437	2,383	668

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 18. Actual and alternative projected numbers for enrollment in private 2-year degree-granting postsecondary institutions, by sex and attendance status: Fall 1991 through fall 2016

[In thousands]

		Men		Women	
Year	Total	Full-time	Part-time	Full-time	Part-time
Actual					
1991	247	80	27	109	32
1992	238	74	30	91	43
1993	229	70	31	85	43
1994	221	64	33	82	43
1995	215	60	33	77	45
1996	249	84	19	117	29
1997	245	89	14	115	26
1998	243	95	14	109	25
1999	253	101	15	112	25
2000	251	105	13	112	21
2001	254	105	12	114	22
2002	259	101	13	122	23
2003	285	103	13	142	28
2004	302	101	13	156	31
2005	304	99	12	161	32
Middle alternative projections					
2006	305	105	13	157	30
2007	311	107	13	162	30
2008	318	109	13	166	30
2009	325	111	13	171	30
2010	330	112	13	174	31
2011	335	113	13	178	31
2012	340	113	13	182	31
2013	346	114	14	187	31
2014	352	114	14	193	31
2015	357	115	14	198	31
2016	363	115	14	203	31
Low alternative projections					
2006	304	105	13	156	30
2007	309	106	13	160	30
2008	315	108	13	164	30
2009	320	110	13	167	30
2010	324	111	13	170	30
2011	328	111	13	173	31
2012	333	112	13	176	31
2013	338	112	13	181	31
2014	343	113	14	186	31
2015	348	113	14	191	31
2016	353	113	14	195	31
High alternative projections					
2006	306	105	13	158	30
2007	314	107	13	164	30
2008	322	109	13	169	30
2009	329	111	13	174	31
2010	336	113	13	179	31
2011	342	114	13	183	31
2012	348	115	14	188	31
2013	354	115	14	194	31
2014	360	116	14	200	31
2015	366	116	14	205	31
2016	372	117	14	211	31

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 19. Actual and alternative projected numbers for undergraduate enrollment in all degree-granting postsecondary institutions, by sex, attendance status, and control of institution: Fall 1991 through fall 2016

[In thousands]

		Sex		Attendance status		Control	
Year	Total	Men	Women	Full-time	Part-time	Public	Private
Actual							
1991	12,439	5,571	6,868	7,221	5,218	10,148	2,291
1992	12,537	5,582	6,954	7,243	5,293	10,216	2,320
1993	12,324	5,484	6,840	7,179	5,144	10,012	2,312
1994	12,263	5,422	6,840	7,169	5,094	9,945	2,317
1995	12,232	5,401	6,831	7,145	5,086	9,904	2,328
1996	12,327	5,421	6,906	7,299	5,028	9,935	2,392
1997	12,451	5,469	6,982	7,419	5,032	10,007	2,443
1998	12,437	5,446	6,991	7,539	4,898	9,950	2,487
1999	12,681	5,559	7,122	7,735	4,946	10,110	2,571
2000	13,155	5,778	7,377	7,923	5,232	10,539	2,616
2001	13,716	6,004	7,711	8,328	5,388	10,986	2,730
2002	14,257	6,192	8,065	8,734	5,523	11,433	2,824
2003	14,474	6,224	8,250	9,035	5,439	11,521	2,952
2004	14,781	6,340	8,441	9,284	5,496	11,651	3,130
2005	14,964	6,409	8,555	9,446	5,518	11,698	3,266
Middle alternative projections							
2006	15,136	6,430	8,706	9,610	5,526	11,923	3,213
2007	15,386	6,522	8,864	9,828	5,558	12,109	3,276
2008	15,659	6,622	9,036	10,062	5,596	12,314	3,345
2009	15,929	6,720	9,209	10,294	5,636	12,516	3,414
2010	16,162	6,799	9,364	10,497	5,665	12,686	3,476
2011	16,376	6,863	9,513	10,681	5,695	12,844	3,532
2012	16,576	6,911	9,665	10,847	5,729	12,993	3,583
2013	16,788	6,950	9,837	11,019	5,769	13,153	3,635
2014	16,995	6,984	10,012	11,192	5,803	13,310	3,685
2015	17,172	7,002	10,171	11,347	5,825	13,443	3,729
2016	17,354	7,024	10,330	11,506	5,848	13,580	3,774
Low alternative projections							
2006	15,093	6,421	8,672	9,574	5,520	11,891	3,202
2007	15,295	6,500	8,795	9,749	5,546	12,042	3,253
2008	15,530	6,589	8,941	9,950	5,580	12,218	3,312
2009	15,766	6,678	9,088	10,150	5,616	12,394	3,372
2010	15,955	6,745	9,209	10,314	5,641	12,532	3,422
2011	16,125	6,800	9,325	10,457	5,667	12,658	3,467
2012	16,297	6,840	9,456	10,597	5,699	12,786	3,510
2013	16,483	6,874	9,609	10,746	5,737	12,927	3,556
2014	16,678	6,904	9,774	10,908	5,770	13,075	3,603
2015	16,840	6,918	9,922	11,049	5,791	13,197	3,644
2016	17,003	6,937	10,066	11,191	5,812	13,320	3,684
High alternative projections							
2006	15,162	6,436	8,726	9,631	5,531	11,943	3,220
2007	15,475	6,544	8,931	9,905	5,569	12,176	3,299
2008	15,788	6,655	9,133	10,176	5,612	12,410	3,378
2009	16,096	6,763	9,333	10,440	5,656	12,639	3,457
2010	16,368	6,851	9,517	10,680	5,688	12,839	3,529
2011	16,619	6,925	9,694	10,898	5,721	13,024	3,595
2012	16,855	6,982	9,873	11,096	5,759	13,200	3,655
2013	17,090	7,026	10,063	11,290	5,800	13,377	3,713
2014	17,301	7,060	10,241	11,467	5,834	13,537	3,764
2015	17,484	7,078	10,406	11,627	5,856	13,674	3,810
2016	17,686	7,104	10,582	11,806	5,880	13,826	3,860

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 20. Actual and alternative projected numbers for graduate enrollment in all degree-granting postsecondary institutions, by sex, attendance status, and control of institution: Fall 1991 through fall 2016

[In thousands]

		Sex		Attendance status		Control	
Year	Total	Men	Women	Full-time	Part-time	Public	Private
Actual							
1991	1,639	761	878	642	997	1,050	589
1992	1,669	772	896	666	1,003	1,058	611
1993	1,688	771	917	688	1,000	1,064	625
1994	1,721	776	946	706	1,016	1,075	647
1995	1,732	767	965	717	1,015	1,074	659
1996	1,742	759	982	737	1,005	1,069	674
1997	1,753	758	996	752	1,001	1,070	683
1998	1,768	754	1,013	754	1,014	1,067	701
1999	1,807	766	1,041	781	1,026	1,077	730
2000	1,850	780	1,070	813	1,037	1,089	761
2001	1,904	796	1,108	843	1,061	1,119	784
2002	2,036	847	1,189	926	1,109	1,187	849
2003	2,097	865	1,232	981	1,117	1,201	896
2004	2,157	879	1,278	1,024	1,132	1,194	963
2005	2,186	877	1,309	1,047	1,139	1,186	1,001
Middle alternative projections							
2006	2,195	872	1,323	1,065	1,130	1,189	1,006
2007	2,224	881	1,343	1,090	1,134	1,204	1,020
2008	2,251	890	1,361	1,113	1,137	1,218	1,033
2009	2,277	898	1,379	1,136	1,141	1,231	1,046
2010	2,308	908	1,400	1,163	1,145	1,247	1,061
2011	2,351	922	1,429	1,197	1,154	1,269	1,082
2012	2,407	939	1,468	1,239	1,168	1,298	1,109
2013	2,470	956	1,514	1,285	1,185	1,331	1,139
2014	2,533	972	1,560	1,330	1,202	1,363	1,169
2015	2,591	986	1,605	1,374	1,217	1,394	1,198
2016	2,648	999	1,648	1,415	1,233	1,423	1,225
Low alternative projections							
2006	2,188	871	1,317	1,060	1,128	1,185	1,002
2007	2,209	878	1,331	1,079	1,130	1,196	1,013
2008	2,229	885	1,345	1,097	1,132	1,206	1,023
2009	2,250	891	1,358	1,115	1,134	1,217	1,033
2010	2,274	900	1,374	1,136	1,137	1,229	1,045
2011	2,309	912	1,396	1,164	1,144	1,247	1,061
2012	2,359	928	1,431	1,202	1,157	1,273	1,086
2013	2,417	944	1,473	1,243	1,174	1,303	1,114
2014	2,476	959	1,517	1,286	1,190	1,334	1,142
2015	2,531	972	1,558	1,326	1,205	1,363	1,168
2016	2,583	985	1,598	1,363	1,220	1,390	1,193
High alternative projections							
2006	2,199	873	1,326	1,068	1,131	1,191	1,008
2007	2,239	885	1,354	1,101	1,137	1,212	1,027
2008	2,273	895	1,377	1,130	1,143	1,229	1,044
2009	2,305	904	1,400	1,157	1,147	1,245	1,059
2010	2,343	916	1,427	1,190	1,153	1,265	1,078
2011	2,392	931	1,461	1,229	1,163	1,290	1,102
2012	2,456	950	1,505	1,277	1,178	1,323	1,133
2013	2,524	968	1,555	1,327	1,196	1,358	1,165
2014	2,588	984	1,603	1,374	1,213	1,392	1,196
2015	2,649	998	1,650	1,420	1,229	1,423	1,226
2016	2,710	1,013	1,697	1,465	1,245	1,455	1,255

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 21. Actual and alternative projected numbers for first-professional enrollment in all degree-granting postsecondary institutions, by sex, attendance status, and control of institution: Fall 1991 through fall 2016

[In thousands]

		Sex		Attendance status		Control	
Year	Total	Men	Women	Full-time	Part-time	Public	Private
Actual							
1991	281	170	111	252	29	111	169
1992	281	169	112	252	29	111	170
1993	292	173	120	260	33	114	179
1994	295	174	121	263	31	114	181
1995	298	174	124	266	31	115	183
1996	298	173	126	267	31	117	182
1997	298	170	129	267	31	118	180
1998	302	169	134	271	31	121	182
1999	303	165	138	271	33	123	180
2000	307	164	143	274	33	124	183
2001	309	161	148	277	32	128	181
2002	319	163	156	286	33	132	187
2003	329	166	163	296	33	135	195
2004	335	168	166	302	33	136	199
2005	337	170	167	303	34	138	199
Middle alternative projections							
2006	341	168	173	308	33	140	201
2007	348	171	177	315	33	143	205
2008	355	173	182	321	34	146	209
2009	361	175	186	327	34	149	212
2010	369	178	191	335	34	152	216
2011	378	181	197	344	34	156	222
2012	390	185	205	356	35	162	229
2013	404	189	214	368	35	167	236
2014	416	193	224	381	36	173	243
2015	428	196	233	392	36	178	250
2016	440	198	242	404	36	183	257
Low alternative projections							
2006	340	168	172	306	33	140	200
2007	345	170	175	312	33	142	203
2008	350	172	178	317	33	144	206
2009	355	174	181	322	34	146	209
2010	361	176	185	328	34	149	212
2011	369	179	190	335	34	152	217
2012	380	183	197	346	34	157	223
2013	392	186	206	357	35	162	230
2014	404	190	214	369	35	167	236
2015	415	192	223	379	36	172	243
2016	426	195	231	390	36	177	249
High alternative projections							
2006	342	168	173	308	33	141	201
2007	351	172	180	318	34	145	207
2008	359	174	185	326	34	148	211
2009	367	177	190	333	34	151	215
2010	376	180	196	342	34	155	221
2011	387	184	204	353	34	160	227
2012	401	188	213	366	35	166	235
2013	415	192	223	380	35	173	243
2014	428	196	233	393	36	178	250
2015	441	199	243	405	36	184	257
2016	454	202	252	417	37	189	265

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 22. Actual and projected numbers for enrollment in all degree-granting postsecondary institutions, by race/ethnicity: Fall 1991 through fall 2016

[In thousands]

Year	Total	Race/ethnicity					
		White	Black,	Hispanic	Asian/ Pacific Islander	American Indian/ Alaska Native	Nonresident alien[1]
Actual							
1991	14,360	10,990	1,335	867	637	114	416
1992	14,488	10,876	1,393	955	697	119	448
1993	14,306	10,601	1,413	989	725	122	457
1994	14,280	10,428	1,449	1,046	774	127	456
1995	14,264	10,313	1,474	1,094	797	131	454
1996	14,369	10,265	1,506	1,166	828	138	466
1997	14,504	10,267	1,551	1,219	859	142	465
1998	14,509	10,180	1,583	1,257	901	144	444
1999	14,792	10,283	1,643	1,319	913	145	488
2000	15,313	10,463	1,730	1,462	978	151	529
2001	15,929	10,775	1,850	1,561	1,019	158	565
2002	16,613	11,141	1,979	1,662	1,074	166	591
2003	16,902	11,276	2,069	1,716	1,076	173	592
2004	17,273	11,423	2,165	1,810	1,109	176	590
2005	17,489	11,496	2,215	1,882	1,134	176	585
Projected							
2006	17,672	11,572	2,235	1,944	1,138	194	589
2007	17,958	11,693	2,291	2,011	1,170	197	595
2008	18,264	11,827	2,351	2,080	1,204	201	602
2009	18,567	11,950	2,414	2,154	1,238	204	608
2010	18,839	12,046	2,472	2,227	1,271	208	615
2011	19,105	12,132	2,531	2,301	1,307	212	623
2012	19,374	12,207	2,595	2,378	1,346	217	632
2013	19,662	12,283	2,667	2,465	1,385	221	641
2014	19,944	12,354	2,734	2,554	1,425	226	651
2015	20,192	12,400	2,794	2,641	1,464	231	660
2016	20,442	12,448	2,855	2,729	1,503	236	670

[1]The racial/ethnic backgrounds of nonresident aliens are not known.

NOTE: Race categories exclude persons of Hispanic origin. Detail may not sum to totals because of rounding. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Enrollment data in the "racial/ethnicity unknown" category of the IPEDS "Fall Enrollment Survey" have been prorated to the other racial/ethnicity categories at the institutional level. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared December 2006.)

Table 23. Actual and alternative projected numbers for full-time-equivalent enrollment in all degree-granting postsecondary institutions, by control and type of institution: Fall 1991 through fall 2016

[In thousands]

Year	Total	Public		Private	
		4-year	2-year	4-year	2-year
Actual					
1991	10,363	4,796	3,067	2,288	212
1992	10,438	4,798	3,114	2,333	194
1993	10,353	4,766	3,046	2,357	184
1994	10,349	4,750	3,035	2,389	176
1995	10,337	4,757	2,994	2,418	168
1996	10,482	4,767	3,028	2,467	219
1997	10,615	4,814	3,056	2,525	220
1998	10,699	4,869	3,011	2,599	220
1999	10,944	4,945	3,075	2,694	229
2000	11,267	5,026	3,241	2,770	231
2001	11,766	5,194	3,445	2,894	233
2002	12,331	5,406	3,655	3,033	237
2003	12,674	5,558	3,679	3,177	261
2004	13,001	5,641	3,707	3,377	276
2005	13,201	5,728	3,662	3,533	277
Middle alternative projections					
2006	13,383	5,835	3,772	3,497	279
2007	13,647	5,954	3,838	3,570	285
2008	13,925	6,080	3,909	3,645	292
2009	14,201	6,206	3,976	3,720	299
2010	14,452	6,326	4,028	3,794	304
2011	14,693	6,439	4,078	3,866	308
2012	14,930	6,548	4,129	3,940	313
2013	15,182	6,660	4,187	4,016	319
2014	15,432	6,769	4,247	4,091	325
2015	15,655	6,866	4,300	4,159	330
2016	15,881	6,963	4,356	4,226	336
Low alternative projections					
2006	13,338	5,815	3,761	3,484	278
2007	13,548	5,909	3,814	3,542	283
2008	13,785	6,016	3,875	3,605	289
2009	14,021	6,125	3,933	3,669	294
2010	14,222	6,222	3,973	3,728	298
2011	14,414	6,313	4,012	3,787	302
2012	14,619	6,407	4,055	3,850	306
2013	14,840	6,505	4,106	3,918	311
2014	15,074	6,607	4,162	3,988	316
2015	15,279	6,696	4,211	4,051	321
2016	15,482	6,784	4,261	4,111	326
High alternative projections					
2006	13,411	5,847	3,779	3,505	280
2007	13,744	5,998	3,861	3,597	288
2008	14,068	6,144	3,943	3,685	296
2009	14,384	6,289	4,020	3,773	303
2010	14,680	6,429	4,083	3,859	309
2011	14,963	6,562	4,143	3,944	315
2012	15,242	6,689	4,204	4,029	321
2013	15,522	6,813	4,268	4,114	327
2014	15,777	6,924	4,329	4,190	333
2015	16,010	7,025	4,385	4,261	339
2016	16,260	7,134	4,446	4,336	345

NOTE: Detail may not sum to totals because of rounding. Some data have been revised from previously published figures. Data for 1999 were imputed using alternative procedures. (For more details, see appendix E of *Projections of Education Statistics to 2011*.) Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Fall Enrollment Survey" (IPEDS-EF:91–99), and Spring 2001 through Spring 2006; and Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table 24. Actual and projected numbers for high school graduates, by control of school: 1991–92 through 2016–17

[In thousands]

School year	Total	Public	Private
Actual			
1991–92 [1]	2,478	2,226	252
1992–93	2,481	2,233	247
1993–94 [1]	2,464	2,221	243
1994–95	2,519	2,274	246
1995–96 [1]	2,518	2,273	245
1996–97	2,612	2,358	254
1997–98 [1]	2,704	2,439	265
1998–99	2,759	2,486	273
1999–2000 [1]	2,833	2,554	279
2000–01	2,848	2,569	279
2001–02 [1]	2,906	2,622	285
2002–03	3,016	2,720	296
2003–04 [1]	3,081	2,783	299
Projected			
2004–05	3,122	2,818	304
2005–06	3,191	2,882	309
2006–07	3,240	2,929	311
2007–08	3,303	2,988	315
2008–09	3,330	3,012	318
2009–10	3,304	2,995	309
2010–11	3,275	2,970	305
2011–12	3,231	2,933	298
2012–13	3,223	2,927	296
2013–14	3,195	2,905	290
2014–15	3,202	2,915	287
2015–16	3,241	2,956	285
2016–17	3,245	2,958	287

[1]Private school numbers are estimated based on data from the Private School Universe Survey.

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1992–93 through 2004–05; Private School Universe Survey (PSS), selected years, 1991–92 through 2003–04; and National Elementary and Secondary High School Graduates Enrollment Model, 1972–73 through 2003–04. (This table was prepared November 2006.)

Table 25. Actual and projected numbers for high school graduates of public schools, by region and state: 1998–99 through 2016–17

	Actual						Projected			
Region and state	**1998–99**	**1999–2000**	**2000–01**	**2001–02**	**2002–03**	**2003–04**	**2004–05**	**2005–06**	**2006–07**	**2007–08**
United States	**2,485,630**	**2,553,844**	**2,568,956**	**2,621,534**	**2,719,907**	**2,782,747**	**2,818,110**	**2,881,750**	**2,928,960**	**2,987,840**
Northeast	437,156	453,814	457,638	461,479	477,236	493,563	509,470	524,310	531,840	538,960
Connecticut	28,284	31,562	30,388	32,327	33,665	34,573	36,390	36,560	37,010	37,380
Maine	11,988	12,211	12,654	12,593	12,947	13,278	13,220	13,260	13,040	12,750
Massachusetts	51,465	52,950	54,393	55,272	55,987	58,326	59,780	60,770	61,600	62,080
New Hampshire	11,251	11,829	12,294	12,452	13,210	13,309	13,810	13,790	14,180	14,360
New Jersey	67,410	74,420	76,130	77,664	81,391	83,826	89,790	94,980	96,870	99,250
New York	139,426	141,731	141,884	140,139	143,818	150,419	154,090	160,860	163,000	166,020
Pennsylvania	112,632	113,959	114,436	114,943	119,932	123,474	125,360	126,930	128,920	129,770
Rhode Island	8,179	8,477	8,603	9,006	9,318	9,258	9,920	10,010	10,140	10,420
Vermont	6,521	6,675	6,856	7,083	6,968	7,100	7,120	7,150	7,090	6,930
Midwest	645,322	648,020	644,770	651,640	673,241	681,009	679,020	684,160	690,280	704,990
Illinois	112,556	111,835	110,624	116,657	117,507	124,763	120,270	125,000	127,040	129,590
Indiana	58,964	57,012	56,172	56,722	57,895	56,008	56,010	58,880	59,840	61,650
Iowa	34,378	33,926	33,774	33,789	34,858	34,339	34,130	33,940	34,970	35,360
Kansas	28,685	29,102	29,360	29,541	29,963	30,155	30,090	29,920	29,460	29,900
Michigan	94,125	97,679	96,515	95,001	100,301	98,823	101,450	100,510	102,990	108,120
Minnesota	56,964	57,372	56,581	57,440	59,432	59,096	59,340	59,280	59,410	60,040
Missouri	52,531	52,848	54,138	54,487	56,925	57,983	58,090	57,870	59,030	60,080
Nebraska	20,550	20,149	19,658	19,910	20,161	20,309	20,220	20,070	20,350	21,000
North Dakota	8,388	8,606	8,445	8,114	8,169	7,888	7,740	7,470	7,410	7,070
Ohio	111,112	111,668	111,281	110,608	115,762	119,029	118,740	119,880	119,440	123,280
South Dakota	8,757	9,278	8,881	8,796	8,998	9,001	8,850	8,340	8,340	8,310
Wisconsin	58,312	58,545	59,341	60,575	63,270	63,615	64,100	62,990	62,030	60,600
South	835,286	861,498	866,693	890,643	930,458	946,808	965,750	991,440	1,014,900	1,030,150
Alabama	36,244	37,819	37,082	35,887	36,741	36,464	36,420	37,190	37,770	38,860
Arkansas	26,896	27,335	27,100	26,984	27,555	27,181	27,080	27,530	27,910	28,600
Delaware	6,484	6,108	6,614	6,482	6,817	6,951	7,080	7,070	7,150	7,360
District of Columbia	2,675	2,695	2,808	3,090	2,723	3,031	2,780	3,010	3,290	3,810
Florida	102,386	106,708	111,112	119,537	127,484	131,418	137,240	148,310	156,270	153,840
Georgia	59,227	62,563	62,499	65,983	66,888	68,550	71,060	73,140	75,110	78,780
Kentucky	37,048	36,830	36,957	36,337	37,654	37,787	37,470	36,570	37,120	38,020
Louisiana	37,802	38,430	38,314	37,905	37,608	37,019	36,060	35,810	35,370	35,980
Maryland	46,214	47,849	49,222	50,881	51,864	52,870	55,000	55,930	57,210	58,940
Mississippi	24,198	24,232	23,748	23,740	23,808	23,735	23,520	23,950	24,320	24,670
North Carolina	60,081	62,140	63,288	65,955	69,694	72,126	75,660	78,350	80,700	83,060
Oklahoma	36,556	37,646	37,458	36,852	36,694	36,799	36,350	36,870	37,150	37,440
South Carolina	31,495	31,617	30,026	31,302	32,480	33,235	33,840	35,700	36,620	34,490
Tennessee	40,823	41,568	40,642	40,894	44,111	46,096	47,030	47,910	49,240	49,730
Texas	203,393	212,925	215,316	225,167	238,109	244,165	247,800	251,160	252,920	257,800
Virginia	63,875	65,596	66,067	66,519	72,943	72,042	74,140	76,130	79,660	81,390
West Virginia	19,889	19,437	18,440	17,128	17,285	17,339	17,220	16,800	17,090	17,390
West	567,866	590,512	600,099	617,772	638,972	640,782	663,870	681,830	691,940	713,730
Alaska	6,810	6,615	6,812	6,945	7,297	7,236	7,290	7,650	7,610	7,650
Arizona	35,728	38,304	46,733	47,175	49,986	45,508	47,220	50,490	52,960	56,360
California	299,221	309,866	315,189	325,895	341,097	343,480	357,740	371,940	376,310	390,200
Colorado	36,958	38,924	39,241	40,760	42,379	44,777	46,210	46,520	47,140	47,790
Hawaii	9,714	10,437	10,102	10,452	10,013	10,324	10,530	10,480	10,500	10,870
Idaho	15,716	16,170	15,941	15,874	15,856	15,547	15,930	16,230	16,340	16,770
Montana	10,925	10,903	10,628	10,554	10,657	10,500	10,510	10,260	10,050	10,240
Nevada	13,892	14,551	15,127	16,270	16,378	15,201	17,820	17,640	18,840	19,460
New Mexico	17,317	18,031	18,199	18,094	16,923	17,892	18,210	18,110	18,450	18,620
Oregon	28,245	30,151	29,939	31,153	32,585	32,958	33,530	33,630	33,570	33,430
Utah	31,574	32,501	31,036	30,183	29,525	30,252	31,170	31,120	31,690	33,400
Washington	55,418	57,597	55,081	58,311	60,433	61,274	62,060	62,240	62,940	63,440
Wyoming	6,348	6,462	6,071	6,106	5,843	5,833	5,670	5,520	5,550	5,520

See notes at end of table.

Table 25. Actual and projected numbers for high school graduates of public schools, by region and state: 1998–99 through 2016–17—Continued

Region and state	Projected—Continued								
	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17
United States	**3,012,190**	**2,995,100**	**2,969,550**	**2,933,360**	**2,927,110**	**2,904,780**	**2,914,960**	**2,956,040**	**2,958,380**
Northeast	538,660	533,420	525,870	518,420	509,680	501,000	496,200	499,450	496,060
Connecticut	37,000	36,680	36,430	35,800	34,980	35,260	34,810	35,040	35,160
Maine	12,500	12,380	11,710	11,350	11,060	10,980	10,920	10,980	10,800
Massachusetts	61,010	60,410	58,870	57,860	57,440	56,030	55,810	56,080	54,620
New Hampshire	14,020	13,850	13,280	13,230	12,960	12,640	12,640	12,560	12,390
New Jersey	100,420	100,330	100,680	99,330	99,490	97,900	98,690	99,800	99,800
New York	165,850	164,350	161,960	159,990	156,160	153,100	149,900	150,630	149,610
Pennsylvania	130,890	128,970	127,010	125,050	122,470	120,290	118,840	119,990	119,440
Rhode Island	10,250	10,050	9,760	9,750	9,260	9,150	8,960	8,790	8,700
Vermont	6,730	6,400	6,180	6,060	5,860	5,660	5,640	5,580	5,540
Midwest	705,030	698,720	687,420	676,080	669,620	661,920	659,890	663,680	656,530
Illinois	130,650	131,670	130,330	132,560	133,550	130,420	129,950	128,160	124,930
Indiana	62,800	62,130	62,010	61,090	61,510	62,430	62,060	62,720	63,150
Iowa	35,330	35,030	34,500	33,680	33,110	33,280	33,570	34,200	33,780
Kansas	29,480	29,270	28,510	28,190	28,030	27,870	27,680	28,680	28,650
Michigan	107,170	104,830	102,920	100,550	98,940	96,510	96,120	96,400	95,900
Minnesota	58,720	58,350	57,620	56,410	56,030	55,590	56,230	56,160	55,190
Missouri	61,000	61,440	59,340	56,980	56,430	56,220	56,410	57,700	57,040
Nebraska	20,610	20,410	20,090	19,690	19,650	19,650	19,720	20,020	20,120
North Dakota	7,070	6,990	6,880	6,480	6,320	6,310	6,220	6,200	5,640
Ohio	122,890	120,360	119,840	116,310	114,210	111,960	111,410	112,780	111,570
South Dakota	8,070	8,020	7,810	7,550	7,270	7,280	7,180	7,150	7,190
Wisconsin	61,230	60,230	57,570	56,590	54,580	54,380	53,360	53,520	53,370
South	1,049,880	1,050,070	1,044,850	1,026,760	1,037,690	1,033,810	1,053,180	1,078,670	1,087,510
Alabama	38,820	38,610	38,270	37,420	36,680	35,810	36,340	36,720	36,130
Arkansas	29,010	28,420	27,530	27,600	27,370	28,000	28,390	28,890	28,620
Delaware	7,830	7,770	7,840	7,780	7,610	7,540	7,580	7,610	7,640
District of Columbia	3,830	3,750	3,630	3,420	3,110	2,900	2,710	2,620	2,530
Florida	157,650	158,060	159,820	147,890	162,730	160,030	165,590	171,860	174,450
Georgia	80,280	80,250	80,840	80,740	79,800	81,090	83,440	86,000	87,640
Kentucky	38,840	37,780	37,750	37,070	36,750	37,200	37,580	37,970	38,080
Louisiana	36,250	36,400	35,310	33,110	34,750	32,590	32,660	33,460	33,200
Maryland	59,510	58,710	56,820	56,660	55,060	54,270	53,470	52,670	53,350
Mississippi	25,350	25,210	25,100	24,480	24,200	23,380	23,460	23,810	23,560
North Carolina	84,390	85,060	83,770	84,950	83,950	83,730	85,850	89,040	90,790
Oklahoma	37,650	37,960	36,770	36,380	35,740	35,480	36,440	37,360	36,710
South Carolina	36,860	36,940	36,400	35,470	35,120	34,720	35,150	36,080	36,340
Tennessee	50,470	49,960	49,320	48,290	48,310	47,430	47,360	48,990	49,110
Texas	262,850	265,580	267,260	267,660	269,990	274,110	281,580	287,350	290,540
Virginia	82,580	82,260	81,520	81,170	79,910	79,450	79,470	81,850	82,580
West Virginia	17,710	17,350	16,890	16,680	16,610	16,080	16,090	16,380	16,250
West	718,610	712,900	711,410	712,100	710,110	708,060	705,690	714,240	718,290
Alaska	7,570	7,460	6,960	6,920	6,780	6,690	6,990	6,860	6,880
Arizona	58,050	58,450	58,640	59,880	60,310	62,290	62,760	63,650	65,060
California	390,960	385,250	387,070	389,130	384,860	378,640	372,270	372,220	373,240
Colorado	48,420	48,590	48,170	47,540	47,590	48,170	48,500	50,000	51,270
Hawaii	10,890	10,450	10,350	10,390	10,110	10,000	9,580	9,650	9,670
Idaho	16,970	17,130	16,910	16,890	17,000	17,780	17,850	18,460	18,680
Montana	9,940	9,970	9,440	9,220	8,950	8,930	8,730	8,890	8,720
Nevada	20,220	20,720	21,280	21,420	22,480	22,770	23,470	24,740	25,530
New Mexico	18,900	18,420	18,340	17,950	17,390	17,280	17,610	17,920	18,100
Oregon	33,860	33,140	32,370	31,770	32,090	32,250	31,890	32,620	32,600
Utah	34,740	35,550	35,670	36,580	38,330	39,750	41,450	44,050	43,900
Washington	62,690	62,510	61,080	59,500	59,550	58,690	59,800	60,250	59,770
Wyoming	5,410	5,280	5,120	4,930	4,670	4,830	4,800	4,940	4,890

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1999–2000 through 2004–05; and State Public High School Graduates Model, 1980–81 through 2003–04. (This table was prepared December 2006.)

Table 26. Actual and projected percentage changes in public high school graduates, by region and state: Selected years, 1998–99 through 2016–17

Region and state	Actual 1998–99 to 2003–04	Projected		
		2003–04 to 2010–11	2010–11 to 2016–17	2003–04 to 2016–17
United States	**12.0**	**6.7**	**-0.4**	**6.3**
Northeast	12.9	6.5	-5.7	0.5
Connecticut	22.2	5.4	-3.5	1.7
Maine	10.8	-11.8	-7.7	-18.7
Massachusetts	13.3	0.9	-7.2	-6.4
New Hampshire	18.3	-0.2	-6.7	-6.9
New Jersey	24.4	20.1	-0.9	19.1
New York	7.9	7.7	-7.6	-0.5
Pennsylvania	9.6	2.9	-6.0	-3.3
Rhode Island	13.2	5.4	-10.9	-6.1
Vermont	8.9	-13.0	-10.3	-21.9
Midwest	5.5	0.9	-4.5	-3.6
Illinois	10.8	4.5	-4.1	0.1
Indiana	-5.0	10.7	1.8	12.7
Iowa	-0.1	0.5	-2.1	-1.6
Kansas	5.1	-5.5	0.5	-5.0
Michigan	5.0	4.1	-6.8	-3.0
Minnesota	3.7	-2.5	-4.2	-6.6
Missouri	10.4	2.3	-3.9	-1.6
Nebraska	-1.2	-1.1	0.1	-0.9
North Dakota	-6.0	-12.8	-17.9	-28.4
Ohio	7.1	0.7	-6.9	-6.3
South Dakota	2.8	-13.2	-7.9	-20.1
Wisconsin	9.1	-9.5	-7.3	-16.1
South	13.4	10.4	4.1	14.9
Alabama	0.6	5.0	-5.6	-0.9
Arkansas	1.1	1.3	4.0	5.3
Delaware	7.2	12.8	-2.7	9.8
District of Columbia	13.3	19.7	-30.2	-16.5
Florida	28.4	21.6	9.2	32.7
Georgia	15.7	17.9	9.2	27.8
Kentucky	2.0	-0.1	0.9	0.8
Louisiana	-2.1	-4.6	-6.0	-10.3
Maryland	14.4	7.5	-6.1	0.9
Mississippi	-1.9	5.8	-6.1	-0.7
North Carolina	20.0	16.1	8.4	25.9
Oklahoma	0.7	-0.1	-0.2	-0.2
South Carolina	5.5	9.5	-0.1	9.3
Tennessee	12.9	7.0	-0.4	6.5
Texas	20.0	9.5	8.7	19.0
Virginia	12.8	13.2	1.3	14.6
West Virginia	-12.8	-2.6	-3.8	-6.3
West	12.8	11.0	1.0	12.1
Alaska	6.3	-3.8	-1.2	-5.0
Arizona	27.4	28.9	10.9	43.0
California	14.8	12.7	-3.6	8.7
Colorado	21.2	7.6	6.4	14.5
Hawaii	6.3	0.3	-6.6	-6.4
Idaho	-1.1	8.8	10.4	20.1
Montana	-3.9	-10.1	-7.6	-17.0
Nevada	9.4	40.0	20.0	68.0
New Mexico	3.3	2.5	-1.3	1.2
Oregon	16.7	-1.8	0.7	-1.1
Utah	-4.2	17.9	23.1	45.1
Washington	10.6	-0.3	-2.2	-2.5
Wyoming	-8.1	-12.3	-4.4	-16.1

NOTE: Calculations are based on unrounded numbers. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1999–2000 and 2004–05; and State Public High School Graduates Model, 1980–81 through 2003–04. (This table was prepared December 2006.)

Table 27. Actual and alternative projected numbers for associate's degrees, by sex of recipient: 1991–92 through 2016–17

Year	Total	Men	Women
Actual			
1991–92	504,231	207,481	296,750
1992–93	514,756	211,964	302,792
1993–94	530,632	215,261	315,371
1994–95	539,691	218,352	321,339
1995–96	555,216	219,514	335,702
1996–97	571,226	223,948	347,278
1997–98	558,555	217,613	340,942
1998–99	559,954	218,417	341,537
1999–2000	564,933	224,721	340,212
2000–01	578,865	231,645	347,220
2001–02	595,133	238,109	357,024
2002–03	632,912	253,060	379,852
2003–04	665,301	260,033	405,268
2004–05	696,660	267,536	429,124
Middle alternative projections			
2005–06	700,000	265,000	435,000
2006–07	689,000	259,000	430,000
2007–08	699,000	262,000	437,000
2008–09	714,000	267,000	447,000
2009–10	724,000	270,000	454,000
2010–11	730,000	272,000	458,000
2011–12	735,000	273,000	462,000
2012–13	740,000	274,000	466,000
2013–14	745,000	275,000	471,000
2014–15	751,000	275,000	476,000
2015–16	755,000	273,000	481,000
2016–17	762,000	273,000	489,000
Low alternative projections			
2005–06	700,000	265,000	435,000
2006–07	668,000	251,000	417,000
2007–08	679,000	255,000	424,000
2008–09	680,000	254,000	426,000
2009–10	680,000	254,000	427,000
2010–11	682,000	254,000	428,000
2011–12	670,000	249,000	421,000
2012–13	675,000	250,000	425,000
2013–14	679,000	250,000	429,000
2014–15	684,000	250,000	434,000
2015–16	687,000	249,000	438,000
2016–17	694,000	249,000	445,000
High alternative projections			
2005–06	700,000	265,000	435,000
2006–07	710,000	267,000	443,000
2007–08	720,000	270,000	450,000
2008–09	748,000	280,000	469,000
2009–10	768,000	286,000	481,000
2010–11	779,000	290,000	489,000
2011–12	801,000	298,000	503,000
2012–13	806,000	299,000	508,000
2013–14	811,000	299,000	512,000
2014–15	817,000	299,000	518,000
2015–16	822,000	298,000	524,000
2016–17	830,000	298,000	532,000

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05. (This table was prepared December 2006.)

Table 28. Actual and alternative projected numbers for bachelor's degrees, by sex of recipient: 1991–92 through 2016–17

Year	Total	Men	Women
Actual			
1991–92	1,136,553	520,811	615,742
1992–93	1,165,178	532,881	632,297
1993–94	1,169,275	532,422	636,853
1994–95	1,160,134	526,131	634,003
1995–96	1,164,792	522,454	642,338
1996–97	1,172,879	520,515	652,364
1997–98	1,184,406	519,956	664,450
1998–99	1,200,303	518,746	681,557
1999–2000	1,237,875	530,367	707,508
2000–01	1,244,171	531,840	712,331
2001–02	1,291,900	549,816	742,084
2002–03	1,348,503	573,079	775,424
2003–04	1,399,542	595,425	804,117
2004–05	1,439,264	613,000	826,264
Middle alternative projections			
2005–06	1,461,000	619,000	843,000
2006–07	1,502,000	629,000	873,000
2007–08	1,548,000	647,000	901,000
2008–09	1,598,000	665,000	933,000
2009–10	1,644,000	681,000	962,000
2010–11	1,679,000	693,000	986,000
2011–12	1,710,000	702,000	1,007,000
2012–13	1,738,000	710,000	1,028,000
2013–14	1,762,000	715,000	1,047,000
2014–15	1,781,000	716,000	1,065,000
2015–16	1,794,000	714,000	1,080,000
2016–17	1,813,000	713,000	1,100,000
Low alternative projections			
2005–06	1,461,000	619,000	843,000
2006–07	1,472,000	617,000	856,000
2007–08	1,504,000	629,000	876,000
2008–09	1,534,000	639,000	895,000
2009–10	1,545,000	641,000	905,000
2010–11	1,553,000	641,000	912,000
2011–12	1,560,000	641,000	919,000
2012–13	1,586,000	648,000	938,000
2013–14	1,607,000	652,000	955,000
2014–15	1,625,000	653,000	971,000
2015–16	1,636,000	651,000	985,000
2016–17	1,654,000	651,000	1,004,000
High alternative projections			
2005–06	1,461,000	619,000	843,000
2006–07	1,532,000	642,000	890,000
2007–08	1,592,000	665,000	927,000
2008–09	1,662,000	692,000	970,000
2009–10	1,742,000	722,000	1,020,000
2010–11	1,804,000	745,000	1,059,000
2011–12	1,860,000	764,000	1,096,000
2012–13	1,891,000	773,000	1,118,000
2013–14	1,916,000	778,000	1,138,000
2014–15	1,937,000	779,000	1,158,000
2015–16	1,951,000	776,000	1,175,000
2016–17	1,973,000	776,000	1,197,000

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05. (This table was prepared June 2007.)

Table 29. Actual and alternative projected numbers for master's degrees, by sex of recipient: 1991–92 through 2016–17

Year	Total	Men	Women
Actual			
1991–92	352,838	161,842	190,996
1992–93	369,585	169,258	200,327
1993–94	387,070	176,085	210,985
1994–95	397,629	178,598	219,031
1995–96	406,301	179,081	227,220
1996–97	419,401	180,947	238,454
1997–98	430,164	184,375	245,789
1998–99	439,986	186,148	253,838
1999–2000	457,056	191,792	265,264
2000–01	468,476	194,351	274,125
2001–02	482,118	199,120	282,998
2002–03	512,645	211,381	301,264
2003–04	558,940	229,545	329,395
2004–05	574,618	233,590	341,028
Middle alternative projections			
2005–06	606,000	245,000	361,000
2006–07	618,000	243,000	374,000
2007–08	634,000	247,000	387,000
2008–09	649,000	252,000	397,000
2009–10	662,000	256,000	405,000
2010–11	671,000	260,000	411,000
2011–12	683,000	264,000	419,000
2012–13	696,000	269,000	428,000
2013–14	715,000	275,000	440,000
2014–15	736,000	281,000	455,000
2015–16	757,000	286,000	471,000
2016–17	778,000	290,000	487,000
Low alternative projections			
2005–06	606,000	245,000	361,000
2006–07	594,000	234,000	360,000
2007–08	585,000	228,000	357,000
2008–09	584,000	226,000	357,000
2009–10	581,000	225,000	356,000
2010–11	575,000	223,000	353,000
2011–12	564,000	218,000	346,000
2012–13	576,000	222,000	354,000
2013–14	591,000	227,000	364,000
2014–15	608,000	232,000	376,000
2015–16	626,000	236,000	390,000
2016–17	643,000	240,000	403,000
High alternative projections			
2005–06	606,000	245,000	361,000
2006–07	642,000	253,000	389,000
2007–08	683,000	266,000	417,000
2008–09	715,000	277,000	438,000
2009–10	743,000	288,000	455,000
2010–11	767,000	297,000	470,000
2011–12	801,000	310,000	492,000
2012–13	817,000	315,000	502,000
2013–14	839,000	322,000	516,000
2014–15	864,000	329,000	534,000
2015–16	889,000	336,000	553,000
2016–17	913,000	341,000	572,000

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05. (This table was prepared June 2007.)

Table 30. Actual and alternative projected numbers for doctor's degrees, by sex of recipient: 1991–92 through 2016–17

Year	Total	Men	Women
Actual			
1991–92	40,659	25,557	15,102
1992–93	42,132	26,073	16,059
1993–94	43,185	26,552	16,633
1994–95	44,446	26,916	17,530
1995–96	44,652	26,841	17,811
1996–97	45,876	27,146	18,730
1997–98	46,010	26,664	19,346
1998–99	44,077	25,146	18,931
1999–2000	44,808	25,028	19,780
2000–01	44,904	24,728	20,176
2001–02	44,160	23,708	20,452
2002–03	46,024	24,341	21,683
2003–04	48,378	25,323	23,055
2004–05	52,631	26,973	25,658
Middle alternative projections			
2005–06	54,700	27,200	27,500
2006–07	55,800	27,200	28,600
2007–08	56,700	27,100	29,600
2008–09	57,300	27,000	30,200
2009–10	57,800	27,000	30,800
2010–11	58,600	27,100	31,500
2011–12	59,900	27,400	32,400
2012–13	61,400	27,900	33,500
2013–14	63,200	28,400	34,900
2014–15	65,200	28,900	36,300
2015–16	67,100	29,300	37,900
2016–17	69,300	29,800	39,500
Low alternative projections			
2005–06	54,700	27,200	27,500
2006–07	53,400	26,000	27,400
2007–08	55,000	26,300	28,700
2008–09	54,300	25,600	28,700
2009–10	55,400	25,800	29,500
2010–11	57,300	26,500	30,800
2011–12	56,500	25,900	30,600
2012–13	57,900	26,300	31,600
2013–14	59,700	26,800	32,900
2014–15	61,500	27,200	34,300
2015–16	63,300	27,600	35,700
2016–17	65,400	28,100	37,300
High alternative projections			
2005–06	54,700	27,200	27,500
2006–07	58,200	28,300	29,900
2007–08	58,400	27,900	30,500
2008–09	60,200	28,400	31,800
2009–10	60,200	28,100	32,100
2010–11	60,000	27,700	32,200
2011–12	63,300	29,000	34,300
2012–13	64,900	29,500	35,400
2013–14	66,800	30,000	36,800
2014–15	68,900	30,500	38,400
2015–16	70,900	30,900	40,000
2016–17	73,200	31,400	41,800

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05. (This table was prepared June 2007.)

Table 31. Actual and alternative projected numbers for first-professional degrees, by sex of recipient: 1991–92 through 2016–17

Year	Total	Men	Women
Actual			
1991–92	74,146	45,071	29,075
1992–93	75,387	45,153	30,234
1993–94	75,418	44,707	30,711
1994–95	75,800	44,853	30,947
1995–96	76,734	44,748	31,986
1996–97	78,730	45,564	33,166
1997–98	78,598	44,911	33,687
1998–99	78,439	44,339	34,100
1999–2000	80,057	44,239	35,818
2000–01	79,707	42,862	36,845
2001–02	80,698	42,507	38,191
2002–03	80,810	41,834	38,976
2003–04	83,041	42,169	40,872
2004–05	87,289	43,849	43,440
Middle alternative projections			
2005–06	88,800	44,100	44,700
2006–07	88,900	43,500	45,400
2007–08	91,000	44,000	47,000
2008–09	93,400	44,600	48,800
2009–10	95,600	45,200	50,400
2010–11	97,400	45,600	51,800
2011–12	99,400	46,100	53,300
2012–13	101,600	46,600	55,000
2013–14	104,200	47,100	57,100
2014–15	107,300	47,700	59,600
2015–16	110,500	48,300	62,200
2016–17	113,600	48,700	64,900
Low alternative projections			
2005–06	88,800	44,100	44,700
2006–07	87,600	42,800	44,800
2007–08	89,400	43,200	46,200
2008–09	90,500	43,300	47,300
2009–10	90,300	42,600	47,600
2010–11	90,600	42,400	48,200
2011–12	91,100	42,200	48,900
2012–13	93,100	42,700	50,400
2013–14	95,600	43,200	52,300
2014–15	98,400	43,800	54,600
2015–16	101,300	44,300	57,000
2016–17	104,200	44,700	59,500
High alternative projections			
2005–06	88,800	44,100	44,700
2006–07	90,200	44,100	46,100
2007–08	92,600	44,700	47,800
2008–09	96,200	45,900	50,200
2009–10	100,900	47,700	53,300
2010–11	104,200	48,800	55,400
2011–12	107,700	49,900	57,800
2012–13	110,000	50,500	59,600
2013–14	112,900	51,100	61,800
2014–15	116,200	51,700	64,500
2015–16	119,700	52,300	67,400
2016–17	123,100	52,800	70,300

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A2, appendix A.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System, "Completions Survey" (IPEDS-C:92–99), and Fall 2000 through Fall 2005; and Degrees Conferred Model, 1975–76 through 2004–05. (This table was prepared June 2007.)

Table 32. Actual and alternative projected numbers for elementary and secondary teachers, by control of school: Fall 1991 through fall 2016

[In thousands]

Year	Total	Public	Private
Actual			
1991	2,797	2,432	365
1992[2]	2,827	2,459	368
1993	2,874	2,504	370
1994[1]	2,925	2,552	373
1995	2,974	2,598	376
1996[1]	3,051	2,667	384
1997	3,138	2,746	391
1998[1]	3,230	2,830	400
1999	3,319	2,911	408
2000[1]	3,366	2,941	424
2001	3,440	3,000	441
2002[1]	3,476	3,034	442
2003	3,490	3,049	441
2004[1]	3,538	3,091	447
Middle alternative projections			
2005	3,572	3,121	451
2006	3,637	3,177	460
2007	3,679	3,213	466
2008	3,725	3,252	473
2009	3,770	3,289	480
2010	3,812	3,325	487
2011	3,857	3,363	494
2012	3,913	3,410	502
2013	3,971	3,461	511
2014	4,038	3,518	520
2015	4,107	3,578	529
2016	4,180	3,642	538
Low alternative projections			
2005	3,572	3,121	451
2006	3,627	3,169	459
2007	3,663	3,199	464
2008	3,704	3,233	471
2009	3,744	3,267	477
2010	3,781	3,298	484
2011	3,821	3,331	490
2012	3,873	3,375	498
2013	3,930	3,424	506
2014	3,996	3,481	515
2015	4,065	3,541	524
2016	4,138	3,604	533
High alternative projections			
2005	3,572	3,121	451
2006	3,643	3,182	461
2007	3,695	3,227	468
2008	3,747	3,271	476
2009	3,796	3,313	484
2010	3,845	3,354	491
2011	3,896	3,397	499
2012	3,957	3,449	508
2013	4,019	3,503	516
2014	4,086	3,561	525
2015	4,156	3,622	535
2016	4,233	3,689	544

[1]Private school numbers are estimated.

NOTE: Teachers reported in full-time equivalents. Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; Private School Universe Survey (PSS), selected years, 1991–92 through 2003–04; and Elementary and Secondary Teacher Model, 1973–2003. (This table was prepared January 2007.)

Table 33. Actual and alternative projected numbers for the pupil/teacher ratios in elementary and secondary schools, by control of school: Fall 1991 through fall 2016

Year	Total	Public	Private
Actual			
1991	17.1	17.3	15.6
1992[1]	17.2	17.4	15.4
1993	17.1	17.4	15.3
1994[1]	17.1	17.3	15.5
1995	17.1	17.3	15.7
1996[1]	16.9	17.1	15.5
1997	16.6	16.8	15.2
1998[1]	16.3	16.4	15.0
1999	15.9	16.1	14.7
2000[1]	15.9	16.0	14.5
2001	15.7	15.9	14.3
2002[1]	15.7	15.9	14.1
2003	15.7	15.9	13.8
2004[1]	15.5	15.8	13.7
Middle alternative projections			
2005	15.5	15.7	13.5
2006	15.3	15.5	13.4
2007	15.2	15.4	13.2
2008	15.1	15.3	13.0
2009	15.0	15.2	12.8
2010	15.0	15.1	12.7
2011	14.9	15.1	12.5
2012	14.8	15.0	12.4
2013	14.8	14.9	12.3
2014	14.7	14.8	12.2
2015	14.6	14.7	12.1
2016	14.5	14.6	12.0
Low alternative projections			
2005	15.5	15.7	13.5
2006	15.3	15.5	13.4
2007	15.2	15.4	13.1
2008	15.0	15.2	12.9
2009	14.9	15.1	12.7
2010	14.8	15.0	12.6
2011	14.8	14.9	12.4
2012	14.7	14.8	12.3
2013	14.6	14.7	12.2
2014	14.5	14.6	12.1
2015	14.5	14.6	12.0
2016	14.4	14.5	11.9
High alternative projections			
2005	15.5	15.7	13.6
2006	15.4	15.6	13.4
2007	15.3	15.5	13.3
2008	15.2	15.4	13.1
2009	15.1	15.3	12.9
2010	15.1	15.3	12.8
2011	15.0	15.2	12.7
2012	15.0	15.1	12.5
2013	14.9	15.1	12.4
2014	14.8	15.0	12.3
2015	14.8	14.9	12.2
2016	14.7	14.8	12.1

[1]Private school numbers are estimated.

NOTE: The pupil/teacher ratios were derived from tables 2 and 31. Teachers reported in full-time equivalents. Some data have been revised from previously published figures. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; Private School Universe Survey (PSS), selected years, 1991–92 through 2003–04; National Elementary and Secondary Enrollment Model, 1972–2004; and Elementary and Secondary Teacher Model, 1973–2003. (This table was prepared January 2007.)

Table 34. Actual and alternative projected numbers for current expenditures and current expenditures per pupil in fall enrollment in public elementary and secondary schools: 1991–92 through 2016–17

School year	Fall enrollment (in thousands)	Current expenditures			
		Constant 2004–05 dollars[1]		Current dollars	
		Total (in billions)	Per pupil in fall enrollment	Total (in billions)	Per pupil in fall enrollment
Actual					
1991–92	42,047	$293.0	$6,969	$211.2	$5,023
1992–93	42,823	297.2	6,941	220.9	5,160
1993–94	43,465	303.5	6,983	231.5	5,327
1994–95	44,111	310.8	7,046	243.9	5,529
1995–96	44,840	316.5	7,059	255.1	5,689
1996–97	45,611	325.9	7,146	270.2	5,923
1997–98	46,127	338.3	7,335	285.5	6,189
1998–99	46,539	352.8	7,582	302.9	6,508
1999–2000	46,857	366.8	7,827	323.9	6,912
2000–01	47,204	381.4	8,080	348.4	7,380
2001–02	47,672	396.4	8,314	368.4	7,727
2002–03	48,183	408.0	8,468	387.6	8,044
2003–04	48,540	415.5	8,561	403.4	8,310
Middle alternative projections					
2004–05	48,795	428.3	8,777	428.3	8,777
2005–06	49,028	434.6	8,865	449.5	9,169
2006–07	49,370	451.0	9,136	474.8	9,618
2007–08	49,610	461.9	9,311	495.7	9,992
2008–09	49,812	474.3	9,521	519.0	10,418
2009–10	50,028	487.3	9,739	543.3	10,859
2010–11	50,303	499.1	9,921	–	–
2011–12	50,653	510.3	10,074	–	–
2012–13	51,093	523.3	10,241	–	–
2013–14	51,579	538.0	10,431	–	–
2014–15	52,135	555.1	10,648	–	–
2015–16	52,733	573.7	10,879	–	–
2016–17	53,300	592.2	11,111	–	–
Low alternative projections					
2004–05	48,795	428.3	8,777	428.3	8,777
2005–06	49,028	433.9	8,850	449.1	9,159
2006–07	49,370	446.9	9,053	473.9	9,598
2007–08	49,610	454.7	9,166	496.2	10,002
2008–09	49,812	464.6	9,327	523.0	10,500
2009–10	50,028	475.1	9,497	550.9	11,012
2010–11	50,303	484.0	9,621	–	–
2011–12	50,653	492.2	9,717	–	–
2012–13	51,093	503.1	9,846	–	–
2013–14	51,579	515.8	10,000	–	–
2014–15	52,135	531.4	10,194	–	–
2015–16	52,733	548.3	10,399	–	–
2016–17	53,300	564.9	10,598	–	–
High alternative projections					
2004–05	48,795	428.3	8,777	428.3	8,777
2005–06	49,028	434.8	8,869	449.3	9,163
2006–07	49,370	453.6	9,187	474.4	9,609
2007–08	49,610	468.5	9,443	496.8	10,014
2008–09	49,812	483.5	9,707	520.4	10,447
2009–10	50,028	499.1	9,977	544.8	10,890
2010–11	50,303	513.7	10,213	–	–
2011–12	50,653	527.6	10,415	–	–
2012–13	51,093	543.3	10,633	–	–
2013–14	51,579	560.0	10,858	–	–
2014–15	52,135	577.9	11,084	–	–
2015–16	52,733	597.5	11,331	–	–
2016–17	53,300	618.2	11,599	–	–

–Not available.

[1]Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

NOTE: Calculations were made using unrounded numbers. Some data have been revised from previously published figures. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; "National Public Education Financial Survey," 1991–92 through 2003–04; National Elementary and Secondary Enrollment Model, 1972–2004; and Elementary and Secondary School Current Expenditures Model, 1969–70 through 2003–04. (This table was prepared December 2006.)

Table 35. Actual and alternative projected numbers for current expenditures and current expenditures per pupil in average daily attendance (ADA) in public elementary and secondary schools: 1991–92 through 2016–17

School year	ADA (in thousands)	Current expenditures: Constant 2004–05 dollars[1] Total (in billions)	Current expenditures: Constant 2004–05 dollars[1] Per pupil in ADA	Current expenditures: Current dollars Total (in billions)	Current expenditures: Current dollars Per pupil in ADA
Actual					
1991–92	38,961	$293.0	$7,521	$211.2	$5,421
1992–93	39,570	297.2	7,511	220.9	5,584
1993–94	40,146	303.5	7,560	231.5	5,767
1994–95	40,721	310.8	7,633	243.9	5,989
1995–96	41,502	316.5	7,627	255.1	6,147
1996–97	42,262	325.9	7,712	270.2	6,393
1997–98	42,766	338.3	7,912	285.5	6,676
1998–99	43,187	352.8	8,170	302.9	7,013
1999–2000	43,807	366.8	8,372	323.9	7,394
2000–01	44,076	381.4	8,653	348.4	7,904
2001–02	44,605	396.4	8,886	368.4	8,259
2002–03	45,017	408.0	9,063	387.6	8,610
2003–04	45,326	415.5	9,168	403.4	8,899
Middle alternative projections					
2004–05	45,393	428.3	9,435	428.3	9,435
2005–06	45,609	434.6	9,529	449.5	9,856
2006–07	45,927	451.0	9,821	474.8	10,338
2007–08	46,151	461.9	10,009	495.7	10,740
2008–09	46,339	474.3	10,235	519.0	11,199
2009–10	46,540	487.3	10,469	543.3	11,673
2010–11	46,796	499.1	10,665	–	–
2011–12	47,121	510.3	10,829	–	–
2012–13	47,530	523.3	11,009	–	–
2013–14	47,983	538.0	11,213	–	–
2014–15	48,500	555.1	11,446	–	–
2015–16	49,056	573.7	11,694	–	–
2016–17	49,583	592.2	11,944	–	–
Low alternative projections					
2004–05	45,393	428.3	9,435	428.3	9,435
2005–06	45,609	433.9	9,513	449.1	9,846
2006–07	45,927	446.9	9,731	473.9	10,318
2007–08	46,151	454.7	9,853	496.2	10,752
2008–09	46,339	464.6	10,026	523.0	11,287
2009–10	46,540	475.1	10,209	550.9	11,837
2010–11	46,796	484.0	10,342	–	–
2011–12	47,121	492.2	10,445	–	–
2012–13	47,530	503.1	10,584	–	–
2013–14	47,983	515.8	10,749	–	–
2014–15	48,500	531.4	10,958	–	–
2015–16	49,056	548.3	11,178	–	–
2016–17	49,583	564.9	11,392	–	–
High alternative projections					
2004–05	45,393	428.3	9,435	428.3	9,435
2005–06	45,609	434.8	9,534	449.3	9,850
2006–07	45,927	453.6	9,876	474.4	10,329
2007–08	46,151	468.5	10,151	496.8	10,765
2008–09	46,339	483.5	10,435	520.4	11,230
2009–10	46,540	499.1	10,725	544.8	11,707
2010–11	46,796	513.7	10,978	–	–
2011–12	47,121	527.6	11,196	–	–
2012–13	47,530	543.3	11,430	–	–
2013–14	47,983	560.0	11,672	–	–
2014–15	48,500	577.9	11,915	–	–
2015–16	49,056	597.5	12,180	–	–
2016–17	49,583	618.2	12,468	–	–

–Not available.

[1]Based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.

NOTE: Calculations were made using unrounded numbers. Some data have been revised from previously published figures. Mean absolute percentage errors of selected education statistics can be found in table A-2, appendix A.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 1991–92 through 2003–04; National Elementary and Secondary Average Daily Attendance Model, 1992–93 through 2003–04; and Elementary and Secondary School Current Expenditures Model, 1969–70 through 2003–04. (This table was prepared December 2006.)

Technical Appendixes

Page intentionally left blank

Appendix A
Projection Methodology

Since its inception in 1964, the *Projection of Education Statistics* series has been providing projections of key education statistics to policy makers, educators, researchers, the press, and the general public. This edition, the *Projections of Education Statistics to 2016*, is the thirty-fifth in the series. It provides projections of enrollment, graduates, teachers, and expenditures.

The general procedure for *Projections of Education Statistics to 2016* was to express the variable to be projected as a percent of a "base" variable. These percents were then projected and applied to projections of the "base" variable. For example, the number of 18-year-old college students was expressed as a percent of the 18-year-old population for each year from 1972 through 2005. This enrollment rate was then projected through the year 2016 and applied to projections of the 18-year-old population from the U.S. Census Bureau.

Enrollment projections are based primarily on population projections. Projections of high school graduates and earned degrees conferred are based primarily on enrollment projections.

Exponential smoothing and multiple linear regression are the two major projection techniques used in this publication. Single exponential smoothing is used when the historical data have a basically horizontal pattern. On the other hand, double exponential smoothing is used when the time series is expected to change linearly with time. In general, exponential smoothing places more weight on recent observations than on earlier ones. The weights for observations decrease exponentially as one moves further into the past. As a result, the older data have less influence on these projections. The rate at which the weights of older observations decrease is determined by the smoothing constant selected.

$$P = \alpha X_t + \alpha(1-\alpha)X_{t-1} + \alpha(1-\alpha)^2 X_{t-2}$$
$$+ \alpha(1-\alpha)^3 X_{t-3} + \ldots\ldots$$

where:

P = projected value

α = smoothing constant ($0 < \alpha < 1$)

X_t = observation for time t

This equation illustrates that the projection is a weighted average based on exponentially decreasing weights. For a relatively high smoothing constant (0.7 or higher), weights for earlier observations decrease rapidly. For a relatively low smoothing constant (0.3 or lower), decreases are more moderate. Projections of enrollments and public high school graduates are based on a smoothing constant of $\alpha = 0.4$.

The farther apart the observations are spaced in time, the more likely it is that there are changes in the underlying social, political, and economic structure. Since the observations for most variables in this report are collected on an annual basis, major shifts in the underlying process are more likely in the time span of just a few observations than if the observations were available on a monthly or weekly basis. As a result, the underlying process for annual models tends to be less stable from one observation to the next. Another reason for using high smoothing constants for some time series is that most of the observations are fairly accurate, because most observations are population values rather than sample estimates. Therefore, large shifts tend to indicate actual changes in the process rather than noise in the data.

Multiple linear regression also is used in making projections of college enrollment and earned degrees conferred. This technique is used when it is believed that a strong relationship exists between the variable being projected (the dependent variable) and independent variables. However, this technique is used only when accurate data and reliable projections of the independent variables are available.

The equations in this appendix should be viewed as forecasting rather than structural equations, as the limitations of time and available data precluded the building of a large-scale, structural teacher model. The particular equations shown were selected on the basis of their statistical properties, such as coefficients of determination (R^2s), the t-statistics of the coefficients, the Durbin-Watson statistic, and residual plots.

The functional form primarily used is the multiplicative model. When used with two independent variables, this model takes the form:

$$Y = aX_1^{b_1} X_2^{b_2}$$

This equation can easily be transformed into the linear form by taking the natural log (ln) of both sides of the equation:

$$\ln Y = \ln(a) + b_1 \ln X_1 + b_2 \ln X_2$$

The multiplicative model has a number of advantages. Research has found that it is a reasonable way to represent human behavior. Constant elasticities are assumed, which means that a 1 percent change in X will lead to a given percent change in Y. This percent change is equal to b_1. And the multiplicative model lends itself easily to "a priori" analysis because the researcher does not have to worry about units of measurement when specifying relationships. In fact, the multiplicative model is considered the standard in economic analyses. For additional information, see *Forecasting: Methods and Applications* by Spiro Makridakis, Steven C. Wheelwright, and Rob J. Hyndman (John Wiley and Sons, 1998, p. 607).

Assumptions

All projections are based on underlying assumptions, and these assumptions determine projection results to a large extent. It is important that users of projections understand the assumptions to determine the acceptability of projected time series for their purposes. Descriptions of the primary assumptions upon which the projections of time series are based are presented in table A1.

For some projections, low, middle, and high alternatives are shown. These alternatives reveal the level of uncertainty involved in making projections, and they also point out the sensitivity of projections to the assumptions on which they are based.

The key economic determinants of higher education enrollment are household income, which represents ability to pay, and an age-specific unemployment rate, which acts as a proxy for opportunity costs faced by students. Age-specific unemployment rates are likely to increase during a weak or pessimistic economy, with the result that the estimated opportunity costs will be lower. This will have a positive impact on higher education enrollment, as students face less attractive alternatives. This will be apparent in the short term, resulting in a potential reversal in the expected pattern across the alternative economic scenarios. As a result, the high alternative projections can be lower than the low alternative projections in the short term. However, in the long term, the effect of the per capita income variable dominates the effects of the unemployment rate. This results in a pattern where the high alternative projections are greater than the low alternative projections.

Many of the projections in this publication are demographically based on U.S. Census Bureau middle series projections of the population by age. The population projections developed by the U.S. Census Bureau are based on the 2000 census and the middle series assumptions for the fertility rate, internal migration, net immigration, and mortality rate.

The future fertility rate assumption along with corresponding projections of females, determine projections of the number of births, a key assumption in making population projections. This assumption plays a major role in determining population projections for the age groups enrolled in nursery school, kindergarten, and elementary grades. The effects of the fertility rate assumption are more pronounced toward the end of the projection period, while the immigration assumptions affect all years.

For enrollments in secondary grades and college, the fertility assumption is of no consequence, since all the population cohorts for these enrollment ranges have already been born. For projections of enrollments in elementary schools, only middle series population projections were considered. Projections of high school graduates are based on projections of the percent of grade 12 enrollment that are high school graduates. Projections of associate's, bachelor's, master's, doctor's, and first-professional degrees are based on projections of college-age populations and college enrollment, by sex, attendance status, level enrolled by student, and type of institution. Projections of college enrollment are also based on disposable income per capita and unemployment rates. The projections of elementary and secondary teachers are based on education revenue receipts from state sources and enrollments. The projections of expenditures of public elementary and secondary schools are based on enrollments and projections of disposable income per capita and various revenue measures of state and local governments. Projections of disposable income per capita and unemployment rates were obtained from the company Global Insight, Inc. Many additional assumptions were made in projecting these variables.

Limitations of Projections

Projections of time series usually differ from the final reported data due to errors from many sources. This is because of the inherent nature of the statistical universe from which the basic data are obtained and the properties of projection methodologies, which depend on the validity of many assumptions. Therefore, alternative projections are shown for most statistical series to denote the uncertainty involved in making projections. These alternatives are not statistical confidence limits, but instead represent judgments made by the authors as to reasonable upper and lower bounds. The mean absolute percentage error is one way to express the forecast accuracy of past projections. This measure expresses the average value of the absolute value of errors over past projections in percentage terms. For example, the mean absolute percentage errors of public school enrollment in grades K–12 for lead times of 1, 2, 5, and 10 years were 0.3, 0.6, 1.2, and 2.4 percent, respectively. For more information on mean absolute percentage errors, see table A-2.

Table A-1. Summary of forecast assumptions to 2016

Variable	Middle alternative	Low alternative	High alternative
Demographic assumptions			
Population	Projections are consistent with the Census Bureau middle series Projections[1].	Same as middle alternative	Same as middle alternative
18- to 24-year-old population	Census Bureau middle series projection: average annual growth rate of 0.1%	Same as middle alternative	Same as middle alternative
25- to 29-year-old population	Census Bureau middle series projection: average annual growth rate of 1.0%	Same as middle alternative	Same as middle alternative
30- to 34-year-old population	Census Bureau middle series projection: average annual growth rate of 0.8%	Same as middle alternative	Same as middle alternative
35- to 44-year-old population	Census Bureau middle series projection: average annual decline of 0.6%	Same as middle alternative	Same as middle alternative
Economic assumptions			
Disposable income per capita in constant dollars	Annual percent changes range between 0.9% and 3.3% with an annual growth rate of 2.1%	Annual percent changes range between 0.7% and 2.4% with an annual growth rate of 1.7%	Annual percent changes range between 0.9% and 3.9% with an annual growth rate of 2.5%
Education revenue receipts from state sources per capita in constant dollars	Annual percent changes range between 1.6% and 4.5% with an annual growth rate of 2.7%	Annual percent changes range between 1.2% and 3.4% with an annual growth rate of 2.2%	Annual percent changes range between 1.7% and 5.3% with an annual growth rate of 3.2%
Inflation rate	Inflation rate ranges between 1.8% and 3.4%	Inflation rate ranges between 1.2% and 3.3%	Inflation rate ranges between 2.4% and 3.9%
Unemployment rate (men)			
Ages 18 and 19	Remains between 15.2% and 16.4%	Remains between 15.1% and 16.3%	Remains between 15.4% and 16.5%
Ages 20 to 24	Remains between 9.0% and 9.7%	Remains between 8.9% and 9.7%	Remains between 9.1% and 9.8%
Age 25 and over	Remains between 3.7% and 4.0%	Remains between 3.6% and 4.0%	Remains between 3.7% and 4.0%
Unemployment rate (women)			
Ages 18 and 19	Remains between 12.6% and 13.2%	Remains between 12.5% and 13.1%	Remains between 12.7% and 13.3%
Ages 20 to 24	Remains between 7.3% and 7.7%	Remains between 7.2% and 7.6%	Remains between 7.4% and 7.8%
Age 25 and over	Remains between 4.0% and 4.2%	Remains between 3.9% and 4.2%	Remains between 4.0% and 4.2%

[1]As the Census Bureau projections was not updated to reflect the 2005 Census Bureau population estimates, the Census Bureau age-specific population projections for each year used adjusted by multiplying the ratio of the total Census Bureau estimate for 2005 to the total Census Bureau projection for 2005.

SOURCE: U.S. Department of Commerce, Census Bureau, Population Estimates, retrieved October 10 and 11, 2006, from http://www.census.gov/popest/national/asrh/2005_nat_af.html; and Population Projections, retrieved October 10 and 11, 2006, from http://www.census.gov/ipc/www/usinterimproj/; and Global Insight, Inc., "U.S. Quarterly Model." (This table was prepared January 2007.)

Table A-2. Mean absolute percentage errors (MAPEs) by lead time for selected statistics in all public elementary and secondary schools and degree-granting institutions: 2006

	Lead time (years)									
Statistic	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Public elementary and secondary schools										
Prekindergarten–12 enrollment	0.3	0.6	0.8	1.1	1.2	1.3	1.5	1.7	2.1	2.4
Prekindergarten–8 enrollment	0.4	0.6	0.9	1.1	1.3	1.5	1.8	2.2	2.8	3.3
9–12 enrollment	0.4	0.7	1.0	1.2	1.3	1.5	1.8	2.1	2.3	2.3
High school graduates	0.8	0.9	1.7	1.9	1.6	1.8	2.4	3.5	3.9	3.9
Elementary and secondary teachers[1]	1.0	1.6	2.0	2.2	2.7	3.3	4.2	4.5	5.3	5.5
Total current expenditures[2]	1.4	2.3	2.4	2.4	2.9	3.7	4.7	4.7	3.8	3.6
Current expenditures per pupil in fall enrollment[2]	1.4	2.2	2.1	2.3	3.3	4.3	5.1	5.3	5.3	5.5
Degree-granting institutions										
Total enrollment	1.7	2.2	2.8	3.5	4.6	5.3	7.0	9.4	10.4	10.6
Men	1.6	2.8	3.1	4.2	5.4	7.1	8.5	9.3	9.8	9.6
Women	3.1	3.3	3.3	4.9	5.6	6.1	8.3	9.4	10.8	11.4
4-year institutions	1.1	2.0	2.8	3.9	5.4	6.2	8.0	9.9	11.3	11.9
2-year institutions	2.4	3.9	4.2	4.3	4.9	6.6	8.4	8.5	8.8	8.5
Associate's degrees	2.3	3.0	2.9	4.8	6.0	6.7	8.9	11.1	11.3	14.8
Bachelor's degrees	0.9	2.0	2.8	4.0	6.0	7.5	8.8	10.0	9.4	11.2
Master's degrees	1.6	3.9	7.7	10.1	12.3	14.2	17.3	19.5	15.7	19.8
Doctor's degrees	2.6	4.3	3.0	5.1	4.1	2.3	5.7	8.4	1.7	4.5
First-professional degrees	1.3	1.4	1.8	3.0	5.6	7.0	8.3	11.9	10.5	12.4

[1]Data for teachers expressed in full-time equivalents.
[2]In constant dollars based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.
NOTE: Mean absolute percentage error is the average value over past projections of the absolute values of errors expressed in percentage terms. MAPEs for K–12 enrollments were calculated using the last 23 editions of *Projections of Education Statistics*. MAPEs for high school graduates were calculated from the past 15 editions of *Projections of Education Statistics*. MAPEs for teachers were calculated from the past 16 editions containing teachers projections and MAPEs for current expenditures were calculated using projections from the last 16 editions containing current expenditure projections. MAPEs for degree-granting institution enrollments and earned degrees were calculated using the last 9 and 10 editions, respectively. Calculations were made using unrounded numbers. Some data have been revised from previously published numbers.
SOURCE: U.S. Department of Education, National Center for Education Statistics, *Projections of Education Statistics*, various issues. (This table was prepared November 2006.)

Enrollment

National

Enrollment projections are based on projected enrollment rates, by age and sex, where the enrollment rate for a given population for a certain level of education is the number of people in that population enrolled at that level of education divided by the total number of people in that population. These enrollment rates were projected by taking into account the most recent trends, as well as the effects of economic conditions and demographic changes. The projected enrollment rates were then used in the Education Forecasting Model (EDMOD), which consists of age-specific rates by sex and by enrollment levels.

Enrollment data for degree-granting institutions presented in this report are derived from both NCES aggregate enrollment counts and the U.S. Census Bureau age-specific enrollment counts. Specifically, the most detailed level of enrollment data (by age, sex, enrollment status, control of institution, type of institution, and level enrolled) were iteratively changed using proportions that are based on known more aggregate totals to ensure that the sum across these most detailed level of enrollment data equal the more aggregate NCES totals that do not include age.

The first stage of EDMOD is an age-specific enrollment model in which these enrollment rates are projected and applied to age-specific population projections from the U.S. Census Bureau. This stage includes all ages for students enrolled in grades K–12 and for students enrolled in colleges and universities. This stage, which is used separately for each sex, consists of the following categories: (1) nursery and kindergarten; (2) elementary grades 1–8; (3) secondary grades 9–12; (4) full-time college enrollment; and (5) part-time college enrollment.

At the postsecondary level, projections of full-time and part-time college enrollments were considered only for ages 16 and over. College enrollment is negligible for earlier ages. Full-time and part-time enrollments are modeled separately, with each model run by sex. Within an enrollment category, where applicable, college enrollment rates were projected by individual ages 16 through 24 and for the age groups 25 to 29, 30 to 34, and 35 years and over. Three alternative projections were made using various economic assumptions. Table A-3 shows enrollment rates for 2005 and middle alternative projected enrollment rates for 2011 and 2016. Table A-4 shows the estimated equations used to project the enrollments for men by attendance status. Table A-5 shows the estimated equations used to project enrollment rates for women by attendance status.

Enrollment in Public Elementary and Secondary Schools, by Grade Group and Organizational Level

The second stage of EDMOD projects enrollment in public elementary and secondary schools by grade group and by organizational level. Public enrollments by age were based on enrollment rate projections for nursery and kindergarten, grade 1, elementary ungraded and special, and secondary ungraded and special. Grade progression rate projections were used for grades 2 through 12. Table A-6 shows the public school enrollment rates, and table A-7 shows the public school grade progression rates for 2004 and projections for 2005 through 2016. The projected rates in tables A-6 and A-7 were used to compute the projections of enrollments in elementary and secondary schools, by grade, shown in table 3.

College Enrollment, by Sex, Attendance Status, and Level Enrolled, and by Type and Control of Institution

The third stage of EDMOD projects enrollments in degree-granting institutions, by age group, sex, attendance status, and level enrolled by student, and by type and control of institution. These projections for 2006 through 2016 are shown in tables A-8 and A-9, along with actual values for 2005. For all projections, it was assumed that there was no enrollment in 2-year institutions at the postbaccalaureate level (graduate and first-professional).

The projected rates in tables A-8 and A-9 were then adjusted to agree with the projected age-specific enrollment rates in the first stage of EDMOD. The adjusted rates were then applied to the projected enrollments by age group, sex, and attendance status from the first stage of EDMOD to obtain projections by age group, sex, attendance status, level enrolled, and type of institution.

For each enrollment category—sex, attendance status, level enrolled, and type of institution—public enrollment was projected as a percent of total enrollment. Projections for 2006 through 2016 are shown in table A-10, along with actual percents for 2005. The projected rates were then applied to the projected enrollments in each enrollment category to obtain projections by control of institution.

For each category by sex, enrollment level, and type and control of institution, graduate enrollment was projected as a percent of postbaccalaureate enrollment. Actual rates for 2005 and projections for 2006 through 2016 are shown in table A-11. The projected rates in table A-11 were then applied to projections of postbaccalaureate enrollment

to obtain graduate and first-professional enrollment projections by sex, attendance status, and type and control of institution.

Full-Time-Equivalent Enrollment, by Type and Control of Institution and by Level Enrolled

The fourth stage of EDMOD projects full-time-equivalent enrollment, by type and control of institution and by level enrolled. The full-time-equivalent enrollment measures enrollment as if students were enrolled full time for one academic year, and equals the sum of full-time enrollment and full-time-equivalent of part-time enrollment. The full-time-equivalent of part-time enrollment was estimated as a percentage of part-time enrollment. In EDMOD, the full-time-equivalent of part-time enrollment was calculated using different percentages for enrollment category by level enrolled and by type and control of institution. Actual percents for 2005 and projections for 2006 and 2016 are shown in table A-12.

These projected percents were applied to part-time projections of enrollment by level enrolled and by type and control of institution from the third stage of EDMOD. These equivalent of part-time projections were added to projections of full-time enrollment (from the previous stage) to obtain projections of full-time-equivalent enrollment.

College Enrollment, by Sex, Attendance Status, Age Group, and Race/Ethnicity

The fifth stage of EDMOD projects enrollments in degree-granting institutions by age, sex, attendance status, and race/ethnicity. The race/ethnicity groups projected include the following: White, Non-Hispanic; Black, Non-Hispanic; Hispanic; Asian or Hawaiian-Pacific Islander, Non-Hispanic; American Indian/Alaska Native, Non-Hispanic; and Non-Resident Alien. Enrollment projections are based on projected enrollment rates by age, sex, attendance status, and race/ethnicity where the enrollment rate for a given population for a certain level of education is the number of people in that population enrolled at that level of education divided by the total number of people in that population. With the exception of American Indian/Alaska Native, Non-Hispanic and Non-Resident Alien, all race/ethnicity groups were projected by taking into account the most recent trends, as well as the effects of economic conditions and demographic changes. Due to the nature of the historical data, American Indian/Alaska Native, Non-Hispanic enrollments were projected using single exponential smoothing and Non-Resident Alien enrollments were projected using patterns in recent historical growth.

Enrollments by sex, race/ethnicity and age from the U.S. Census Bureau were adjusted to NCES totals by sex and race/ethnicity to compute rates for 1981 through 2005. As with the first stage of EDMOD, the fifth stage consists of age-specific enrollment models for each sex-race/ethnicity group in which enrollment rates are projected and applied to age-specific population projections by sex and race/ethnicity from the U.S. Census Bureau. The final set of projected rates by age, sex, attendance status, and race/ethnicity were controlled to the stage one enrollment rates by age, sex, and attendance status to ensure consistency across stages. Specifically, the most detailed level of enrollment data (by age, sex, enrollment status, and race/ethnicity) were iteratively changed using proportions that are based on known more aggregate totals to ensure that the sum across these most detailed level of enrollment data equal the more aggregate NCES totals that do not include age.

Stage five consists of 16 individual pooled time series models—one for each attendance status - sex - race/ethnicity combination—that are each pooled across age. As with the stage one postsecondary level projections, projections of full-time and part-time college enrollments by race/ethnicity were considered only for ages 16 and over. College enrollment is negligible for earlier ages. Within each model, college enrollment rates were projected by individual ages 16 through 24 and for the age groups 25 to 29, 30 to 34, and 35 years and over. Table A-14 shows the estimated equations used to project the enrollments for White, Non-Hispanic men by attendance status. Table A-15 shows the estimated equations used to project enrollment rates for White, Non-Hispanic women by attendance. Table A-16 shows the estimated equations used to project the enrollments for Black, Non-Hispanic men by attendance status. Table A-17 shows the estimated equations used to project enrollment rates for Black, Non-Hispanic women by attendance. Table A-18 shows the estimated equations used to project the enrollments for Hispanic men by attendance status. Table A-19 shows the estimated equations used to project enrollment rates for Hispanic women by attendance. Table A-20 shows the estimated equations used to project the enrollments for Asian or Hawaiian-Pacific Islander, Non-Hispanic men by attendance status. Table A-21 shows the estimated equations used to project enrollment rates for Asian or Hawaiian-Pacific Islander, Non-Hispanic women by attendance status.

Projection Accuracy

An analysis of projection errors from the past 23 editions of *Projections of Education Statistics* indicates that the mean absolute percentage errors (MAPEs) for lead times of 1, 2, 5, and 10 years out for projections of public school enrollment in grades K–12 were 0.3, 0.6, 1.2, and 2.4 percent, respectively. For the 1-year-out prediction,

this means that one would expect the projection to be within 0.3 percent of the actual value, on the average. For projections of public school enrollment in grades K–8, the MAPEs for lead times of 1, 2, 5, and 10 years out were 0.4, 0.6, 1.3, and 3.3 percent, respectively, while those for projections of public school enrollment in grades 9–12 were 0.4, 0.7, 1.3, and 2.3 percent for the same lead times.

For projections of total enrollment in degree-granting institutions, an analysis of projection errors based on the past 9 editions of *Projections of Education Statistics* indicates that the MAPEs for lead times of 1, 2, 5, and 10 years were 1.7, 2.2, 4.6, and 10.6 percent, respectively. For the 1-year-out prediction, this means that one would expect the projection to be within 1.7 percent of the actual value, on the average. For more information on MAPEs, see table A-2, page 86.

Basic Methodology

The notation and equations that follow describe the basic models used to project public elementary and secondary enrollment.

Public Elementary and Secondary Enrollment

Let:

i = Subscript denoting age

j = Subscript denoting grade

t = Subscript denoting time

K_t = Enrollment at the nursery and kindergarten level

G_{jt} = Enrollment in grade j

G_{1t} = Enrollment in grade 1

E_t = Enrollment in elementary special and ungraded programs

S_t = Enrollment in secondary special and ungraded programs

P_{it} = Population age i

RK_t = Enrollment rate for nursery and kindergarten

RG_{1t} = Enrollment rate for grade 1

RE_t = Enrollment rate for elementary special and ungraded programs

RS_t = Enrollment rate for secondary special and ungraded programs

EG_t = Total enrollment in elementary grades (K–8)

SG_t = Total enrollment in secondary grades (9–12)

R_{jt} = Progression rate for grade j: the proportion that enrollment in grade j in year t is of enrollment in grade j - 1 in year t-1.

Then:

$$EG_t = K_t + E_t + \sum_{j=1}^{8} G_{jt}$$

$$SG_t = S_t + \sum_{j=9}^{12} G_{jt}$$

where:

$$K_t = RK_t(P_{5t})$$

$$G_{jt} = R_{jt}\left(G_{j-1,t-1}\right)$$

$$E_t = RE_t\left(\sum_{i=5}^{13} P_{it}\right)$$

$$G_{1t} = RG_{it}(P_{6t})$$

$$S_t = RS_t\left(\sum_{i=14}^{17} P_{it}\right)$$

Enrollment in Degree-Granting Institutions

For degree-granting institutions, projections were computed separately by sex and attendance status of student. The notation and equations are:

Let:

i = Subscript denoting age except:

i = 25: ages 25–29

i = 26: ages 30–34

i = 27: ages 35 and over for enrollment (35–44 for population)

t = Subscript denoting year

j = Subscript denoting sex

k = Subscript denoting attendance status

E_{ijkt} = Enrollment of students age i by sex and attendance status

P_{ijt} = Population age i by sex

R_{ijkt} = Enrollment rate for students age i by sex and attendance status

T_{ijkt} = Total enrollment for particular subset of students: full-time men, full-time women, part-time men, part-time women

Then:

$$T_{ijkt} = \sum_{i=16}^{27} E_{ijkt}$$

where:

$$E_{ijkt} = R_{ijkt}\left(P_{ijt}\right)$$

Enrollment in Degree-Granting Institutions by Race/Ethnicity

Projections for degree-granting institutions by sex and attendance status of student were further disaggregated by race/ethnicity. The notation and equations are:

Let:

i = Subscript denoting age except:

i = 25: ages 25–29

i = 26: ages 30–34

i = 27: ages 35 and over for enrollment (35–44 for population)

t = Subscript denoting year

j = Subscript denoting sex

k = Subscript denoting attendance status

l = Subscript denoting race/ethnicity

E_{ijklt} = Enrollment of students age i by sex, attendance status, and race/ethnicity

P_{ijlt} = Population age i by sex and race/ethnicity

R_{ijklt} = Enrollment rate for students age i by sex, attendance status, and race/ethnicity

T_{ijklt} = Total enrollment for a particular subset of students by race/ethnicity: full-time men, full-time women, part-time men, part-time women

Then:

$$T_{ijklt} = \sum_{i=16}^{27} E_{ijklt}$$

where:

$$E_{ijklt} = R_{ijklt}\left(P_{ijlt}\right)$$

Methodological Tables

Table A-22 gives the basic assumptions underlying enrollment projections.

Private School Enrollment

This edition is the sixth report that projected trends in elementary and secondary enrollment by grade level in private schools using the grade progression rate method.

Private school enrollment data from the NCES Private School Universe Survey for 1989–90, 1991–92, 1993–94, 1995–96, 1997–98, 1999–2000, 2001–02, and 2003–04 were used to develop these projections. In addition, population estimates for 1989 to 2005 and population projections for 2006 to 2016 from the U.S. Census Bureau were used to develop the projections.

Prekindergarten, kindergarten, and first-grade enrollments are based on projected enrollment rates of 5- and 6-year-olds. These projected enrollment rates are applied to population projections of 5- and 6-year-olds developed by the U.S. Census Bureau.

Enrollments in grades 2 through 12 are based on projected grade progression rates. The grade progression rate method starts with 6-year-olds entering first grade and then follows their progress through private elementary and secondary schools. The method requires calculating the ratio of the number of children in one year who "survive" the year and enroll in the next grade the following year. These projected rates are then applied to the current enrollment by grade to yield grade-by-grade projections for future years.

Enrollment rates of 5- and 6-year-olds and grade progression rates are projected using single exponential smoothing. Elementary ungraded and secondary ungraded are projected to remain constant at their 2004 levels. To obtain projections of total enrollment, projections of enrollments for the individual grades (prekindergarten through 12) and ungraded were summed.

The grade progression rate method assumes that past trends in factors affecting private school enrollments will continue over the projection period. This assumption implies that all factors influencing enrollments will display future patterns consistent with past patterns. This method implicitly includes the net effect of such factors as migration, dropouts, deaths, nonpromotion, and transfers to and from public schools.

Mean absolute percentage errors (MAPEs) of the projection accuracy of private school enrollment were not developed because this projection method has been developed only recently and there is not yet enough historical information to evaluate model performance. As additional data become available, MAPEs can then be calculated.

State Level

For the 50 states and the District of Columbia, this edition contains projected trends in elementary and secondary enrollment by grade level in public schools from 2005 to the year 2016.

Public school enrollment data from the NCES Common Core of Data survey for 1980 to 2004 were used to develop these projections. This survey does not collect enrollment data for private schools.

Population estimates for 1980 to 2005 and population projections for 2006 to 2016 from the U.S. Census Bureau were used to develop the enrollment projections. The set of population projections used in this year's *Projections of Education Statistics to 2016* are the Census Bureau's set of interim state-level population projections (April 2005); which were also used in last year's report. This set of state-level projections line up with the Census Bureau's interim national population projections, which were released earlier in May 2004. During the next year, the Census Bureau plans to develop a revised set of population projections that will be consistent with a revised set of national population projections and that will include modifications to produce projections by race and Hispanic origin, as well as by age and sex.

Table A-13 describes the number of years, projection methods, and smoothing constants used to project enrollments in public schools. Also included in table A-13 is the procedure for choosing the different smoothing constants for the time-series models. All jurisdictions were projected using the same single exponential smoothing parameter.

As with the national enrollment projections, projections of enrollment in public elementary and secondary schools by state primarily used the grade progression rate method. As with the national projections, prekindergarten, kindergarten, and first-grade enrollments are based on projected enrollment rates of 5- and 6-year-olds. These projected enrollment rates are applied to population projections of 5- and 6-year-olds developed by the U.S. Census Bureau.

Enrollments in grades 2 through 12 are based on projected grade progression rates in each state. These projected rates are then applied to the current enrollment by grade to yield grade-by-grade projections for future years. Enrollment rates of 5- and 6-year-olds and grade progression rates are projected using single exponential smoothing. Elementary

ungraded and secondary ungraded are projected to remain constant at their 2004 levels. To obtain projections of total enrollment, projections of enrollments for the individual grades (prekindergarten through 12) and ungraded were summed.

The grade progression rate method assumes that past trends in factors affecting public school enrollments will continue over the projection period. This assumption implies that all factors influencing enrollments will display future patterns consistent with past patterns. Therefore, this method has limitations when applied to states with unusual changes in migration rates. This method implicitly includes the net effect of such factors as migration, dropouts, deaths, nonpromotion, and transfers to and from private schools.

Adjustment to National Projections

The projections of state enrollments were adjusted to sum to the national projections of public school K–12, K–8, and 9–12 enrollments shown in table 1. This was done through the use of ratio adjustments in which all the states' enrollment projections for each grade level were multiplied by the ratio of the national enrollment projection for that grade level to the sum of the state enrollment projections for that grade level. For details on the methods used to develop the national projections for this statistic, see the section on national enrollment projections in this appendix.

Table A-3. Actual and middle alternative projected numbers for college enrollment rates, by sex, attendance status, and age: Fall 2005, 2011, and 2016

Sex, attendance status, and age	Actual 2005	Projected	
		2011	2016
Men			
Full-time			
16 years old	0.2	0.2	0.2
17 years old	1.5	1.6	1.7
18 years old	28.3	29.5	31.2
19 years old	35.5	36.8	38.6
20 years old	35.1	36.5	38.2
21 years old	32.6	33.9	35.7
22 years old	20.6	21.6	23.0
23 years old	12.5	13.2	14.1
24 years old	10.0	10.6	11.4
25 to 29 years old	4.3	4.5	4.9
30 to 34 years old	2.3	2.5	2.7
35 to 44 years old	1.5	1.6	1.7
Part-time			
16 years old	0.4	0.2	0.2
17 years old	1.5	1.6	1.6
18 years old	4.4	4.5	4.6
19 years old	6.6	6.7	6.8
20 years old	8.0	8.0	8.1
21 years old	6.7	6.8	6.9
22 years old	6.1	6.2	6.3
23 years old	6.6	6.8	7.0
24 years old	5.6	5.8	6.0
25 to 29 years old	5.2	5.4	5.6
30 to 34 years old	3.0	3.1	3.2
35 to 44 years old	3.7	3.8	4.0
Women			
Full-time			
16 years old	0.2	0.4	0.4
17 years old	3.8	2.7	3.4
18 years old	38.6	42.3	47.9
19 years old	44.8	48.6	54.1
20 years old	42.5	46.3	51.7
21 years old	35.5	39.1	44.5
22 years old	26.3	29.4	34.3
23 years old	17.5	19.9	23.7
24 years old	12.1	13.9	16.8
25 to 29 years old	7.1	8.2	10.1
30 to 34 years old	3.1	3.7	4.5
35 to 44 years old	2.3	2.6	3.3
Part-time			
16 years old	0.2	0.1	0.1
17 years old	1.1	1.2	1.3
18 years old	6.8	6.6	6.3
19 years old	10.0	9.7	9.1
20 years old	11.0	10.6	10.0
21 years old	10.4	10.3	9.9
22 years old	8.0	8.0	7.9
23 years old	11.1	11.2	11.3
24 years old	8.6	8.7	8.9
25 to 29 years old	7.2	7.4	7.7
30 to 34 years old	5.0	5.2	5.5
35 to 44 years old	6.7	6.9	7.3

SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared June 2007.)

Table A-4. Estimated equations and model statistics for full-time and part-time college enrollment rates of men

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-5.77	0.295	-19.57	0.99	2.22*
Age 18	-3.07	0.220	-13.95		
Age 19	-2.83	0.188	-15.05		
Age 20	-2.98	0.190	-15.72		
Age 21	-3.09	0.192	-16.13		
Age 22	-3.60	0.191	-18.83		
Age 23	-4.02	0.189	-21.30		
Age 24	-4.32	0.199	-21.72		
Age 25	-5.14	0.219	-23.44		
Age 25-29	-6.05	0.209	-29.02		
Age35-44	-6.67	0.201	-33.25		
LNRYPDRNMA	0.42	0.036	11.86		
LNRUM	0.11	0.036	3.16		
Rho17	0.74	0.099	7.48		
Rho18	0.81	0.070	11.58		
Rho19	0.30	0.135	2.25		
Rho20	0.43	0.131	3.25		
Rho21	0.49	0.141	3.49		
Rho22	0.42	0.128	3.28		
Rho23	0.09	0.137	0.64		
Rho24	0.66	0.094	7.10		
Rho25-29	0.82	0.070	11.71		
Rho30-34	0.66	0.106	6.20		
Rho35-44	0.42	0.105	4.04		
Part-time					
Age 17	-7.42	0.883	-8.40	0.37	1.78*
Age 18	-3.92	0.617	-6.36		
Age 19	-3.53	0.680	-5.20		
Age 20	-3.53	0.620	-5.69		
Age 21	-3.63	0.620	-5.85		
Age 22	-3.52	0.621	-5.67		
Age 23	-3.79	0.617	-6.13		
Age 24	-4.00	0.633	-6.32		
Age 25	-4.04	0.638	-6.33		
Age 25-29	-4.48	0.650	-6.89		
Age 35-44	-4.51	0.622	-7.25		
LNRYPDRNMA	0.23	0.114	2.00		
LNRUM	0.03	0.073	0.43		
Rho17	-0.19	0.155	-1.24		
Rho18	0.27	0.174	1.52		
Rho19	0.86	0.072	11.97		
Rho20	0.51	0.136	3.73		
Rho21	0.44	0.155	2.84		
Rho22	0.45	0.151	2.99		
Rho23	0.33	0.174	1.89		
Rho24	0.69	0.112	6.18		
Rho25-29	0.77	0.084	9.21		
Rho30-34	0.85	0.072	11.84		
Rho35-44	0.59	0.152	3.86		

* p<.05.

R^2 = Coefficient of determination.

D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.

Where:

AGE(age) = Age-specific intercept term.

Rho(age) = Autocorrelation coefficient for each age.

LNRUM = Log unemployment rate for men.

LNRYPDRNMA = Log of three-period weighted average of per capita disposable in 2000 dollars, using the present period and the previous two periods.

NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method with a first-order autocorrelation correction. The time period used to estimate the equations is from 1975 to 2005. The number of observations is 363. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table A-5. Estimated equations and model statistics for full-time and part-time college enrollment rates of women

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-10.18	1.916	-5.31	0.99	2.39*
Age 18	-6.65	0.262	-25.38		
Age 19	-6.46	0.200	-32.39		
Age 20	-6.64	0.194	-34.23		
Age 21	-6.86	0.194	-35.34		
Age 22	-7.57	0.221	-34.21		
Age 23	-8.00	0.210	-38.08		
Age 24	-8.30	0.197	-42.11		
Age 25	-8.99	0.202	-44.42		
Age 25-29	-9.73	0.196	-49.55		
Age 35-44	-9.96	0.194	-51.28		
LNRYPDRNMA	1.16	0.045	25.91		
LNRUF	0.24	0.060	3.97		
Rho17	0.96	0.055	17.59		
Rho18	0.86	0.071	12.02		
Rho19	0.33	0.139	2.35		
Rho20	0.24	0.147	1.63		
Rho21	0.28	0.135	2.10		
Rho22	0.76	0.074	10.31		
Rho23	0.71	0.088	8.11		
Rho24	0.44	0.104	4.21		
Rho25-29	0.69	0.091	7.56		
Rho30-34	0.40	0.136	2.98		
Rho35-44	0.06	0.118	0.47		
Part-time					
Age 17	-6.79	0.566	-12.00	0.79	2.32*
Age 18	-4.02	0.345	-11.66		
Age 19	-3.61	0.492	-7.34		
Age 20	-3.72	0.403	-9.25		
Age 21	-3.77	0.459	-8.20		
Age 22	-3.84	0.343	-11.19		
Age 23	-4.08	0.358	-11.39		
Age 24	-4.19	0.400	-10.48		
Age 25	-4.40	0.344	-12.78		
Age 25-29	-4.63	0.346	-13.39		
Age 35-44	-4.41	0.344	-12.82		
LNRYPDRNMA	0.31	0.061	5.07		
Rho17	0.48	0.124	3.91		
Rho18	0.44	0.169	2.60		
Rho19	0.87	0.074	11.65		
Rho20	0.77	0.118	6.51		
Rho21	0.87	0.072	12.09		
Rho22	0.41	0.125	3.28		
Rho23	0.63	0.124	5.11		
Rho24	0.84	0.089	9.43		
Rho25-29	0.62	0.110	5.62		
Rho30-34	0.74	0.077	9.66		
Rho35-44	0.62	0.087	7.14		

* p<.05.

R^2 = Coefficient of determination.

D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.

Where:

AGE(age) = Age-specific intercept term.

Rho(age) = Autocorrelation coefficient for each age.

LNRUF = Log unemployment rate for women.

LNRYPDRNMA = Log of three-period weighted average of per capita disposable in 2000 dollars, using the present period and the previous two periods.

NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method with a first-order autocorrelation correction. The time period used to estimate the equations is from 1975 to 2005. The number of observations is 363. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared November 2006.)

Table A-6. Actual and projected numbers for national enrollment rates in public schools, by grade level: Fall 2004, and 2005 through 2016

Grade level	Actual 2004	Projected 2005 through 2016
Prekindergarten	25.7	25.7
Kindergarten	92.0	92.0
Grade 1	94.8	94.8
Elementary ungraded	0.6	0.6
Secondary ungraded	0.6	0.6

NOTE: The base age for each grade level is as follows: kindergarten, 5 years old; grade 1, 6 years old; elementary ungraded, 5- to 13-years-olds; and secondary ungraded 14- to 17-years-olds. Projected values for 2005 through 2016 were held constant at the actual values for 2004.
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Elementary and Secondary Enrollment Model, 1972–2004. (This table was prepared May 2007.)

Table A-7. Actual and projected numbers for national public school grade progression rates: Fall 2004, and 2005 through 2016

Grade	Actual 2004	Projected 2005 through 2016
1 to 2	98.5	98.6
2 to 3	101.0	100.9
3 to 4	100.0	100.1
4 to 5	100.4	100.4
5 to 6	101.4	101.5
6 to 7	101.2	101.4
7 to 8	99.6	99.6
8 to 9	112.4	112.9
9 to 10	89.5	89.4
10 to 11	91.7	91.3
11 to 12	94.4	93.9

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Elementary and Secondary Enrollment Model, 1972–2004. (This table was prepared May 2007.)

Table A-8. Actual and projected numbers for the percentage distribution of full-time students at degree-granting postsecondary institutions, by sex and age group: Fall 2005, and 2006 through 2016

	Men		Women	
Institution type and age	Actual 2005	Projected 2006 through 2016	Actual 2005	Projected 2006 through 2016
Undergraduate, 4-year institutions				
16 and 17 years old	68.7	63.8	71.4	66.9
18 and 19 years old	67.2	66.0	66.9	67.3
20 and 21 years old	74.1	75.7	80.4	79.4
22 to 24 years old	68.4	65.3	62.0	61.4
25 to 29 years old	38.1	40.1	41.4	39.8
30 to 34 years old	31.2	36.1	33.2	32.9
35 years and over	42.3	39.3	39.8	38.6
Undergraduate, 2-year institutions				
16 and 17 years old	31.3	34.7	28.6	31.0
18 and 19 years old	32.8	33.6	33.1	32.3
20 and 21 years old	22.4	21.5	17.6	18.6
22 to 24 years old	16.6	17.4	19.0	17.7
25 to 29 years old	18.7	19.4	22.3	25.2
30 to 34 years old	18.0	19.3	38.2	37.3
35 years and over	27.7	28.9	29.1	33.0
Postbaccalaureate, 4-year institutions				
16 and 17 years old	#	1.5	#	2.1
18 and 19 years old	#	0.4	#	0.3
20 and 21 years old	3.6	2.8	2.0	2.0
22 to 24 years old	15.0	17.3	19.0	20.9
25 to 29 years old	43.2	40.5	36.3	35.0
30 to 34 years old	50.9	44.5	28.6	29.8
35 years and over	30.0	31.8	31.1	28.4

Rounds to zero.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared May 2007.)

Table A-9. Actual and projected numbers for the percentage distribution of part-time students at degree-granting postsecondary institutions, by sex and age group: Fall 2005, and 2006 through 2016

	Men		Women	
Institution type and age	**Actual 2005**	**Projected 2006 through 2016**	**Actual 2005**	**Projected 2006 through 2016**
Undergraduate, 4-year institutions				
16 and 17 years old	7.6	8.1	8.7	13.5
18 and 19 years old	22.5	19.3	18.9	19.9
20 and 21 years old	30.2	27.3	31.2	29.6
22 to 24 years old	42.0	34.1	31.7	29.4
25 to 29 years old	24.6	27.9	21.8	23.9
30 to 34 years old	23.6	25.2	22.8	24.0
35 years and over	19.1	20.4	23.6	22.0
Undergraduate, 2-year institutions				
16 and 17 years old	92.4	91.9	91.3	86.4
18 and 19 years old	77.5	80.6	80.5	79.7
20 and 21 years old	69.8	72.3	68.8	70.1
22 to 24 years old	48.9	57.2	56.8	59.4
25 to 29 years old	57.2	52.6	55.6	52.3
30 to 34 years old	41.4	43.7	55.7	54.0
35 years and over	55.9	53.5	49.6	52.5
Postbaccalaureate, 4-year institutions				
16 and 17 years old	#	0.1	#	0.1
18 and 19 years old	#	0.1	0.7	0.4
20 and 21 years old	#	0.4	#	0.3
22 to 24 years old	9.1	8.7	11.5	11.2
25 to 29 years old	18.2	19.5	22.6	23.7
30 to 34 years old	35.1	31.1	21.5	21.9
35 years and over	25.0	26.1	26.9	25.5

Rounds to zero.
NOTE: Detail may not sum to totals because of rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions Model, 1980–2004. (This table was prepared May 2007.)

Table A-10. Actual and projected numbers for enrollment in public degree-granting postsecondary institutions as a percent of total enrollment, by sex, attendance status, level enrolled, and type of institution: Fall 2005, and 2006 through 2016

	Men		Women	
Enrollment category	Actual 2005	Projected 2006 through 2016	Actual 2005	Projected 2006 through 2016
Full-time, undergraduate, 4-year institutions	65.5	66.1	63.0	64.2
Part-time, undergraduate, 4-year institutions	70.4	70.4	67.6	68.0
Full-time, undergraduate, 2-year institutions	91.4	91.2	89.2	89.9
Part-time, undergraduate, 2-year institutions	99.2	99.2	98.6	98.7
Full-time, postbaccalaureate, 4-year institutions	49.6	50.7	48.4	50.1
Part-time, postbaccalaureate, 4-year institutions	55.0	56.0	57.5	59.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared May 2007.)

Table A-11. Actual and projected numbers for graduate enrollment in degree-granting postsecondary institutions as a percent of total postbaccalaureate enrollment, by sex, attendance status, and control of institution: Fall 2005, and 2006 through 2016

	Men		Women	
Enrollment category	Actual 2005	Projected 2006 through 2016	Actual 2005	Projected 2006 through 2016
Full-time, 4-year, public	79.1	79.1	80.9	80.9
Part-time, 4-year, public	98.7	98.7	99.2	99.2
Full-time, 4-year, private	70.6	70.6	78.7	78.7
Part-time, 4-year, private	92.6	92.6	96.1	96.1

NOTE: Projected values for 2006 through 2016 were held constant at the actual values for 2005. Postbaccualaureate enrollment includes both graduate and first-professional enrollment.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared May 2007.)

Table A-12. Actual and projected numbers for full-time-equivalent enrollment of part-time students in degree-granting postsecondary institutions as a percent of part-time enrollment, by type and control of institution, and level enrolled: Fall 2005, and 2006 through 2016

Enrollment category	Actual 2005	Projected 2006 through 2016
Public, 4-year, undergraduate	40.4	40.4
Public, 2-year, undergraduate	33.6	33.6
Private, 4-year, undergraduate	39.3	39.3
Private, 2-year, undergraduate	39.7	39.7
Public, 4-year, graduate	36.2	36.2
Private, 4-year, graduate	38.2	38.2
Public, 4-year, first-professional	60.0	60.0
Private, 4-year, first-professional	54.6	54.6

NOTE: Projected values for 2006 through 2016 were held constant at the actual values for 2005.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions Model, 1980–2005. (This table was prepared May 2007.)

Table A-13. Number of years, projection methods, and smoothing constants used to project state-level public school enrollments and high school graduates

Projected state variable	Number of years (1972–2004)	Projection method	Smoothing constant	Basis for smoothing constant
Grade progression rates	32	Single exponential smoothing	0.4	Empirical research
Graduates divided by grade 12 enrollment	32	Single exponential smoothing	0.4	Empirical research

SOURCE: U.S. Department of Education, National Center for Education Statistics, State Public Elementary and Secondary Enrollment Model, 1980–2004; and State Public High School Graduates Model, 1980–81 through 2003–04. (This table was prepared November 2006.)

Table A-14. Estimated equations and model statistics for full-time and part-time college enrollment rates of White men

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-7.78	0.153	-50.70	0.99	1.66*
Age 18	-4.83	0.119	-40.61		
Age 19	-4.62	0.115	-40.20		
Age 20	-4.83	0.115	-41.88		
Age 21	-4.96	0.116	-42.85		
Age 22	-5.48	0.118	-46.33		
Age 23	-5.98	0.116	-51.50		
Age 24	-6.34	0.118	-53.87		
Age 25-29	-7.27	0.116	-62.83		
Age 30-34	-8.33	0.119	-70.00		
Age 35 and up	-8.95	0.124	-72.44		
LNYPDNWNH	0.22	0.006	36.79		
Part-time					
Age 17	-6.89	0.927	-7.43	0.99	1.75*
Age 18	-2.41	0.058	-41.24		
Age 19	-2.10	0.083	-25.38		
Age 20	-2.04	0.051	-40.13		
Age 21	-2.17	0.059	-36.88		
Age 22	-2.08	0.059	-35.36		
Age 23	-2.35	0.046	-50.94		
Age 24	-2.57	0.052	-49.29		
Age 25-29	-2.64	0.038	-70.32		
Age 30-34	-3.08	0.047	-66.22		
Age 35 and up	-3.14	0.030	-103.41		
LNRJECIWSSPCPI	0.87	0.143	6.08		

* p<.05.
R^2 = Coefficient of determination.
D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.
Where:
AGE(age) = Age-specific intercept term.
LNYPDNWNH = Log of White per capita disposable income in current dollars.
LNRJECIWSSPCPI = Log of real total private compensation employment cost index.
NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method. The time period used to estimate the equations is from 1980 to 2005. The number of observations is 286. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared December 2006.)

Table A-15. Estimated equations and model statistics for full-time and part-time college enrollment rates of White women

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-12.34	0.275	-44.81	0.99	1.84*
Age 18	-9.46	0.255	-37.02		
Age 19	-9.36	0.254	-36.83		
Age 20	-9.63	0.254	-37.88		
Age 21	-9.88	0.254	-38.85		
Age 22	-10.68	0.257	-41.58		
Age 23	-11.16	0.256	-43.61		
Age 24	-11.45	0.255	-44.92		
Age 25-29	-12.37	0.255	-48.58		
Age 30-34	-13.08	0.255	-51.39		
Age 35 and up	-13.26	0.255	-52.05		
LNYPDNWNH	0.48	0.013	36.30		
Part-time					
Age 17	-8.75	0.430	-20.34	0.99	1.82*
Age 18	-4.91	0.270	-18.17		
Age 19	-4.65	0.275	-16.93		
Age 20	-4.61	0.271	-17.03		
Age 21	-4.80	0.272	-17.60		
Age 22	-4.74	0.269	-17.59		
Age 23	-5.03	0.270	-18.65		
Age 24	-5.18	0.270	-19.17		
Age 25-29	-5.30	0.267	-19.87		
Age 30-34	-5.61	0.269	-20.88		
Age 35 and up	-5.31	0.267	-19.90		
LNYPDNWNH	0.14	0.014	10.19		

* p<.05.
R^2 = Coefficient of determination.
D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.
Where:
AGE(age) = Age-specific intercept term.
LNYPDNWNH = Log of White per capita disposable income in current dollars.
NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method. The time period used to estimate the equations is from 1980 to 2005. The number of observations is 286. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared December 2006.)

Table A-16. Estimated equations and model statistics for full-time and part-time college enrollment rates of Black men

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-8.94	0.445	-20.10	0.97	1.95*
Age 18	-6.77	0.438	-15.46		
Age 19	-6.51	0.437	-14.89		
Age 20	-6.62	0.438	-15.11		
Age 21	-6.89	0.438	-15.71		
Age 22	-7.10	0.440	-16.14		
Age 23	-7.55	0.445	-16.98		
Age 24	-7.79	0.439	-17.75		
Age 25-29	-8.60	0.440	-19.53		
Age 30-34	-9.43	0.447	-21.11		
Age 35 and up	-9.80	0.442	-22.15		
LNYPDNBNH	0.28	0.024	11.75		
Part-time					
Age 17	-10.50	1.005	-10.45	0.99	2.00*
Age 18	-8.24	0.500	-16.46		
Age 19	-7.45	0.488	-15.28		
Age 20	-7.32	0.480	-15.25		
Age 21	-7.32	0.473	-15.47		
Age 22	-7.21	0.488	-14.76		
Age 23	-7.67	0.491	-15.63		
Age 24	-7.71	0.483	-15.96		
Age 25-29	-7.66	0.472	-16.22		
Age 30-34	-7.90	0.470	-16.81		
Age 35 and up	-7.98	0.468	-17.04		
LNYPDNBNH	0.24	0.025	9.31		

* $p<.05$.
R^2 = Coefficient of determination.
D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.
Where:
AGE(age) = Age-specific intercept term.
LNYPDNBNH = Log of Black per capita disposable income in current dollars.
NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method. The time period used to estimate the equations is from 1980 to 2005. The number of observations is 286. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared December 2006.)

Table A-17. Estimated equations and model statistics for full-time and part-time college enrollment rates of Black women

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-13.30	0.616	-21.60	0.93	1.88*
Age 18	-11.23	0.608	-18.46		
Age 19	-11.04	0.608	-18.16		
Age 20	-11.31	0.608	-18.60		
Age 21	-11.40	0.608	-18.76		
Age 22	-11.97	0.608	-19.67		
Age 23	-12.17	0.609	-19.97		
Age 24	-12.43	0.609	-20.41		
Age 25-29	-13.36	0.610	-21.89		
Age 30-34	-13.81	0.608	-22.71		
Age 35 and up	-14.19	0.609	-23.32		
LNYPDNBNH	0.55	0.033	16.76		
Part-time					
Age 17	-13.30	0.612	-21.74	0.99	1.84*
Age 18	-11.10	0.490	-22.65		
Age 19	-10.84	0.489	-22.15		
Age 20	-10.74	0.488	-21.99		
Age 21	-10.77	0.489	-22.04		
Age 22	-10.51	0.490	-21.44		
Age 23	-10.75	0.489	-22.00		
Age 24	-11.06	0.492	-22.47		
Age 25-29	-11.05	0.479	-23.05		
Age 30-34	-11.14	0.481	-23.18		
Age 35 and up	-11.04	0.479	-23.06		
LNYPDNBNH	0.44	0.026	17.11		

* p<.05.
R^2 = Coefficient of determination.
D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.
Where:
AGE(age) = Age-specific intercept term.
LNYPDNBNH = Log of Black per capita disposable income in current dollars.
NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method. The time period used to estimate the equations is from 1980 to 2005. The number of observations is 286. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared December 2006.)

Table A-18. Estimated equations and model statistics for full-time and part-time college enrollment rates of Hispanic men

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-9.43	0.576	-16.39	0.97	1.99*
Age 18	-7.48	0.567	-13.20		
Age 19	-7.26	0.566	-12.83		
Age 20	-7.44	0.566	-13.14		
Age 21	-7.65	0.570	-13.41		
Age 22	-8.17	0.570	-14.34		
Age 23	-8.41	0.570	-14.76		
Age 24	-8.49	0.569	-14.92		
Age 25-29	-9.38	0.570	-16.45		
Age 30-34	-10.13	0.570	-17.78		
Age 35 and up	-10.72	0.576	-18.59		
LNYPDNH	0.30	0.031	9.63		
Part-time					
Age 17	-9.76	0.997	-9.79	0.99	1.92*
Age 18	-6.81	0.451	-15.09		
Age 19	-6.73	0.459	-14.67		
Age 20	-6.48	0.450	-14.41		
Age 21	-6.55	0.452	-14.51		
Age 22	-6.65	0.450	-14.79		
Age 23	-6.92	0.464	-14.91		
Age 24	-7.07	0.456	-15.51		
Age 25-29	-7.22	0.439	-16.43		
Age 30-34	-7.65	0.442	-17.30		
Age 35 and up	-7.69	0.440	-17.48		
LNYPDNH	0.21	0.024	8.64		

* $p<.05$.
R^2 = Coefficient of determination.
D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.
Where:
AGE(age) = Age-specific intercept term.
LNYPDNH = Log of Hispanic per capita disposable income in current dollars.
NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method. The time period used to estimate the equations is from 1980 to 2005. The number of observations is 286. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared December 2006.)

Table A-19. Estimated equations and model statistics for full-time and part-time college enrollment rates of Hispanic women

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-16.48	0.540	-30.49	0.97	1.96*
Age 18	-14.00	0.517	-27.07		
Age 19	-13.90	0.514	-27.01		
Age 20	-14.25	0.516	-27.60		
Age 21	-14.38	0.516	-27.89		
Age 22	-15.04	0.520	-28.92		
Age 23	-15.22	0.518	-29.41		
Age 24	-15.63	0.524	-29.84		
Age 25-29	-16.35	0.515	-31.76		
Age 30-34	-17.01	0.519	-32.76		
Age 35 and up	-17.32	0.523	-33.11		
LNYPDNH	0.69	0.028	24.53		
Part-time					
Age 17	-14.46	0.541	-26.74	0.99	2.00*
Age 18	-12.20	0.415	-29.42		
Age 19	-12.06	0.408	-29.53		
Age 20	-12.24	0.417	-29.33		
Age 21	-12.14	0.416	-29.20		
Age 22	-12.29	0.416	-29.57		
Age 23	-12.28	0.412	-29.80		
Age 24	-12.72	0.420	-30.33		
Age 25-29	-12.77	0.401	-31.82		
Age 30-34	-13.14	0.402	-32.66		
Age 35 and up	-13.01	0.400	-32.50		
LNYPDNH	0.53	0.022	24.32		

* p<.05.
R^2 = Coefficient of determination.
D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.
Where:
AGE(age) = Age-specific intercept term.
LNYPDNH = Log of Hispanic per capita disposable income in current dollars.
NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method. The time period used to estimate the equations is from 1980 to 2005. The number of observations is 286. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared December 2006.)

Table A-20. Estimated equations and model statistics for full-time and part-time college enrollment rates of Asian/Pacific Islander men

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-8.18	0.550	-14.87	0.98	1.99*
Age 18	-5.37	0.531	-10.11		
Age 19	-5.17	0.533	-9.69		
Age 20	-5.28	0.532	-9.94		
Age 21	-5.27	0.533	-9.87		
Age 22	-5.57	0.532	-10.48		
Age 23	-5.81	0.534	-10.88		
Age 24	-6.16	0.538	-11.46		
Age 25-29	-7.02	0.532	-13.19		
Age 30-34	-8.01	0.534	-14.98		
Age 35 and up	-8.76	0.532	-16.47		
LNYPDNAHNH	0.26	0.027	9.35		
Part-time					
Age 17	-7.44	1.513	-4.92	0.99	2.04*
Age 18	-4.63	0.692	-6.69		
Age 19	-3.95	0.690	-5.74		
Age 20	-3.88	0.694	-5.59		
Age 21	-4.16	0.703	-5.92		
Age 22	-4.03	0.724	-5.56		
Age 23	-4.10	0.693	-5.91		
Age 24	-4.57	0.691	-6.62		
Age 25-29	-4.73	0.673	-7.03		
Age 30-34	-5.29	0.673	-7.87		
Age 35 and up	-5.66	0.672	-8.43		
LNYPDNAHNH	0.13	0.035	3.59		

* p<.05.
R^2 = Coefficient of determination.
D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.
Where:
AGE(age) = Age-specific intercept term.
LNYPDNAHNH = Log of Asian/Pacific Islander non-Hispanic per capita disposable income in current dollars.
NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method. The time period used to estimate the equations is from 1980 to 2005. The number of observations is 286. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared December 2006.)

Table A-21. Estimated equations and model statistics for full-time and part-time college enrollment rates of Asian/Pacific Islander women

Independent variable	Coefficient	Standard error	T-statistic	R^2	D.W. statistic
Full-time					
Age 17	-12.65	0.350	-36.12	0.99	2.02*
Age 18	-10.44	0.338	-30.93		
Age 19	-9.83	0.351	-27.96		
Age 20	-10.27	0.340	-30.16		
Age 21	-10.24	0.340	-30.11		
Age 22	-10.81	0.348	-31.05		
Age 23	-11.18	0.341	-32.78		
Age 24	-11.64	0.368	-31.58		
Age 25-29	-12.57	0.334	-37.61		
Age 30-34	-13.91	0.344	-40.41		
Age 35 and up	-14.26	0.343	-41.55		
LNYPDNAHNH	0.54	0.017	30.85		
Part-time					
Age 17	-17.06	0.906	-18.84	0.99	2.12*
Age 18	-14.97	0.757	-19.78		
Age 19	-14.47	0.782	-18.51		
Age 20	-14.86	0.764	-19.44		
Age 21	-14.35	0.768	-18.70		
Age 22	-14.35	0.758	-18.92		
Age 23	-14.88	0.756	-19.69		
Age 24	-15.25	0.774	-19.71		
Age 25-29	-15.59	0.751	-20.76		
Age 30-34	-16.27	0.752	-21.64		
Age 35 and up	-16.06	0.746	-21.51		
LNYPDNAHNH	0.69	0.039	17.76		

* p<.05.
R^2 = Coefficient of determination.
D.W. statistic = Durbin-Watson statistic. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.
Where:
AGE(age) = Age-specific intercept term.
LNYPDNAHNH = Log of Asian/Pacific Islander non-Hispanic per capita disposable income in current dollars..
NOTE: The regression method used to estimate the full-time and part-time equations was the pooled seemingly unrelated regression method. The time period used to estimate the equations is from 1980 to 2005. The number of observations is 286. For additional information, see M. D. Intriligator, *Econometric Models, Techniques, & Applications*, New Jersey: Prentice-Hall, Inc., 1978, pp. 165–173.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared December 2006.)

Table A-22. Enrollment (assumptions)

Variable	Assumptions	Alternatives	Tables
Elementary and secondary enrollment	Age-specific enrollment rates will remain constant at levels consistent with the most recent rates.	Middle (no alternatives)	1-9
	Public enrollment rates and public grade retention rates will remain constant at levels consistent with the most recent rates.	Middle (no alternatives)	1-9
	The percentage of 7th- and 8th-grade public students enrolled in schools organized as secondary schools will remain constant at levels consistent with the most recent rates.	Middle (no alternatives)	1-9
College enrollment, by age, sex, and attendance status	Age-specific enrollment rates are a function of dummy variables by age, the log of three-period weighted average of real disposable income per capita from the Global Insight's February 2006 trend scenario and the log unemployment rate by age group from the Global Insight's February 2006 trend scenario.	Middle	10-19
	Age-specific enrollment rates are a function of dummy variables by age, the log of three-period weighted average of real disposable income per capita from the Global Insight's February 2006 pessimistic scenario and the log unemployment rate by age group from the Global Insight's February 2006 pessimistic scenario.	Low	10-19
	Age-specific enrollment rates are a function of dummy variables by age, the log of three-period weighted average of real disposable income per capita from the Global Insight's February 2006 optimistic scenario and the log unemployment rate by age group from the Global Insight's February 2006 optimistic scenario.	High	10-19
College enrollment, by sex, attendance status, level enrolled, and type of institution	For each group and for each attendance status separately, percent of total enrollment by sex, level enrolled, and type of institution will follow past trends through 2016. For each age group and attendance status category, the sum of the percentages must equal 100 percent.	High, middle, and low	10-19
College enrollment, by control of institution	For each enrollment category, by sex, attendance status, and level enrolled, and by type of institution, public enrollment as a percent of total enrollment will remain constant at levels consistent with the most recent rates.	High, middle, and low	10-19
Graduate enrollment	For each enrollment category, by sex and attendance status of student, and by type and control of institution, graduate enrollment as a percent of postbaccalaureate enrollment will remain constant at levels consistent with the most recent rates.	High, middle, and low	20
College enrollment, by age, sex, attendance status, and race/ethnicity			
Full-time: White, Non-Hispanic men; White, Non-Hispanic women; Black, Non-Hispanic men; Black, Non-Hispanic women; Hispanic men; Hispanic women; Asian/Pacific Islander, Non-Hispanic men; Asian/Pacific Islander, Non-Hispanic women. Part-time: White, Non-Hispanic women; Black, Non-Hispanic men; Black, Non-Hispanic women; Hispanic men; Hispanic women; Asian/Pacific Islander, Non-Hispanic men; Asian/Pacific Islander, Non-Hispanic women	Age-specific enrollment rates by race/ethnicity are a function of dummy variables by age and the log of the corresponding race/ethnicity group's disposable income per capita in current dollars.	Middle (no alternatives)	22
Part-time White, Non-Hispanic men	Age-specific enrollment rates by race/ethnicity are a function of dummy variables by age and the log of real total compensation.	Middle (no alternatives)	22
Full-time-equivalent of part-time enrollment	For each enrollment category, by type and control of institution and level enrolled, the percent that full-time-equivalent of part-time enrollment is of part-time enrollment will remain constant at levels consistent with the most recent rates.	High, middle, and low	23

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Elementary and Secondary Enrollment Model, 1972–2004; State Public Elementary and Secondary Enrollment Model, 1980–2004; Enrollment in Degree-Granting Institutions Model, 1980–2005; and Enrollment in Degree-Granting Institutions by Race/Ethnicity Model, 1980–2005. (This table was prepared January 2007.)

High School Graduates

National

Projections of public high school graduates were developed in the following manner. The number of public high school graduates was expressed as a percent of grade 12 enrollment in public schools for 1972–73 to 2003–04. This percent was projected using single exponential smoothing and applied to projections of grade 12 enrollment to yield projections of high school graduates in public schools. (This percent does not make any specific assumptions regarding the dropout rate. The effect of the 12th- grade dropout proportion is reflected implicitly in the graduate proportion.) The grade 12 enrollment was projected based on grade progression rates. This percent was assumed to remain constant at levels consistent with the most recent rates. This method assumes that past trends in factors affecting graduation ratios, such as dropouts, migration, and public or private transfers, will continue over the projection period. In addition to student behaviors, the projected number of graduates could be affected by changes in graduation requirements, but not considered in the projections in this report.

Projections of private high school graduates were calculated using the same methodology as public high school graduates, using data from 1988–89 to 2002–03.

Projection Accuracy

An analysis of projections from models used in the past 16 editions of *Projections of Education Statistics* indicates that the mean absolute percentage errors (MAPEs) for projections of public high school graduates were 0.8 percent for 1 year ahead, 0.9 percent for 2 years ahead, 1.6 percent for 5 years ahead, and 3.9 percent for 10 years ahead. For the 1-year-ahead prediction, this means that one would expect the projection to be within 0.8 percent of the actual value, on the average. For more information on the mean absolute percentage errors, see table A-2, page 86.

State Level

This edition contains projections of high school graduates from public schools by state from 2004–05 to 2016–17. Public school graduate data from the Common Core of Data survey for 1980–81 to 2003–04 were used to develop these projections. This survey does not collect graduate data for private schools.

Projections of public high school graduates by state were developed in the following manner. For each state, the number of public high school graduates was expressed as a percent of grade 12 enrollment in public schools for 1980–81 to 2003–04. This percent was projected using single exponential smoothing and applied to projections of grade 12 enrollment to yield projections of high school graduates in public schools. All jurisdictions were projected using the same single exponential smoothing parameter of 0.4. Projections of grade 12 enrollment were developed based on the grade progression rates discussed in appendix A, Enrollment. The projected rates were assumed to remain constant at levels consistent with the most recent rates. This method assumes that past trends in factors affecting public high school graduates will continue over the projection period.

Degrees Conferred

Projections of associate's, bachelor's, master's, doctor's, and first-professional degrees for men and women were based on demographic models that relate degree awards to college-age populations and college enrollment by level enrolled and attendance status. Table A-23 describes the estimated equations used to calculate projections, and table A-24 contains the basic assumptions underlying projections.

Associate's Degrees

Associate's degree projections for men and women were based on a weighted average over the last 2 years of total undergraduate enrollment by attendance status in 2-year institutions and sex relative to the 18- to 24-year-old population by sex. The previous year is weighted two-thirds, and 2 years back is weighted one-third. Results of the regression analysis used to project associate's degrees are shown in table A-23.

Bachelor's Degrees

Bachelor's degree projections for men and women were based on a weighted average over the last 4 years of full-time undergraduate enrollment by attendance status in 4-year institutions and sex relative to the 18- to 24-year-old population by sex. The weights for the previous 4 years—0.4, 0.3, 0.2, and 0.1—give more weight to the most recent years. Results of the regression analysis used to project bachelor's degrees are shown in table A-23.

Master's Degrees

Master's degree projections for men were based on a weighted average over the last 2 years of full-time graduate enrollment by attendance status and sex relative to the 25- to 34-year-old population by sex. Master's degree projections for women were based on a weighted average over the last 2 years of total graduate enrollment by attendance status and sex relative to the 25- to 34-year-old population by sex. In each case, the previous year is weighted two-thirds, and 2 years back is weighted one-third. Results of the regression analysis used to project master's degrees are shown in table A-23.

Doctor's Degrees

Doctor's degree projections for men were based on a weighted average over the last 4 years of total graduate enrollment by attendance status and sex relative to the 35- to 44-year-old population, by sex. Doctor's degree projections for women were based on a weighted average over the last 4 years of full-time enrollment by attendance status and sex relative to the 35- to 44-year-old population, by sex. In each case, the weights for the previous 4 years—0.4, 0.3, 0.2, and 0.1—give more weight to the most recent years. Results of the regression analysis used to project doctor's degrees are shown in table A-23.

First-Professional Degrees

First-professional degree projections for men were based on a weighted average over the last 3 years of total first-professional enrollment by attendance status in 4-year institutions and sex relative to the 25- to 34-year-old population by sex. First-professional degree projections for women were based on a weighted average over the last 3 years of first-professional enrollment by attendance status in 4-year institutions and sex relative to the 25- to 34-year old population by sex. In each case, the weights for the previous 3 years—0.5, 0.33, and 0.17—give more weight to the most recent years. Results of the regression analysis used to project first-professional degree are shown in table A-23.

Projection Accuracy

An analysis of projection errors from similar models used in the past nine editions of *Projections of Education Statistics* indicates that mean absolute percentage errors (MAPEs) for associate's degrees were 2.3 percent for 1 year out, 3.0 percent for 2 years out, 6.0 percent for 5 years out, and 14.8 percent for 10 years out. For the 1-year-out prediction, this means that one would expect the projection to be within 2.3 percent of the actual value, on average. MAPEs for bachelor's degree projections were 0.9 percent for 1 year out, 2.0 percent for 2 years out, 6.0 percent for 5 years out, and 11.2 percent for 10 years out. MAPEs for master's degrees were 1.6, 3.9, 12.3, and 19.8 percent, respectively. For doctor's degrees, the MAPEs were 2.6, 4.3, 4.1, and 4.5 percent, respectively. For first-professional degrees, the MAPEs were 1.3, 1.4, and 5.6 , and 12.4 percent, respectively. For more information on the MAPEs, see table A-2.

Table A-23. Estimated equations and model statistics for degrees conferred, by degree type and sex

Dependent variable	Equation	R^2	Durbin-Watson statistic	Error distribution pattern[1]	Rho	Time period
Associate's degrees	LNASSOCM = 4.9 + 0.4LNUG2ML2	0.95	2.0*	AR(1)	0.57	1975–76 to
Men	(10.7)				(5.0)	2004–05
Associate's degrees	LNASSOCW = 5.6 + 0.6LNUG2WL2	0.99	1.5*	AR(1)	0.66	1975–76 to
Women	(16.6)				(8.5)	2004–05
Bachelor's degrees	LNBACHM = 5.6 + 1.2LNUG4FTML4	0.98	1.4^	AR(1)	0.89	1977–78 to
Men	(4.9)				(7.6)	2004–05
Bachelor's degrees	LNBACHW = 5.6 + 1.0LNUG4FTWL4	0.99	1.5*	AR(1)	0.92	1977–78 to
Women	(3.2)				(6.8)	2004–05
Master's degrees	LNMASTM = 6.9 + 1.2LNGFTML2	0.98	1.4^	AR(1)	0.73	1975–76 to
Men	(9.4)				(4.4)	2004–05
Master's degrees	LNMASTW = 7.6 + 0.7LNGWL2	0.99	1.4^	AR(1)	0.79	1975–76 to
Women	(22.4)				(17.4)	2004–05
Doctor's degrees	LNDOCM = 3.4 + 0.4LNGML4	0.99	1.6*	AR(1)	0.66	1977–78 to
Men	(8.1)				(7.0)	2004–05
Doctor's degrees	LNDOCW = 3.6 + 0.9LNGFTWL4	0.96	1.7*	AR(1)	0.70	1977–78 to
Women	(10.7)				(4.7)	2004–05
First-professional degrees	LNFPROM = 3.7 + 0.2LNFPML3	0.99	1.6*	AR(1)	0.86	1976–77 to
Men	(3.1)				(20.1)	2004–05
First-professional degrees	LNFPROW = 5.8 + 1.0LNFPFTWL3	0.99	1.6*	AR(1)	0.51	1976–77 to
Women	(30.0)				(3.1)	2004–05

* $p<.05$.

^ The Durbin-Watson statistic is inconclusive as to whether to either accept or reject the hypothesis of no autocorrelation at the .05 significance level. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.

[1]AR(1) indicates that the model was estimated using least squares with the AR(1) process for correcting for first-order autocorrelation. For a general discussion of the problem of autocorrelation, and the method used to forecast in the presence of autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pp. 315–318.

Where:

LNASSOCM = Log of the ratio of associate's degrees awarded to men relative to the population of 18- to 24-year old men

LNASSOCW = Log of the ratio of associate's degrees awarded to woman relative to the population of 18- to 24-year old women

LNBACHM = Log of the ratio of bachelor's degrees awarded to men relative to the population of 18- to 24-year old men

LNBACHW = Log of the ratio of bachelor's degrees awarded to women relative to the population of 18- to 24-year old women

LNMASTM = Log of the ratio of master's degrees awarded to men relative to the population of 25- to 34-year old men

LNMASTW = Log of the ratio of master's degrees awarded to women relative to the population of 25- to 34-year old women

LNDOCM = Log of the ratio of doctor's degrees awarded to men relative to the population of 35- to 44-year old men

LNDOCW = Log of the ratio of doctor's degrees awarded to women relative to the population of 35- to 44-year old women

LNFPROM = Log of the ratio of first-professional degrees awarded to men relative to the population of 25- to 34-year old men

LNFPROW = Log of the ratio of first-professional degrees awarded to women relative to the population of 25- to 34-year old women

LNUG2ML2 = Log of the ratio of full-time male undergraduate enrollment in 2-year institutions to the male population of 18- to 24-year-olds, weighted over the last 2 years (where weights are .67 and .33 for descending lagged years), plus the similar log ratio for part-time male undergraduate enrollment in 2-year institutions.

LNUG2WL2 = Log of the ratio of full-time female undergraduate enrollment in 2-year institutions to the female population of 18- to 24-year-olds, weighted over the last 2 years (where weights are .67 and .33 for descending lagged years), plus the similar log ratio for part-time female undergraduate enrollment in 2-year institutions.

LNUG4FTML4 = Log of the ratio of full-time male undergraduate enrollment in 4-year institutions to the male population of 18- to 24-year-olds, weighted over the last 4 years (where weights are .4, .3, .2, and .1 for descending lagged years).

LNUG4FTWL4 = Log of the ratio of full-time female undergraduate enrollment in 4-year institutions to the female population of 18- to 24-year-olds, weighted over the last 4 years (where weights are .4, .3, .2, and .1 for descending lagged years).

LNGFTML2 = Log of the ratio of full-time male graduate enrollment to the male population of 25- to 34-year-olds, weighted over the last 2 years (where weights are .67 and .33 for descending lagged years).

LNGWL2 = Log of the ratio of full-time female graduate enrollment to the female population of 25- to 34-year-olds, weighted over the last 2 years (where weights are .67 and .33 for descending lagged years), plus the similar log ratio for part-time female graduate enrollment.

LNGML4 = Log of the ratio of full-time male graduate enrollment to the male population of 35- to 44-year-olds, weighted over the last 4 years (where weights are .4, .3., .2, and .1 for descending lagged years), plus the similar log ratio for part-time male graduate enrollment.

LNGFTWL4 = Log of the ratio of full-time female graduate enrollment to the female population of 35- to 44-year-olds, weighted over the last 4 years (where weights are .4, .3, .2, and .1 for descending lagged years).

LNFPML3 = Log of the ratio of full-time male first-professional enrollment to the male population of 25- to 34-year-olds, weighted over the last 3 years (where weights are .5, .33, and .17 for descending lagged years), plus the similar log ratio for part-time male first-professional enrollment.

LNFPFTWL3 = Log of the ratio of full-time female first-professional enrollment to the female population of 25- to 34-year-olds, weighted over the last 3 years (where weights are .5, .33, and .17 for descending lagged years).

NOTE: R^2 indicates the coefficient of determination. Rho measures the correlation between errors in time period t and time period t minus 1. Numbers in parentheses are t-statistics.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Degrees Conferred Model, 1975–76 through 2004–05. (This table was prepared June 2007.)

Table A-24. Degrees conferred (assumptions)

Variable	Assumptions	Alternatives	Tables
Associate's degrees			
Men	The number of associate's degrees awarded to men is a linear function of the log of the ratio of full-time male undergraduate enrollment in 2-year institutions to the male population of 18- to 24-year-olds, weighted over the last 2 years (where weights are .67 and .33 for descending lagged years), plus the similar log ratio for part-time male undergraduate enrollment in 2-year institutions. This relationship will continue through 2016–17.	Middle	27
Women	The number of associate's degrees awarded to women is a linear function of the log of the ratio of full-time female undergraduate enrollment in 2-year institutions to the female population of 18- to 24-year-olds, weighted over the last 2 years (where weights are .67 and .33 for descending lagged years), plus the similar log ratio for part-time female undergraduate enrollment in 2-year institutions. This relationship will continue through 2016–17.	Middle	27
Bachelor's degrees			
Men	The number of bachelor's degrees awarded to men is a linear function of the log of the ratio of full-time male undergraduate enrollment in 4-year institutions to the male population of 18- to 24-year-olds, weighted over the last 4 years (where weights are .4, .3, .2, and .1 for descending lagged years). This relationship will continue through 2016–17.	Middle	28
Women	The number of bachelor's degrees awarded to women is a linear function of the log of the ratio of full-time female undergraduate enrollment in 4-year institutions to the female population of 18- to 24-year-olds, weighted over the last 4 years (where weights are .4, .3, .2, and .1 for descending lagged years). This relationship will continue through 2016–17.	Middle	28
Master's degrees			
Men	The number of master's degrees awarded to men is a linear function of the log of the ratio of full-time male graduate school enrollment to the male population of 25- to 34-year-olds, weighted over the last 2 years (where weights are .67 and .33 for descending lagged years). This relationship will continue through 2016–17.	Middle	29
Women	The number of master's degrees awarded to women is a linear function of the log of the ratio of full-time female graduate school enrollment to the female population of 25- to 34-year-olds, weighted over the last 2 years (where weights are .67 and .33 for descending lagged years), plus the similar log ratio for part-time female graduate school enrollment. This relationship will continue through 2016–17.	Middle	29
Doctor's degrees			
Men	The number of doctor's degrees awarded to men is a linear function of the log of the ratio of full-time male graduate school enrollment to the male population of 35- to 44-year-olds, weighted over the last 4 years (where weights are .4, .3, .2, and .1 for descending lagged years), plus the similar log ratio for part-time male graduate school enrollment. This relationship will continue through 2016–17.	Middle	30
Women	The number of doctor's degrees awarded to women is a linear function of the log of the ratio of full-time female graduate school enrollment to the female population of 35- to 44-year-olds, weighted over the last 4 years (where weights are .4, .3, .2, and .1 for descending lagged years). This relationship will continue through 2016–17.	Middle	30
First-professional degrees			
Men	The number of first-professional degrees awarded to men is a linear function of the log of the ratio of full-time male first-professional school enrollment to the male population of 25- to 34-year-olds, weighted over the last 3 years (where weights are .5, .33, and, .17 for descending lagged years), plus the similar log ratio for part-time male first-professional school enrollment. This relationship will continue through 2016–17.	Middle	31
Women	The number of first-professional degrees awarded to women is a linear function of the log of the ratio of full-time female first-professional school enrollment to the female population of 25- to 34-year-olds, weighted over the last 3 years (where weights are .5, .33, and, .17 for descending lagged years), This relationship will continue through 2016–17.	Middle	31

SOURCE: U.S. Department of Education, National Center for Education Statistics, Degrees Conferred Model, 1975–76 through 2004–05. (This table was prepared December 2006.)

Elementary and Secondary Teachers

Public Elementary and Secondary Teachers

The number of public elementary and secondary teachers was projected separately for the elementary and secondary levels. The number of public elementary teachers was projected using the public elementary student/teacher ratio. The ratio was modeled as a function of education revenue from state sources per student, and the level of elementary and secondary teacher wages relative to the overall economy-level wages. The number of public elementary teachers was obtained by applying the projected public elementary student/teacher ratio to the previously projected enrollment in public elementary schools. The number of public secondary teachers was projected using the public secondary student/teacher ratio. The ratio was modeled as a function of local education revenue from state sources per student and public secondary enrollment relative to the 11- to 18-year-old population. The number of public secondary teachers was obtained by applying the projected public secondary student/teacher ratio to the previously projected enrollment in public secondary schools.

The models were estimated using the AR1 model for correcting for autocorrelation, and all variables are in log form. Local education revenue from state sources were in constant 2000 dollars.

The multiple regression technique will yield good forecasting results only if the relationships that existed among the variables in the past continue throughout the projection period.

The public elementary teacher model is:

$$\ln(RELENRTCH_t) = b_0 + b_1 \ln(RSALARY_t) + b_2 \ln(RSGRNTELENR_t)$$

where:

$RELENRTCH_t$ is the public elementary student/teacher ratio in year t;

$RSALARY_t$ is the average teacher wage relative to the overall economy-level wage in year t; and

$RSGRNTELENR_t$ is the level of education revenue from state sources deflated by the consumer prices chained-price index in constant 2000 dollars per public elementary student in year t.

Each variable affects the public elementary student/teacher ratio in the expected way. As the average teacher wage relative to the overall economy-level wage increases, schools economize on teachers by increasing the student/teacher ratio as teachers are now more expensive to hire. As the level of real grants per elementary student increases, the class size decreases. The more money being devoted to education, the more teachers are hired, thus decreasing the student/teacher ratio.

The public secondary teacher model is:

$$\ln(RSCENRTCH_t) = b_0 + b_1 \ln(RSGRNTSCENR_t) + b_2 \ln(RSCENRPU_t)$$

where:

$RSCENRTCH_t$ is the public secondary student/teacher ratio in year t;

$RSGRNTSCENR_t$ is the level of education revenue from state sources deflated by the consumer prices chained-price index in constant 2000 dollars per public secondary student in year t; and

$RSCENRPU_t$ is the number of students enrolled in public secondary schools relative to the secondary school-age population in year t.

Each variable affects the public secondary student/teacher ratio in the expected way. As the level of real grants per secondary student increases, the student/teacher ratio decreases. The more money being devoted to education, the more teachers are hired, thus decreasing the student/teacher ratio. As enrollment rates (number of enrolled students relative to the school-age population) increase, the ratio also increases: increases in the enrollment rate are not matched by increases in the number of teachers.

Table A-25 summarizes the results for the elementary and secondary public teacher models. Enrollment for this equation is by organizational level, not by grade level. Thus, secondary enrollment is not the same as grade 9–12 enrollment because some jurisdictions count some grade 7 and 8 enrollment as secondary. Therefore, the distribution of the number of teachers is also by organizational level, not by grade span.

Private Elementary and Secondary Teachers

Projections of private elementary and secondary teachers were derived in the following manner. From 1960 to 2003, the ratio of private school teachers to public school teachers was calculated by organizational level. These ratios were projected using single exponential smoothing with a smoothing constant of $\alpha = 0.4$, yielding a constant value over the projection period. This constant value was then applied to projections of public school teachers by organizational level to yield projections of private school teachers. This method assumes that the future pattern in the trend of private school teachers will be the same as that for public school teachers. The reader is cautioned that a number of factors could alter the assumption of constant ratios over the projection period.

The total number of public school teachers, enrollment by organizational level, and education revenue from state sources used in these projections were from the Common Core of Data (CCD) survey conducted by NCES. The proportion of public school teachers by organizational level was taken from the National Education Association and then applied to the total number of teachers from the CCD to produce the number of teachers by organizational level.

Projection Accuracy

An analysis of projection errors from the past 16 editions of *Projections of Education Statistics* indicated that the mean absolute percentage errors (MAPEs) for projections of classroom teachers in public elementary and secondary schools were 1.0 percent for 1 year out, 1.6 percent for 2 years out, 2.7 percent for 5 years out, and 5.5 percent for 10 years out. For the 2-year-ahead prediction, this means that one would expect the projection to be within 1.6 percent of the actual value, on average. For more information on the MAPEs, see table A-2.

Table A-25. Estimated equations and model statistics for public elementary and secondary teachers

Dependent variable	Equation	R^2	Durbin-Watson statistic[1]	Error distribution pattern[2]	Rho	Time period
Elementary	ln(RELENRTCH) = 3.9 + .1 ln(RSALARY) - .2 ln(RSGRNTELENR)	0.99	2.0*	AR(1)	0.36	1973 to
	(4.6) (-10.5)				(2.04)	2003
Secondary	ln(RSCENRTCH) = 4.1 - .2 ln(RSGRNTSCENR) + .6 ln(RSCENRPU)	0.99	1.9*	AR(1)	0.60	1973 to
	(-14.5) (4.9)				(3.7)	2003

* p<.05.

[1]For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.

[2]AR(1) indicates that the model was estimated using least squares with the AR(1) process for correcting for first-order autocorrelation. For a general discussion of the problem of autocorrelation, and the method used to forecast in the presence of autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pp. 315–318.

Where:

RELENRTCH = Log of the ratio of public elementary school enrollment to classroom teachers (i.e., student/teacher ratio)
RSCENRTCH = Log of the ratio of public secondary school enrollment to classroom teachers (i.e., student/teacher ratio)
RSALARY = Log of the average annual teacher salary relative to the overall economy wage in 2000 dollars
RSGRNTELENR = Log of the ratio of education revenue receipts from state sources per capita to public elementary school enrollment in 2000 dollars
RSGRNTSCENR = Log of the ratio of education revenue receipts from state sources per capita to public secondary school enrollment in 2000 dollars
RSCENRPU = Log of the ratio of enrollment in public secondary schools to the 11- to 18-year-old population

NOTE: R^2 indicates the coefficient of determination. Rho measures the correlation between errors in time period t and time period t minus 1. Numbers in parentheses are t-statistics.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Elementary and Secondary Teacher Model, 1968–2003. (This table was prepared December 2006.)

Expenditures of Public Elementary and Secondary Schools

Elementary and Secondary School Current Expenditure Model

There is a large body of work, both theoretical and empirical, on the demand for local public services such as education.[1] The elementary and secondary school current expenditure model is based on this work.

The model that is the basis for the elementary and secondary school current expenditure model has been called the median voter model. In brief, the theory states that spending for each public good in the community (in this case, spending for education) reflects the preferences of the "median voter" in the community. This individual is identified as the voter in the community with the median income and median property value. The amount of spending in the community reflects the price of education facing the voter with the median income, as well as his income and tastes. There are competing models in which the level of spending reflects the choices of others in the community, such as the "bureaucrats."

In a median voter model, the demand for education expenditures is typically linked to four different types of variables: (1) measures of the income of the median voter; (2) measures of intergovernmental aid for education going indirectly to the median voter; (3) measures of the price to the median voter of providing one more dollar of education expenditures per pupil; and (4) any other variables that may affect one's tastes for education.

The elementary and secondary school current expenditure model contains variables reflecting the first two types of variables. The model is:

$$\ln(CUREXP_t) = b_0 + b_1\ln(PCI_t) + b_2\ln(SGRNT_t)$$

where:

ln indicates the natural log;

$CUREXP_t$ equals current expenditures of public elementary and secondary schools per pupil in fall enrollment in constant 1982–84 dollars in year t;

PCI_t equals disposable income per capita in constant 2000 dollars in year t; and

$SGRNT_t$ equals local governments' education revenue from state sources, per capita, in constant year 1982–84 dollars in year t. The model used to project this variable is discussed below.

The model was estimated using least squares with the AR(1) process for correcting for autocorrelation. The model was estimated using data from 1969–70 to 2003–04.

There are potential problems with using a model for local government education expenditures for the nation as a whole. Two such problems concern the variable SGRNT. First, the amount of money that local governments receive for education from state governments varies substantially by state. Second, the formulas used to apportion state moneys for education among local governments vary by state.

Beginning in 1988–89, there was a major change in the survey form used to collect data on current expenditures (the National Public Education Financial Survey). This new survey form produces a more complete measure of current expenditures; therefore, the values for current expenditures are not completely comparable to the previously collected numbers. Data for a majority of states were also collected for 1986–87 and 1987–88 that were comparable to data from the new survey form. A comparison of these data with those from the old survey form suggests that the use of the new survey form may have increased the national figure for current expenditures by approximately 1.4 percent over what it would have been if the survey form had not been changed. When the model was estimated, all values for current expenditures before 1988–89 were increased by 1.4 percent.

[1] For a discussion of the theory together with a review of some of the older literature, see Inman, R. P. (1979), ''The Fiscal Performance of Local Governments: An Interpretive Review," in *Current Issues in Urban Economics*, edited by P. Mieszkowski and M. Straszheim, Johns Hopkins Press, Baltimore, Maryland. More recent empirical work includes: Gamkhar, S. and Oates, W. (1996). Asymmetries in the Response to Increases and Decreases in Intergovernmental Grants: Some Empirical Findings. *National Tax Journal*, *49*(3): 501-512 and Mitias, P. and Turnbull, G. (2001) Grant Illusion, Tax Illusion, and Local Government Spending. *Public Finance Review. 29*(5): 347-368.

The results for the model are shown in table A-26. Each variable affects current expenditures in the direction that would be expected. With high levels of income (PCI) or revenue from state sources (SGRNT), the level of spending increases.

From the cross-sectional studies of the demand for education expenditures, we have an estimate of how sensitive current expenditures are to changes in PCI. We can compare the results from this model with those from the cross-sectional studies. For this model, an increase in PCI of 1 percent, with SGRNT held constant, would result in an increase of current expenditures per pupil in fall enrollment of approximately .6 percent. With PCI held constant, an increase of 1 percent in SGRNT would result in an increase in current expenditures per pupil in fall enrollment of approximately .2 percent. Both numbers are well within the range of what has been found in cross-sectional studies.

The results from this model are not completely comparable with those from previous editions of *Projections of Education Statistics*. First, in those earlier editions, the sample period used to estimate the model began with either 1959–60 or 1967–68 rather than 1969–70. This change was made due to superior model diagnostics. Second, in some earlier editions the model contained an additional variable, as a proxy for the price facing the median voter, the ratio of enrollment to the population. This price variable has been excluded due to its lack of statistical significance as measured by its t-statistic. Third, in editions prior to *Projections of Education Statistics to 2011* and *Projections of Education Statistics to 2013,*[2] average daily attendance rather than fall enrollment, was used as the measure of enrollment. This change was made because the definitions of fall enrollment are more consistent from state to state than those of average daily attendance.

There have been other changes to the model used in earlier editions. As with the current expenditure projections in the most recent editions, the population number for each school year is the U.S. Census Bureau's July 1 population number for the upcoming school year. In earlier editions, the school year population numbers were from an economic consulting firm. These changes were made to be consistent with population projections used in producing other projections of education statistics. Also, there have been changes in the definition of disposable income.

Projections for total current expenditures were made by multiplying the projections for current expenditures per pupil in fall enrollment by projections for fall enrollment. The projections for total current expenditures were also divided by projections for average daily attendance to produce projections of current expenditures per pupil in average daily attendance to provide projections that are consistent with those from earlier years. Projections were developed in 1982–84 dollars and then placed in 2004–05 dollars using the Consumer Price Index. Current-dollar projections were produced by multiplying the constant-dollar projections by projections for the Consumer Price Index. The Consumer Price Index and the other economic variables used in calculating the projections presented in this report were placed in school year terms rather than calendar year terms.

Three alternative sets of projections for current expenditures are presented: the middle alternative projections, the low alternative projections, and the high alternative projections. The alternative sets of projections differ because of varying assumptions about the growth paths for disposable income and revenue from state sources.

The alternative sets of projections for the economic variables, including disposable income, were developed using three economic scenarios prepared by the economic consulting firm, Global Insight, Inc.

Global Insight's February 2006 trend scenario was used as a base for the middle alternative projections of the economic variables. Global Insight's trend scenario depicts a mean of possible paths that the economy could take over the forecast period, barring major shocks. The economy, in this scenario, evolves smoothly, without major fluctuations.

Global Insight's February 2006 pessimistic scenario was used for the low alternative projections, and Global Insight's February 2006 optimistic scenario was used for the high alternative projections.

[2] There were no projections of either current expenditures or teacher salaries in *Projections of Education Statistics to 2012*.

In the middle alternative projections, disposable income per capita rises each year from 2005–06 to 2016–17 at rates between 0.9 percent and 3.3 percent. In the low alternative projections, disposable income per capita ranges between 0.7 percent and 2.4 percent, and in the high alternative projections, disposable income per capita rises at rates between 0.9 percent and 3.9 percent.

The alternative projections for revenue from state sources, which form a component of the current expenditures model, were produced using the following model:

$$\ln(SGRNT_t) = b_0 + b_1\ln(PCI_t) + b_2\ln(ENRPOP_t)$$

where:

ln indicates the natural log;

$SGRNT_t$ equals local governments' education revenue from state sources, per capita, in constant 1982–84 dollars in year t;

$ENRPOP_t$ equals the ratio of fall enrollment to the population in year t; and

PCI_t equals disposable income per capita in constant 2000 dollars in year t.

The model was estimated using least squares with the AR(1) process for correcting for autocorrelation. The model was estimated using the period from 1971–72 to 2003–04. These models are shown in table A-26.

The values of the coefficients in this model follow expectations. As the enrollment increases relative to the population (higher ENRPOP), so does the amount of aid going to education. Finally, other things being equal, as the value of disposable income per capita in real dollar values (higher PCI) increases, the level of local governments' education revenue from state sources per capita also increases.

This year's edition of the *Projections of Education Statistics* uses the same revenue from state sources model as the last two year's editions. The model used in the prior two editions, *Projections of Education Statistics 2012* and *Projections of Education Statistics 2013,* was different. It included a term for personal taxes and non-tax receipts (PERTAX1) and an inflation rate term (RCPIANN) and was estimated over a different time period (the sample period began in 1967-68 rather than 1971-72). The current model specification yielded superior model diagnostics than the model used in the *Projections of Education Statistics 2012* and *Projections of Education Statistics 2013*. The models in the previous four editions of the *Projections of Education Statistics* each used the same variable to represent enrollment (ENRPOP). In the earlier editions, models used average daily attendance rather than fall enrollment as the measure of enrollment, and the sample period used to produce the forecast began in 1959–60. As with the current expenditures model, the change to fall enrollment was done because the definition of fall enrollment is more consistent across states, and the change in sample period was done because of superior model diagnostics. Other models in the past have contained a second measure of state and local government revenue. Also in earlier editions, similar models were used except the variables were not in log form. Both of these changes were made because of superior model diagnostics.

Three alternative sets of projections for SGRNT were produced using this model. Each is based on a different set of projections for revenue from state sources per capita. The middle set of projections was produced using the values from the middle set of alternative projections. The low set of projections was produced using the values from the low set of alternative projections, and the high set of projections was produced using the values from the high set of alternative projections. In the middle alternative projections, revenue from state sources per capita rises each year from 2005–06 to 2016–17 at rates between 1.6 percent and 4.5 percent. In the low alternative projections, revenue from state sources per capita ranges between 1.2 percent and 3.4 percent, and in the high alternative projections, revenue from state sources per capita rises at rates between 1.7 percent and 5.3 percent.

Projection Accuracy

Sixteen of the last 17 editions of *Projections of Education Statistics* contained projections of current expenditures. The actual values of current expenditures can be compared with the projected values in the previous editions to examine the accuracy of the model.

The projections from the various editions of *Projections of Education Statistics* were placed in 1982–84 dollars using the Consumer Price Indices that appeared in each edition.

In most of the earlier editions of *Projections of Education Statistics,* average daily attendance rather than fall enrollment was used as the measure of enrollment in the calculation of the current expenditure per pupil projection. However, projections of current expenditures per fall enrollment were presented in most of these earlier editions, and projections of fall enrollment were presented in all of these earlier editions. As a result, the projected values of both current expenditures per pupil in fall enrollment and current expenditures per pupil in average daily attendance can be compared to their respective actual values.

Similar sets of independent variables have been used in the production of the current expenditure projections presented in the last 14 editions of *Projections of Education Statistics*, including this one. The one major change is that in all the earlier editions except the *Projections of Education Statistics to 2015*, the set of variables included the ratio of the number of students to the population. There have also been some differences in the construction of the variables. First, as noted, average daily attendance was used in most of the previous editions rather than fall enrollment. Second, in *Projections of Education Statistics to 1997–98*, calendar year data were used for disposable income, the population, and the Consumer Price Index. With the later editions, school year data were used. Third, there have been two revisions in the disposable income time series, the first affecting the *Projections of Education Statistics to 2004* and the second, *Projections of Education Statistics to 2007*. Fourth, in the more recent editions, including this one, the U.S. Bureau of the Census's July 1 number for the population has been used. In the earlier editions, an average of the quarterly values was used. Fifth, in the more recent editions, the U.S. Census Bureau's population projections have been used. In the earlier editions, the population projections came from an economic consulting firm.

There has also been a change in the estimation procedure. In the more recent editions, the AR1 model for correcting for autocorrelation was used to estimate the model. In the earlier editions, ordinary least squares without correcting for autocorrelation was used to estimate the model.

Several commonly used statistics can be used to evaluate projections. The values for one of these, the mean absolute percentage error (MAPE), are presented in table A-2. MAPEs of expenditure projections are presented for total current expenditures, current expenditures per pupil in fall enrollment, current expenditures per pupil in average daily attendance, and teacher salaries.

For some editions of the *Projections of Education Statistics*, the first projection to be listed did not have a lead time of 1 year. For example, in *Projections of Education Statistics to 2002*, the first projection to appear was for 1990–91. This projection was calculated using a sample period ending in 1988–89, so it had a lead time of 2 years. The value that appeared for 1989–1990 was from NCES *Early Estimates*. Only those projections that appeared in an edition of *Projections of Education Statistics* were used in this evaluation.

An analysis of projection errors from similar models used in the past sixteen editions of *Projections of Education Statistics* that contained expenditure projections indicates that mean absolute percentage errors (MAPEs) for total current expenditures in constant dollars were 1.4 percent for 1 year out, 2.3 percent for 2 years out, 2.9 percent for 5 years out, and 3.6 percent for 10 years out. For the 1-year-out prediction, this means that one would expect the projection to be within 1.4 percent of the actual value, on average. MAPEs for current expenditure per pupil in current dollars were 1.4 percent for 1 year out, 2.2 percent for 2 years out, 3.3 percent for 5 years out, and 5.5 percent for 10 years out. For more information on the MAPEs, see table A-2.

Sources of Past and Projected Data

Data from several different sources were used to produce the projections in this report. In some instances, the time series used were made by either combining numbers from various sources or manipulating the available numbers. The sources and the methods of manipulation are described here.

The time series used for current expenditures was compiled from several different sources. For the school years ending in even numbers from 1969–70 to 1975–76, the numbers for current expenditures were taken from various issues of *Statistics of State School Systems*, published by NCES. For the school years ending in odd numbers during the 1970s, up to and including 1976–77, the numbers were taken from various issues of *Revenues and Expenditures for Public Elementary and Secondary Education*, published by NCES. For the school years from 1977–78 until 2003–04, the data were from the NCES Common Core of Data survey and unpublished data.

For 1974–75 and 1976–77, expenditures for summer schools were subtracted from the published figures for current expenditures. The value for 1972–73 was the sum of current expenditures at the local level, expenditures for administration by state boards of education and state departments of education, and expenditures for administration by intermediate administrative units.

Note that although the data from the different sources are similar, they are not entirely consistent. Also, the NCES data beginning with 1980–81 are not entirely consistent with the earlier NCES numbers, due to differing treatments of items such as expenditures for administration by state governments and expenditures for community services.

An alternative source for current expenditures would have been the U.S. Census Bureau's F-33, which offers statistics at the district level. This level of detail was not needed, however.

For most years, the sources for the past values of average daily attendance were identical to the sources for current expenditures.

Projections for average daily attendance for the period from 2004–05 to 2016–17 were made by multiplying the projections for enrollment by the average value of the ratios of average daily attendance to the enrollment from 1990–91 to 2003–04; this average value was approximately .93.

The values for fall enrollment from 1979–80 to 2004–05 were taken from the NCES Common Core of Data survey. The projections for fall enrollment are those presented in chapter 1 of this publication.

For 1969–70 to 2003–04, the sources for revenue from state sources were the two NCES publications *Statistics of State School Systems* and *Revenues and Expenditures for Public Elementary and Secondary Education*, and the NCES Common Core of Data survey. The methods for producing the alternative projections for revenue from state sources are outlined above.

The projected values for disposable income, personal taxes and non-tax receipts to state and local governments, and indirect business taxes and tax accruals to state and local governments were developed using projections developed by Global Insight's U.S. Quarterly Model. Projected values of the Consumer Price Index for all urban consumers, which was used for adjusting current expenditures, revenue from state sources, and the state revenue variables, were also developed using the U.S. Quarterly Model.

The U.S. Census Bureau supplied both the historical and projected values for the population.

The values of all the variables from Global Insight were placed in school-year terms. The school-year numbers were calculated by taking the average of the last two quarters of one year and the first two quarters of the next year.

The Elementary and Secondary School Price Index was considered as a replacement for the Consumer Price Index for placing current expenditures and teacher salaries in constant dollars. This index could not be used because the required projections of the index were not available. There are other price indexes, such as the implicit price deflator for state and local government purchases, which could have been used instead of the Consumer Price Index. These alternatives would have produced somewhat different projections.

Table A-26. Estimated equations and model statistics for current expenditures per pupil in fall enrollment and education revenue from state sources

Dependent variable	Equation	R^2	Durbin-Watson statistic	Error distribution pattern[1]	Rho	Time period
Current expenditures per pupil	ln(CUREXP) = 0.9 + 0.6ln(PCI) + 0.2ln(SGRANT) (3.4) (2.2)	0.99	1.6^	AR(1)	0.94 (19.3)	1973–74 to 2003–04
Education revenue from state sources per capita	ln(SGRNT) = 0.9 + 1.2ln(PCI) + 0.9ln(ENRPOP) (21.4) (6.4)	0.99	1.7*	AR(1)	0.41 (2.6)	1973–74 to 2003–04

* p<.05.

^ The Durbin-Watson statistic is inconclusive as to whether to either accept or reject the hypothesis of no autocorrelation at the .05 significance level. For an explanation of the Durbin-Watson statistic, see J. Johnston and J. Dinardo, *Econometric Methods*, New York: McGraw-Hill, 1996.

[1]AR(1) indicates that the models was estimated using least squares with the AR(1) process for correcting for first-order autocorrelation. For a general discussion of the problem of autocorrelation, and the method used to forecast when correcting for autocorrelation, see G. Judge, W. Hill, R. Griffiths, H. Lutkepohl, and T. Lee, *The Theory and Practice of Econometrics*, New York: John Wiley and Sons, 1985, pp. 315–318.

Where:

CUREXP = Current expenditures of public elementary and secondary schools per pupil in fall enrollment in constant 1982–84 dollars

SGRANT = Local governments' education revenue from state sources, per capita, in constant 1982–84 dollars

PCI = Disposable income per capita in constant 2000 chained dollars

ENRPOP = Ratio of fall enrollment to the population

NOTE: R^2 indicates the coefficient of determination. Rho measures the correlation between errors in time period t and time period t minus 1. Numbers in parentheses are t-statistics.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Elementary and Secondary School Current Expenditures Model, 1969–70 through 2003–04; and Revenue Receipts from State Sources Model, 1971–72 through 2003–04. (This table was prepared December 2006.)

Page intentionally left blank

Appendix B
Supplementary Tables

Table B-1. Annual number of births: 1946 through 2004

[In thousands]

Calendar year	Number of births	Calendar year	Number of births
1946	3,426	1976	3,168
1947	3,834	1977	3,327
1948	3,655	1978	3,333
1949	3,667	1979	3,494
1950	3,645	1980	3,612
1951	3,845	1981	3,629
1952	3,933	1982	3,681
1953	3,989	1983	3,639
1954	4,102	1984	3,669
1955	4,128	1985	3,761
1956	4,244	1986	3,757
1957	4,332	1987	3,809
1958	4,279	1988	3,910
1959	4,313	1989	4,041
1960	4,307	1990	4,158
1961	4,317	1991	4,111
1962	4,213	1992	4,065
1963	4,142	1993	4,000
1964	4,070	1994	3,953
1965	3,801	1995	3,900
1966	3,642	1996	3,891
1967	3,555	1997	3,881
1968	3,535	1998	3,942
1969	3,626	1999	3,959
1970	3,739	2000	4,059
1971	3,556	2001	4,026
1972	3,258	2002	4,022
1973	3,137	2003	4,090
1974	3,160	2004	4,112
1975	3,144		

NOTE: Some data have been revised from previously published figures.
SOURCE: U.S. Department of Health and Human Services, National Center for Health Statistics (NCHS), *Annual Summary of Births, Marriages, Divorces, and Deaths: United States*, various years, *National Vital Statistics Reports*. (This table was prepared January 2007.)

Table B-2. Actual and projected numbers for preprimary school-age populations: 1991 through 2016

[In thousands]

Year (July 1)	3- to 5-year-olds	3-year-olds	4-year-olds	5-year-olds
Actual				
1991	11,151	3,723	3,722	3,707
1992	11,346	3,824	3,790	3,732
1993	11,692	3,989	3,898	3,805
1994	12,001	4,023	4,066	3,912
1995	12,188	4,004	4,103	4,081
1996	12,141	3,936	4,086	4,119
1997	12,019	3,894	4,021	4,104
1998	11,880	3,862	3,979	4,040
1999	11,768	3,827	3,946	3,996
2000	11,700	3,824	3,905	3,971
2001	11,576	3,815	3,839	3,923
2002	11,507	3,822	3,830	3,856
2003	11,563	3,882	3,836	3,846
2004	11,795	4,050	3,894	3,851
2005	11,977	4,007	4,062	3,908
Projected				
2006	12,266	4,101	4,081	4,084
2007	12,331	4,133	4,109	4,089
2008	12,427	4,170	4,140	4,116
2009	12,534	4,209	4,177	4,148
2010	12,650	4,250	4,216	4,184
2011	12,772	4,293	4,256	4,223
2012	12,901	4,338	4,300	4,263
2013	13,033	4,381	4,345	4,307
2014	13,160	4,420	4,388	4,352
2015	13,277	4,455	4,427	4,395
2016	13,381	4,485	4,462	4,435

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Projections are from the U.S. Census Bureau's middle series. SOURCE: U.S. Department of Commerce, Census Bureau, Population Estimates, retrieved October 10 and 11, 2006, from http://www.census.gov/popest/archives/EST90INTERCENSAL/US-EST90INT-datasets.html and http://www.census.gov/popest/national/asrh/2005_nat_af.html; and Population Projections, retrieved October 10 and 11, 2006, from http://www.census.gov/ipc/www/usinterimproj/. (This table was prepared November 2006.)

Table B-3. Actual and projected numbers for school-age populations, ages 5, 6, 5 to 13, and 14 to 17: 1991 through 2016

[In thousands]

Year (July 1)	5-year-olds	6-year-olds	5- to 13-year-olds	14- to 17-year-olds
Actual				
1991	3,707	3,686	32,609	13,491
1992	3,732	3,715	33,199	13,775
1993	3,805	3,743	33,761	14,096
1994	3,912	3,814	34,217	14,637
1995	4,081	3,919	34,825	15,013
1996	4,119	4,088	35,375	15,443
1997	4,104	4,127	35,915	15,769
1998	4,040	4,112	36,454	15,829
1999	3,996	4,045	36,804	16,007
2000	3,971	4,008	37,051	16,122
2001	3,923	3,989	37,077	16,183
2002	3,856	3,941	36,971	16,354
2003	3,846	3,874	36,765	16,504
2004	3,851	3,862	36,371	16,826
2005	3,908	3,865	36,087	17,079
Projected				
2006	4,084	3,923	35,907	17,306
2007	4,089	4,092	35,909	17,289
2008	4,116	4,098	36,012	17,060
2009	4,148	4,124	36,186	16,801
2010	4,184	4,155	36,439	16,566
2011	4,223	4,192	36,805	16,318
2012	4,263	4,230	37,229	16,134
2013	4,307	4,271	37,670	16,023
2014	4,352	4,315	38,106	16,011
2015	4,395	4,360	38,418	16,243
2016	4,435	4,403	38,765	16,496

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Projections are from the U.S. Census Bureau's middle series.
SOURCE: U.S. Department of Commerce, Census Bureau, Population Estimates, retrieved October 10 and 11, 2006, from http://www.census.gov/popest/archives/EST90INTERCENSAL/US-EST90INT-datasets.html and http://www.census.gov/popest/national/asrh/2005_nat_af.html; and Population Projections, retrieved October 10 and 11, 2006, from http://www.census.gov/ipc/www/usinterimproj/. (This table was prepared November 2006.)

Table B-4. Actual and projected numbers for college-age populations, ages 18, 18 to 24, 25 to 29, 30 to 34, and 35 to 44: 1991 through 2016

[In thousands]

Year (July 1)	18-year-olds	18- to 24-year-olds	25- to 29-year-olds	30- to 34-year-olds	35- to 44-year-olds
Actual					
1991	3,410	26,655	21,044	22,387	39,413
1992	3,354	26,282	20,591	22,564	40,046
1993	3,455	26,102	20,146	22,646	40,975
1994	3,428	25,821	19,809	22,648	41,877
1995	3,601	25,585	19,742	22,425	42,765
1996	3,650	25,376	19,927	21,996	43,605
1997	3,780	25,574	19,960	21,494	44,282
1998	3,984	26,155	19,863	20,999	44,802
1999	3,993	26,780	19,632	20,647	45,130
2000	4,075	27,387	19,353	20,576	45,231
2001	4,071	28,061	18,984	20,766	45,170
2002	4,028	28,555	18,961	20,851	44,837
2003	4,127	29,045	19,182	20,763	44,453
2004	4,126	29,355	19,607	20,503	44,152
2005	4,121	29,402	20,116	20,110	43,906
Projected					
2006	4,233	29,372	20,360	19,493	43,378
2007	4,316	29,616	20,811	19,382	42,929
2008	4,446	29,980	21,161	19,531	42,338
2009	4,429	30,342	21,362	19,873	41,672
2010	4,356	30,565	21,426	20,310	41,168
2011	4,293	30,692	21,462	20,849	40,889
2012	4,212	30,739	21,536	21,288	40,789
2013	4,168	30,671	21,682	21,630	40,794
2014	4,122	30,478	21,929	21,828	40,829
2015	4,048	30,084	22,246	21,896	40,840
2016	4,031	29,692	22,515	21,938	40,990

NOTE: Some data have been revised from previously published figures. Detail may not sum to totals because of rounding. Projections are from the U.S. Census Bureau's middle series.
SOURCE: U.S. Department of Commerce, Census Bureau, Population Estimates, retrieved October 10 and 11, 2006, from http://www.census.gov/popest/archives/EST90INTERCENSAL/US-EST90INT-datasets.html and http://www.census.gov/popest/national/asrh/2005_nat_af.html; and Population Projections, retrieved October 10 and 11, 2006, from http://www.census.gov/ipc/www/usinterimproj/. (This table was prepared November 2006.)

Table B-5. Actual and projected numbers for fall enrollment in public elementary and secondary schools, change in fall enrollment from previous year, population, and fall enrollment as a ratio of the population: 1991–92 through 2016–17

School year	Fall enrollment (in thousands)	Change in fall enrollment from previous year (in thousands)	Population (in millions)	Fall enrollment as a ratio of the population
Actual				
1991–92	42,047	830	253.5	0.166
1992–93	42,823	776	256.9	0.167
1993–94	43,465	642	260.3	0.167
1994–95	44,111	647	263.4	0.167
1995–96	44,840	729	266.6	0.168
1996–97	45,611	771	269.7	0.169
1997–98	46,127	516	272.9	0.169
1998–99	46,539	412	276.1	0.169
1999–2000	46,857	319	279.3	0.168
2000–01	47,204	346	282.4	0.167
2001–02	47,672	468	285.3	0.167
2002–03	48,183	511	288.2	0.167
2003–04	48,540	357	291.1	0.167
2004–05	48,795	255	293.9	0.166
Projected				
2005–06	49,028	233	296.6	0.165
2006–07	49,370	342	298.4	0.165
2007–08	49,610	240	301.1	0.165
2008–09	49,812	202	303.8	0.164
2009–10	50,028	216	306.5	0.163
2010–11	50,303	275	309.2	0.163
2011–12	50,653	350	311.8	0.162
2012–13	51,093	440	314.5	0.162
2013–14	51,579	487	317.2	0.163
2014–15	52,135	556	319.9	0.163
2015–16	52,733	598	322.6	0.163
2016–17	53,300	567	325.3	0.164

NOTE: Calculations were made using unrounded numbers. Some data have been revised from previously published figures.
SOURCE: U.S. Department of Commerce, Census Bureau, *Current Population Estimates and Projections* (September 2004). U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 1991–92 through 2004–05; and Elementary and Secondary Enrollment Model, 1972–2004. (This table was prepared December 2006.)

Table B-6. Actual and alternative projected numbers for macroeconomic measures of the economy: School years 1991–92 through 2016–17

School year	Disposable income per capita[1]	Education revenue receipts from state sources per capita[2]	Consumer Price Index
Actual			
1991–92	23,505	595	0.721
1992–93	23,751	594	0.743
1993–94	23,843	592	0.763
1994–95	24,338	618	0.785
1995–96	24,603	636	0.806
1996–97	25,114	655	0.829
1997–98	26,026	685	0.844
1998–99	26,912	714	0.859
1999–2000	27,558	748	0.883
2000–01	28,191	774	0.913
2001–02	28,756	779	0.930
2002–03	28,922	783	0.950
2003–04	29,686	769	0.971
2004–05	30,183	789	1.000
Middle alternative projections			
2005–06	30,442	801	1.034
2006–07	31,440	838	1.053
2007–08	32,108	858	1.073
2008–09	32,929	882	1.094
2009–10	33,787	908	1.115
2010–11	34,498	929	1.137
2011–12	35,085	947	1.160
2012–13	35,722	969	1.186
2013–14	36,444	994	1.211
2014–15	37,267	1,023	1.237
2015–16	38,146	1,056	1.263
2016–17	39,036	1,089	1.290
Low alternative projections			
2005–06	30,383	799	1.035
2006–07	31,111	827	1.060
2007–08	31,535	839	1.091
2008–09	32,156	857	1.126
2009–10	32,823	876	1.160
2010–11	33,301	889	1.194
2011–12	33,660	900	1.234
2012–13	34,141	916	1.277
2013–14	34,717	936	1.324
2014–15	35,447	962	1.374
2015–16	36,217	990	1.427
2016–17	36,973	1,018	1.481
High alternative projections			
2005–06	30,459	802	1.033
2006–07	31,643	844	1.046
2007–08	32,633	875	1.061
2008–09	33,669	907	1.076
2009–10	34,735	939	1.092
2010–11	35,665	968	1.109
2011–12	36,454	993	1.127
2012–13	37,296	1,022	1.145
2013–14	38,162	1,052	1.163
2014–15	39,027	1,084	1.180
2014–15	39,973	1,119	1.199
2016–17	41,011	1,157	1.220

[1]In 2003–04 dollars based on the price deflator for personal consumption expenditures, Bureau of Labor Statistics, U.S. Department of Labor.
[2]In 2003–04 dollars based on the Consumer Price Index for all urban consumers, Bureau of Labor Statistics, U.S. Department of Labor.
NOTE: Calculations were made using unrounded numbers. Some data have been revised from previously published figures.
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 1989–90 through 2003–04; Revenue Receipts From State Sources Model, 1971–72 through 2003–04; and Global Insight, Inc., "U.S. Quarterly Model: February 2006 Long-Term-Projections." (This table was prepared December 2006.)

Page intentionally left blank

Appendix C
Data Sources

Sources and Comparability of Data

The information in this report was obtained from many sources, including federal and state agencies, private research organizations, and professional associations. The data were collected by many methods, including surveys of a universe (such as all colleges) or of a sample, and compilations of administrative records. Care should be used when comparing data from different sources. Differences in procedures, such as timing, phrasing of questions, and interviewer training, mean that the results from the different sources are not strictly comparable. More extensive documentation of one survey's procedures than of another's does not imply more problems with the data, only that more information is available on the survey.

Accuracy of Data

The accuracy of any statistic is determined by the joint effects of "sampling" and "nonsampling" errors. Estimates based on a sample will differ from the figures that would have been obtained if a complete census had been taken using the same survey instruments, instructions, and procedures. Besides sampling errors, both of the surveys, universe and sample, are subject to errors of design, reporting, and processing, and errors due to nonresponse. To the extent possible, these nonsampling errors are kept to a minimum by methods built into the survey procedures. In general, however, the effects of nonsampling errors are more difficult to gauge than those produced by sampling variability.

Sampling Errors

The standard error is the primary measure of sampling variability. It provides a specific range—with a stated confidence—within which a given estimate would lie if a complete census had been conducted. The chances that a complete census would differ from the sample by less than the standard error are about 68 out of 100. The chances that the difference would be less than 1.65 times the standard error are about 90 out of 100. The chances that the difference would be less than 1.96 times the standard error are about 95 out of 100. The chances that it would be less than 2.58 times as large are about 99 out of 100.

The standard error can help assess how valid a comparison between two estimates might be. The standard error of a difference between two sample estimates that are uncorrelated is approximately equal to the square root of the sum of the squared standard errors of the estimates. The standard error (se) of the difference between sample estimate "a" and sample estimate "b" is

$$se_{a-b} = (se_a^2 + se_b^2)^{1/2}$$

Note that most of the standard errors in subsequent sections and in the original documents are approximations. That is, to derive estimates of standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, most of the standard errors presented provide a general order of magnitude rather than the exact standard error for any specific item.

Nonsampling Errors

Both universe and sample surveys are subject to nonsampling errors. Nonsampling errors are of two kinds—random and nonrandom. Random nonsampling errors may arise when respondents or interviewers interpret questions differently, when respondents must estimate values, or when coders, keyers, and other processors handle answers differently. Nonrandom nonsampling errors result from total nonresponse (no usable data obtained for a sampled unit), partial or item nonresponse (only a portion of a response may be usable), inability or unwillingness on the part of respondents to provide information, difficulty interpreting questions, mistakes in recording or keying data, errors of collection or processing, and overcoverage or undercoverage of the target universe. Random nonresponse errors usually, but not always, result in an understatement of sampling errors and thus an overstatement of the precision of survey estimates. Because estimating the magnitude of nonsampling errors would require special experiments or access to independent data, these magnitudes are seldom available.

To compensate for suspected nonrandom errors, adjustments of the sample estimates are often made. For example, adjustments are frequently made for nonresponse, both total and partial. Imputations are usually made separately within various groups of sample members that have similar survey characteristics. Imputation for item nonresponse is usually made by substituting for a missing item the response to that item of a respondent having characteristics similar to those of the respondent.

Although the magnitude of nonsampling errors in the data used in *Projections of Education Statistics* is frequently unknown, idiosyncrasies that have been identified are noted on the appropriate tables.

Federal Agency Sources

National Center for Education Statistics (NCES)

Common Core of Data

NCES uses the Common Core of Data (CCD) to acquire and maintain statistical data from each of the 50 states, the District of Columbia, the Bureau of Indian Affairs, Department of Defense Dependents' Schools (overseas), and the outlying areas. Information about staff and students is collected annually at the school, local education agency or school district (LEA), and state levels. Information about revenues and expenditures is also collected at the state and LEA levels.

Data are collected for a particular school year (July 1 through June 30) via survey instruments sent to the state education agencies during the school year. States have 1 year in which to modify the data originally submitted.

Since the CCD is a universe survey, the CCD information presented in this edition of the *Projections of Education Statistics* is not subject to sampling errors. However, nonsampling errors could come from two sources—nonresponse and inaccurate reporting. Almost all of the states submit the five CCD survey instruments each year, but submissions are sometimes incomplete or too late for publication.

Understandably, when 58 education agencies compile and submit data for approximately 94,000 public schools and 17,000 local school districts, misreporting can occur. Typically, this results from varying interpretations of NCES definitions and differing recordkeeping systems. NCES attempts to minimize these errors by working closely with the state education agencies through the National Forum on Education Statistics.

The state education agencies report data to NCES from data collected and edited in their regular reporting cycles. NCES encourages the agencies to incorporate into their own survey systems the NCES items they do not already collect so that these items will also be available for the subsequent CCD survey. Over time, this has meant fewer missing data cells in each state's response, reducing the need to impute data.

NCES subjects data from the state education agencies to a comprehensive edit. Where data are determined to be inconsistent, missing, or out of range, NCES contacts the agencies for verification. NCES-prepared state summary forms are returned to the agencies for verification. States are also given an opportunity to revise their state-level aggregates from the previous survey cycle.

Further information on the nonfiscal CCD may be obtained from

John Sietsema
Elementary/Secondary and Libraries Studies Division
Elementary/Secondary Cooperative System and
Institutional Studies Program
National Center for Education Statistics
1990 K Street NW
Washington, DC 20006
john.sietsema@ed.gov
http://nces.ed.gov/ccd/

Further information on the fiscal CCD data may be obtained from

Frank H. Johnson
Elementary/Secondary and Libraries Studies Division
Elementary/Secondary Cooperative System and
Institutional Studies Program
National Center for Education Statistics
1990 K Street NW
Washington, DC 20006
frank.johnson@ed.gov
http://nces.ed.gov/ccd/

Private School Universe Survey

The purposes of Private School Universe Survey (PSS) data collection activities are to build an accurate and complete list of private schools to serve as a sampling frame for NCES sample surveys of private schools, and to report data on the total number of private schools, teachers, and students in the survey universe. The PSS is conducted every 2 years, with collections in the 1989–90, 1991–92, 1993–94, 1995–96, 1997–98, 1999–2000, 2001–02, and 2003–04 school years.

The PSS produces data similar to that of the CCD for public schools and can be used for public-private comparisons. The data are useful for a variety of policy and research-relevant issues, such as the growth of religiously affiliated schools, the number of private high school graduates, the length of the school year for various private schools, and the number of private school students and teachers.

The target population for this universe survey is all private schools in the United States that meet the NCES criteria of a school (i.e., a private school is an institution that provides instruction for any of grades K through 12, has one or more teachers to give instruction, is not administered by a public agency, and is not operated in a private home). The survey universe is composed of schools identified from a variety of sources. The main source is a list frame, initially developed for the 1989–90 PSS. The list is updated regularly, matching it with lists provided by nationwide private school associations, state departments of education, and other national guides and sources that list private schools. The other source is an area frame search in approximately 120 geographic areas, conducted by the U.S. Census Bureau.

Further information on the PSS may be obtained from

Steve Broughman
Elementary/Secondary and Libraries Studies Division
Elementary/Secondary Sample Survey Studies Program
National Center for Education Statistics
1990 K Street NW
Washington, DC 20006
stephen.broughman@ed.gov
http://nces.ed.gov/surveys/pss/

Integrated Postsecondary Education Data System

The Integrated Postsecondary Education Data System (IPEDS) surveys approximately 6,500 postsecondary institutions, including universities and colleges, as well as institutions offering technical and vocational education beyond the high school level. IPEDS, which began in 1986, replaced the Higher Education General Information Survey (HEGIS).

IPEDS consists of nine integrated components that obtain information on who provides postsecondary education (institutions), who participates in it and completes it (students), what programs are offered and what programs are completed, and both the human and financial resources involved in the provision of institutionally-based postsecondary education. Until 2000 these components included: institutional characteristics, fall enrollment, completions, salaries, finance, and fall staff. Data are collected in the fall for institutional characteristics and completions; in the winter for employees by assigned position (EAP), salaries and fall staff; and in spring for enrollment, student financial aid, finances, and graduation rates.

The degree-granting institutions portion of IPEDS is a census of colleges awarding associate's or higher degrees, that are eligible to participate in Title IV financial aid programs. Prior to 1993, data from technical and vocational institutions were collected through a sample survey. Beginning in 1993, all data were gathered in a census of all postsecondary institutions. The IPEDS tabulations developed for this edition of *Projections of Education Statistics* are based on lists of all institutions and are not subject to sampling errors.

The definition of institutions generally thought of as offering college and university education has changed in recent years. The old standard for higher education institutions included those institutions that had courses leading to an associate degree or higher, or that had courses accepted for credit toward those degrees. The higher education institutions were accredited by an agency or association that was recognized by the U.S. Department of Education, or were recognized directly by the Secretary of Education. The current category includes institutions that award associate or higher level degrees and that are eligible to participate in Title IV federal financial aid programs. The impact of this change has generally not been large. For example, tables on degrees awarded at the bachelor's level or higher were not heavily affected. Most of the data on public 4-year colleges have been affected only to a minimal extent. The impact on enrollment in public 2-year colleges was noticeable in certain states, but relatively small at the national level. The largest impact has been on private 2-year college enrollment. Overall, total enrollment for all institutions was about one-half of a percent higher for degree-granting institutions than for higher education institutions.

Prior to the establishment of IPEDS in 1986, HEGIS acquired and maintained statistical data on the characteristics and operations of institutions of higher education. Implemented in 1966, HEGIS was an annual universe survey of institutions accredited at the college level by an agency recognized by the Secretary of the U.S. Department of Education. These institutions were listed in the NCES publication *Education Directory, Colleges and Universities*.

HEGIS surveys solicited information concerning institutional characteristics, faculty salaries, finances, enrollment, and degrees. Since these surveys were distributed to all higher education institutions, the data presented are not subject to sampling error. However, they are subject to nonsampling error, the sources of which varied with the survey instrument. Information concerning the nonsampling error of the HEGIS enrollment and degrees surveys can be obtained from the HEGIS Post Survey Validation Study conducted in 1979.

Elise Miller
Postsecondary Studies Division
Postsecondary Institutional Studies Program
National Center for Education Statistics
1990 K Street NW
Washington, DC 20006
elise.miller@ed.gov
http://nces.ed.gov/ipeds/

Fall (Institutional Characteristics) This survey collects the basic information necessary to classify institutions, including control, level, and types of programs offered, as well as information on tuition, fees, and room and board charges. Beginning in 2000, the survey collected institutional pricing data from institutions with first-time, full-time, degree/certificate-seeking undergraduate students. Unduplicated full-year enrollment counts and instructional activity are now collected in the fall enrollment survey. The overall response rate was 100.0 percent for Title IV degree-granting institutions in 2003.

Further information may be obtained from

Patricia Brown
Postsecondary Studies Division
Postsecondary Institutional Studies Program
National Center for Education Statistics
1990 K Street NW
Washington, DC 20006
patricia.brown@ed.gov
http://nces.ed.gov/ipeds/

Winter/Spring (Fall Enrollment) This survey has been part of the HEGIS and IPEDS series since 1966. The enrollment survey response rate is nearly 100 percent. Beginning in 2000, the data collection method became web-based, replacing the paper survey forms that had been used in past years, resulting in higher responses rates. In 2004–05, the overall response rate was 100.0 percent for degree-granting, 4-year public and not-for-profit institutions, and 99.9 and 99.6 percent, respectively, for 2-year public and not-for-profit institutions. Imputation methods and the response bias analysis for the 2004–05 survey are discussed in *Enrollment in Postsecondary Institutions, Fall 2004; Graduation Rates, 1998 & 2001 Cohorts; and Financial Statistics, Fiscal Year 2004* (NCES 2006-155).

Beginning with the fall 1986 survey, the survey was redesigned, with the introduction of IPEDS (see above). The survey allows (in alternating years) for the collection of age and residence data. In 2000, the survey collected instructional activity and unduplicated headcount data, which are needed to compute a standardized, full-time-equivalent (FTE) enrollment statistic for the entire academic year.

The Integrated Postsecondary Education Data System Data Quality Study (NCES 2005-175) showed that public institutions made the majority of changes to enrollment data during the 2004 revision period. The majority of changes were made to unduplicated headcount data, with the net differences between the original data and the revised data at about 1 percent. Part-time students in general and enrollment in private not-for-profit institutions were often underestimated. The fewest changes by institutions were to CIP code data. More institutions provided enrollment data to IPEDS than to Thomson Peterson. A fairly high percentage of institutions that provided data to both provided the same data, and among those that did not, the difference in magnitude was less than 10 percent.

Further information about the Winter/Spring (Fall Enrollment) survey may be obtained from

Frank Morgan
Postsecondary Studies Division
Postsecondary Institutional Studies Program
National Center for Education Statistics
1990 K Street NW
Washington, DC 20006
frank.morgan@ed.gov
http://nces.ed.gov/ipeds/

Fall (Completions) This survey was part of the HEGIS series throughout its existence. However, the degree classification taxonomy was revised in 1970–71, 1982–83, 1991–92, and 2002–03. Collection of degree data has been maintained through IPEDS.

The nonresponse rate does not appear to be a significant source of nonsampling error for this survey. The response rate over the years has been high, with the degree-granting institutions response rate for the 2004-

05 survey at 99.9 percent. The overall response rate for non-degree granting institutions was 99.6 percent in 2004-05. Because of the high response rate for degree-granting institutions, nonsampling error caused by imputation is also minimal. Imputation methods and the response bias analysis for the 2004-05 survey are discussed in *Postsecondary Institutions in the United States: Fall 2004 and Degrees and Other Awards Conferred: 2003-04* (NCES 2005-182).

The Integrated Postsecondary Education Data System Data Quality Study, Methodology Report (NCES 2005-175) indicated that most Title IV institutions supplying revised data on completions were able to supply missing data for the prior year. The small differences between imputed data for the prior year and the revised actual data supplied by the institution indicated that the imputed values produced by NCES were acceptable.

Further information on the IPEDS Completions surveys may be obtained from

Andrew Mary
Postsecondary Studies Division
Postsecondary Institutional Studies Program
National Center for Education Statistics
1990 K Street NW
Washington, DC 20006
andrew.mary@ed.gov
http://nces.ed.gov/ipeds/

Census Bureau

Current Population Survey

Prior to July 2001, estimates of school enrollment rates, as well as social and economic characteristics of students, were based on data collected in the Census Bureau's monthly household survey of about 50,000 dwelling units. Beginning in July 2001, this sample was expanded to 60,000 dwelling units. The monthly Current Population Survey (CPS) sample consists of 754 areas comprising 2,007 geographic areas, independent cities, and minor civil divisions throughout the 50 states and the District of Columbia. The samples are initially selected based on the decennial census files and are periodically updated to reflect new housing construction.

The monthly CPS deals primarily with labor force data for the civilian noninstitutional population (i.e., excluding military personnel and their families living on post and inmates of institutions). In addition, in October of each year, supplemental questions are asked about highest grade completed, level and grade of current enrollment, attendance status, number and type of courses, degree or certificate objective, and type of organization offering instruction for each member of the household. In March of each year, supplemental questions on income are asked. The responses to these questions are combined with answers to two questions on educational attainment: highest grade of school ever attended and whether that grade was completed.

The estimation procedure employed for monthly CPS data involves inflating weighted sample results to independent estimates of characteristics of the civilian noninstitutional population in the United States by age, sex, and race. These independent estimates are based on statistics from decennial censuses; statistics on births, deaths, immigration, and emigration; and statistics on the population in the armed services. Generalized standard error tables are provided in the *Current Population Reports*. The data are subject to both nonsampling and sampling errors.

Caution should also be used when comparing data between Census years. With the release of the January 2003 CPS data, population controls that reflect the results of Census 2000 were used in the monthly CPS estimation process. The new controls increased the size of the civilian noninstitutional population by about 3.5 million in May 2002. This adjustment usually occurs 3 to 4 years after the census, and, if the adjustment is substantial, historical data will be revised. Data from January 2000 through December 2002 were revised to reflect these new controls. Over and above these revisions, the U.S. Census Bureau introduced another large upward adjustment to the controls as part of its annual update of population estimates for 2003. The prior change in population controls occurred in March 1993, where data after this date were based on the 1990 census-based population controls and data before this date were based on 1980 or earlier census based population controls. This change in population controls between 1980-based and 1990-based had relatively little impact on summary measures, such as means, medians, and percentage distributions. It does, however, have a significant impact on levels. For example, use of 1990-based population controls resulted in about a 1 percent increase in the civilian noninstitutional population and in the number of families and households. Thus, estimates of levels for data collected in 1994 and later years differed from those for earlier years by more than what could be attributed to actual changes in the population. These differences could be disproportionately greater for certain subpopulation groups than for the total population.

In addition to the changes in population controls, two other relevant changes were introduced into the CPS with the release of the January 2003 data. First, the questions on race and Hispanic origin in the CPS were modified to comply with the new standards for maintaining, collecting, and presenting Federal data on race and ethnicity for Federal statistical agencies. A major change under those standards is that respondents may select more than one race when answering the survey. Respondents continued to be asked a separate question to determine if they are Hispanic, which is considered an ethnicity rather than a race. The ethnicity question was reworded to ask directly whether the respondent was Hispanic. Persons who report they are Hispanic also are classified separately in the race (or races) they consider themselves to be. Second, improvements were introduced to both the second stage and composite weighting procedures. These changes adapt the weighting procedures to the new race/ethnic classification system and enhance the stability over time of national and state/substate labor force estimates for demographic groups. These two changes, in addition to the change in population controls discussed above, benchmark the CPS data to the results of Census 2000, improve the estimation procedures, and ensure that the data series produced from the survey reflect the evolving composition of the U.S. population.

Further information on CPS may be obtained from

Education and Social Stratification Branch
Population Division
Census Bureau
U.S. Department of Commerce
Washington, DC 20233
http://www.census.gov/cps

School Enrollment Each October, the Current Population Survey (CPS) includes supplemental questions on the enrollment status of the population 3 years old and over, in addition to the monthly basic survey on labor force participation. Prior to 2001, the October supplement consisted of approximately 47,000 interviewed households. Beginning with the October 2001 supplement, the sample was expanded by 9,000 to a total of approximately 56,000 interviewed households. The main sources of non-sampling variability in the responses to the supplement are those inherent in the survey instrument. The question of current enrollment may not be answered accurately for various reasons. Some respondents may not know current grade information for every student in the household, a problem especially prevalent for households with members in college or in nursery school. Confusion over college credits or hours taken by a student may make it difficult to determine the year in which the student is enrolled. Problems may occur with the definition of nursery school (a group or class organized to provide educational experiences for children), where respondents' interpretations of "educational experiences" vary.

The October 2003 basic CPS response rate was 92.7 percent and the school enrollment supplement response rate was 93.7 percent, for a total supplement response rate of 86.9 percent.

The October 2004 basic CPS response rate was 92.3 percent and the school enrollment supplement response rate was 96.0 percent, for a total supplement response rate of 88.6 percent.

Further information on CPS methodology may be obtained from

http://www.census.gov/cps

Further information on CPS "School Enrollment" may be obtained from

Education and Social Stratification Branch
Census Bureau
U.S. Department of Commerce
Washington, DC 20233
http://www.census.gov/population/www/socdemo/school.html

State Population Projections These state population projections were prepared using a cohort-component method by which each component of population change—births, deaths, state-to-state migration flows, international in-migration, and international out-migration—was projected separately for each birth cohort by sex, race, and Hispanic origin. The basic framework was the same as in past Census Bureau projections.

Detailed components necessary to create the projections were obtained from vital statistics, administrative records, census data, and national projections.

The cohort-component method is based on the traditional demographic accounting system:

$$P_1 = P_0 + B - D + DIM - DOM + IIM - IOM$$

where:

P_1 = population at the end of the period

P_0 = population at the beginning of the period

B = births during the period

D = deaths during the period

DIM = domestic in-migration during the period

DOM = domestic out-migration during the period

IIM = international in-migration during the period

IOM = international out-migration during the period

To generate population projections with this model, the Census Bureau created separate datasets for each of these components. In general, the assumptions concerning the future levels of fertility, mortality, and international migration are consistent with the assumptions developed for the national population projections of the Census Bureau.

Once the data for each component were developed, it was a relatively straightforward process to apply the cohort-component method and produce the projections. For each projection year, the base population for each state was disaggregated into eight race and Hispanic categories (non-Hispanic White; non-Hispanic Black; non-Hispanic American Indian, Eskimo, and Aleut; non-Hispanic Asian and Pacific Islander; Hispanic White; Hispanic Black; Hispanic American Indian, Eskimo, and Aleut; and Hispanic Asian and Pacific Islander), by sex, and single year of age (ages 0 to 85+). The next step was to survive each age-sex-race-ethnic group forward 1 year using the pertinent survival rate. The internal redistribution of the population was accomplished by applying the appropriate state-to-state migration rates to the survived population in each state. The projected out-migrants were subtracted from the state of origin and added to the state of destination (as in-migrants). Next, the appropriate number of immigrants from abroad was added to each group. The population under age 1 was created by applying the appropriate age-race-ethnic-specific birth rates to females of childbearing age. The number of births by sex and race/ethnicity were survived forward and exposed to the appropriate migration rate to yield the population under age 1. The final results of the projection process were adjusted to be consistent with the national population projections by single years of age, sex, race, and Hispanic origin. The entire process was then repeated for each year of the projection.

More information is available in the Census Bureau Population Paper Listing 47 (PPL-47) and Current Population Report P25-1131. These reports may be obtained from

Statistical Information Staff
Census Bureau
U.S. Department of Commerce
Washington, DC 20233
(301) 763-3030
http://www.census.gov

Other Sources

National Education Association

Estimates of School Statistics

The National Education Association (NEA) reports enrollment, teacher, revenue, and expenditure data in its annual publication *Estimates of School Statistics*. Each year, NEA prepares regression-based estimates of financial and other education statistics and submits them to the states for verification. Generally, about 30 states adjust these estimates based on their own data. These preliminary data are published by NEA along with revised data from previous years. States are asked to revise previously submitted data as final figures become available. The most recent publication contains all changes reported to the NEA.

Additional information is available from

National Education Association—Research
1201 16th Street NW
Washington, DC 20036
http://www.nea.org

Global Insight, Inc.

Global Insight, Inc. provides an information system that includes: databases of economic and financial information; simulation and planning models; regular publications and special studies; data retrieval and management systems; and access to experts on economic, financial, industrial, and market activities. One service is the Global Insight Model of the U.S. Economy, which contains annual projections of U.S. economic and financial conditions, including forecasts for the federal government, incomes, population, prices and wages, and state and local governments, over a long-term (10- to 25-year) forecast period.

Additional information is available from

Global Insight, Inc.
1000 Winter Street
Suite 4300N
Waltham, MA 02451-124
http://www.globalinsight.com/

Page intentionally left blank

Appendix D
List of Abbreviations

ADA	average daily attendance
BLS	Bureau of Labor Statistics
CCD	Common Core of Data
CPI	Consumer Price Index
EDMOD	Education Forecasting Model
FTE	full-time-equivalent
IPEDS	Integrated Postsecondary Education Data System
MAPE	mean absolute percentage error
NCES	National Center for Education Statistics

Page intentionally left blank

Appendix E
Glossary

Data Terms

American Indian or Alaska Native: A person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.

Asian/Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, and Pacific Islands. This includes people from China, Japan, Korea, the Philippine Islands, American Samoa, India, and Vietnam.

Associate's degree: An award that normally requires at least 2 but less than 4 years of full-time equivalent college work.

Average daily attendance (ADA): The aggregate attendance of a school during a reporting period (normally a school year) divided by the number of days school is in session during this period. Only days on which the pupils are under the guidance and direction of teachers should be considered days in session.

Average daily membership (ADM): The aggregate membership of a school during a reporting period (normally a school year) divided by the number of days school is in session during this period. Only days on which the pupils are under the guidance and direction of teachers should be considered as days in session. The ADM for groups of schools having varying lengths of terms is the average of the ADMs obtained for the individual schools.

Bachelor's degree: An award (baccalaureate or equivalent degree, as determined by the Secretary, U.S. Department of Education) that normally requires at least 4 but not more than 5 years of full-time equivalent college-level work. This includes all bachelor's degrees conferred in a 5-year cooperative (work-study) program. A cooperative plan provides for alternate class attendance and employment in business, industry, or government; thus, it allows students to combine actual work experience with their college studies. Also includes bachelor's degrees in which the normal 4 years of work are completed in 3 years.

Black: A person having origins in any of the black racial groups of Africa (except those of Hispanic origin).

Classroom teacher: A staff member assigned the professional activities of instructing pupils in self-contained classes or courses, or in classroom situations. Usually expressed in full-time-equivalents.

Cohort: A group of individuals that have a statistical factor in common (e.g., year of birth).

College: A postsecondary school that offers a general or liberal arts education, usually leading to an associate's, bachelor's, master's, doctor's, or first-professional degree. Junior colleges and community colleges are included in this term.

Constant dollars: Dollar amounts that have been adjusted by means of price and cost indexes to eliminate inflationary factors and allow direct comparison across years.

Consumer Price Index (CPI): This price index measures the average change in the cost of a fixed-market basket of goods and services purchased by consumers.

Current dollars: Dollar amounts that have not been adjusted to compensate for inflation.

Current expenditures (elementary/secondary): The expenditures for operating local public schools, excluding capital outlay and interest on school debt. These expenditures include such items as salaries for school personnel, fixed charges, student transportation, school books and materials, and energy costs.

Current expenditures per pupil in average daily attendance: Current expenditures for the regular school term divided by the ADA of full-time pupils (or full-time-equivalency of pupils) during the term. See also *Current expenditures* and *Average daily attendance*.

Current Population Survey: See appendix C, Data Sources.

Degree-granting institutions: Postsecondary institutions that are eligible for Title IV federal financial aid programs and that grant an associate's or higher degree. For an institution to be eligible to participate in Title IV financial aid programs it must offer a program of at least 300 clock hours in length, have accreditation recognized by the U.S. Department of Education, have been in business for at least 2 years, and have signed a participation agreement with the Department.

Disposable income: Current income received by persons less their contributions for social insurance, personal tax, and nontax payments. It is the income available to persons for spending and saving. Nontax payments include passport fees, fines and penalties, donations, and tuitions and fees paid to schools and hospitals operated mainly by the government. See also *Personal income*.

Doctor's degree: The highest award a student can earn for graduate study. The doctor's degree classification includes such degrees as Doctor of Education, Doctor of Juridical Science, Doctor of Public Health, and the Doctor of Philosophy degree in any field such as agronomy, food technology, education, engineering, public administration, ophthalmology, or radiology.

Elementary school: A school classified as elementary by state and local practice and composed of any span of grades not above grade 8. A preschool or kindergarten school is included under this heading only if it is an integral part of an elementary school or a regularly established school system.

Elementary and secondary schools: As used in this publication, includes only regular schools, that is, schools that are part of state and local school systems and also most private elementary and secondary schools, both religiously affiliated and nonsectarian. Schools not included in this term are subcollegiate departments of institutions of higher education, federal schools for Indians, and federal schools on military posts and other federal installations.

Enrollment: The number of students registered in a given school unit at a given time, generally in the fall of a year.

Expenditures: Charges incurred, whether paid or unpaid, that are presumed to benefit the current fiscal year. For elementary and secondary schools, these include all charges for current outlays plus capital outlays and interest on school debt. For degree-granting institutions, these include current outlays plus capital outlays. For government, these include charges net of recoveries and other correcting transactions other than for retirement of debt, investment in securities, or extension of credit. Government expenditures include only external transactions, such as the provision of perquisites or other payments in kind. Aggregates for groups of governments exclude intergovernmental transactions.

Expenditures per pupil: Charges incurred for a particular period of time divided by a student unit of measure, such as average daily attendance or average daily membership.

First-professional degree: An award that requires completion of a program that meets all of the following criteria: (1) completion of the academic requirements to begin practice in the profession; (2) at least 2 years of college work prior to entering the program; and (3) a total of at least 6 academic years of college work to complete the degree program, including prior required college work plus the length of the professional program itself. First-professional degrees may be awarded in the following 10 fields: Chiropractic (D.C. or D.C.M.), Dentistry (D.D.S. or D.M.D.), Law (L.L.B., J.D.), Medicine (M.D.), Optometry (O.D.), Osteopathic Medicine (D.O.), Pharmacy (Pharm.D.), Podiatry (D.P.M., D.P., or Pod.D.), Theology (M.Div., M.H.L., B.D., or Ordination), Veterinary Medicine (D.V.M.).

First-professional enrollment: The number of students enrolled in following degree programs: Chiropractic (D.C. or D.C.M.), Dentistry (D.D.S. or D.M.D.), Law (L.L.B., J.D.), Medicine (M.D.), Optometry (O.D.), Osteopathic Medicine (D.O.), Pharmacy (Pharm.D.), Podiatry (D.P.M., D.P., or Pod.D.), Theology (M.Div., M.H.L., B.D., or Ordination), Veterinary Medicine (D.V.M.).

Four-year institution: A postsecondary institution that offers programs of at least 4 years duration or one that offers programs at or above the baccalaureate level. Includes schools that offer postbaccalaureate certificates only or those that offer graduate programs only. Also includes free-standing medical, law or other first-professional schools.

Full-time equivalent (FTE) enrollment: A measurement equal to one student enrolled full time for one academic year. Total FTE enrollment includes full time plus the calculated equivalent of the part-time enrollment. The full-time equivalent of the part-time students can be

estimated using different factors depending on the type and control of institution and level of student.

Full-time-equivalent (FTE) enrollment: For degree-granting institutions, enrollment of full-time students, plus the FTE of part-time students as reported by institutions.

Full-time worker: In educational institutions, an employee whose position requires being on the job on school days throughout the school year at least the number of hours the schools are in session; for higher education, a member of an educational institution's staff who is employed full time.

Graduate: An individual who has received formal recognition for the successful completion of a prescribed program of studies.

Graduate enrollment: The number of students who hold the bachelor's or first-professional degree, or the equivalent, and who are working towards a master's or doctor's degree. First-professional students are counted separately. These enrollment data measure those students who are registered at a particular time during the fall.

High school: A secondary school offering the final years of high school work necessary for graduation, usually including grades 10, 11, and 12 (in a 6-3-3 plan) or grades 9, 10, 11, and 12 (in a 6-2-4 plan).

Higher education: Study beyond secondary school at an institution that offers programs terminating in an associate's, baccalaureate, or higher degree.

Higher education institutions (traditional classifications):

> **4-year institution:** An institution legally authorized to offer and offering at least a 4-year program of college-level studies wholly or principally creditable toward a bachelor's degree. A university is a postsecondary institution that typically includes one or more graduate professional schools.
>
> **2-year institution:** An institution legally authorized to offer and offering at least a 2-year program of college-level studies that terminates in an associate's degree or is principally creditable toward a baccalaureate.

See also *Degree-granting institutions* and *Postsecondary education*.

Hispanic: A person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race.

Master's degree: An award that requires the successful completion of a program of study of at least the full-time equivalent of 1 but not more than 2 academic years of work beyond the bachelor's degree.

Nonresident alien: A person who is not a citizen or national of the United States and who is in this country on a visa or temporary basis and does not have the right to remain indefinitely.

Part-time enrollment: Undergraduate—A student enrolled for either 11 semester credits or less, or 11 quarter credits or less, or less than 24 contact hours a week each term. Graduate—A student enrolled for either 8 semester credits or less, or 8 quarter credits or less.

Personal income: Current income received by persons from all sources minus their personal contributions for social insurance. Classified as "persons" are individuals (including owners of unincorporated firms), nonprofit institutions serving individuals, private trust funds, and private noninsured welfare funds. Personal income includes transfers (payments not resulting from current production) from government and business such as social security benefits, military pensions, and so forth, but excludes transfers among persons.

Postbaccalaureate enrollment: number of students with a bachelor's degree who are enrolled in graduate-level or first-professional courses.

Postsecondary education: The provision of a formal instructional program whose curriculum is designed primarily for students who are beyond the compulsory age for high school. This includes programs whose purpose is academic, vocational, and continuing professional education, and excludes avocational and adult basic education programs.

Postsecondary education institution: An institution which has as its sole purpose or one of its primary missions, the provision of postsecondary education.

Private institution: A school or institution that is controlled by an individual or agency other than a state, a subdivision of a state, or the federal government (i.e., usually supported primarily by other than public funds) and the operation of whose program rests with other than publicly elected or appointed officials.

Property tax: The sum of money collected from a tax levied against the value of property.

Public school or institution: A school or institution controlled and operated by publicly elected or appointed officials, and generally deriving its primary support from public funds.

Pupil/teacher ratio: The enrollment of pupils at a given period of time, divided by the full-time-equivalent number of classroom teachers serving these pupils during the same period.

Race/ethnicity: Categories used to describe groups to which individuals belong, identify with, or belong in the eyes of the community. The categories do not denote scientific definitions of anthropological origins. A person may be counted in only one group. The groups used to categorize U.S. citizens, resident aliens, and other eligible non-citizens are as follows: Black, non-Hispanic, American Indian/Alaska Native, Asian/Pacific Islander, Hispanic, White, non-Hispanic.

Revenues: All funds received from external sources, net of refunds and correcting transactions. Noncash transactions such as receipt of services, commodities, or other receipts "in kind" are excluded, as are funds received from the issuance of debt, liquidation of investments, or nonroutine sale of property.

Revenue receipts: Additions to assets that do not incur an obligation that must be met at some future date and do not represent exchanges of property for money. Assets must be available for expenditures.

Salary: The total amount regularly paid or stipulated to be paid to an individual, before deductions, for personal services rendered while on the payroll of a business or organization.

School: A division of the school system consisting of students in one or more grades or other identifiable groups and organized to give instruction of a defined type. One school may share a building with another school or one school may be housed in several buildings.

Secondary instructional level: The general level of instruction provided for pupils in secondary schools (generally covering grades 7 through 12 or 9 through 12), and any instruction of a comparable nature and difficulty provided for adults and youth beyond the age of compulsory school attendance.

Secondary school: A school including any span of grades beginning with the next grade following elementary or middle school (usually 7, 8, or 9) and ending with or below grade 12. Both junior high schools and senior high schools are included.

Senior high school: A secondary school offering the final years of high school work necessary for graduation.

Student: An individual for whom instruction is provided in an educational program under the jurisdiction of a school, school system, or other educational institution. No distinction is made between the terms "student" and "pupil", although "student" may refer to one receiving instruction at any level while "pupil" refers only to one attending school at the elementary or secondary level. The term "student" is used to include individuals at all instructional levels. A student may receive instruction in a school facility or in another location, such as at home or in a hospital. Instruction may be provided by direct student-teacher interaction or by some other approved medium, such as the Internet, television, radio, telephone, or correspondence.

Tax base: The collective value of sales, assets, and income components against which a tax is levied.

Total expenditures per pupil in average daily attendance (ADA): Includes all expenditures allocable to per pupil costs divided by ADA. These allocable expenditures include current expenditures for regular school programs, interest on school debt, and capital outlay. Beginning in 1980–81, expenditures for administration by state governments were excluded and expenditures for other programs (summer schools, community colleges, and private schools) were included.

Two-year institution: A postsecondary institution that offers programs of at least 2 but less than 4 years duration. Includes occupational and vocational schools with programs of at least 1800 hours and academic institutions with programs of less than 4 years. Does not include bachelor's degree-granting institutions where the baccalaureate program can be completed in 3 years.

Unclassified student (elementary/secondary): A student who has been assigned to a school or program that does not have standard grade designations.

Unclassified student (postsecondary): A student taking courses creditable toward a degree or other formal award who cannot be classified by academic level. For example, this could include a transfer student whose earned credits have not been determined at the time of the fall report.

Undergraduate students: Students registered at an institution of higher education who are working in a program leading to a baccalaureate or other formal award below the baccalaureate, such as an associate's degree.

Undergraduate enrollment: The number of students enrolled in a 4- or 5-year bachelor's degree program, an associate's degree program, or a vocational or technical program below the baccalaureate.

Statistical Terms

Autocorrelation: Correlation of the error terms from different observations of the same variable. Also called *serial correlation*.

Degrees of freedom: The number of free or linearly independent sample observations used in the calculation of a statistic. In a time series regression with t time periods and k independent variables including a constant term, there would be t minus k degrees of freedom.

Dependent variable: A mathematical variable whose value is determined by that of one or more other variables in a function. In regression analysis, when a random variable, y, is expressed as a function of variables x_1, x_2,..., plus a stochastic term, then y is known as the "dependent variable."

Double exponential smoothing: A method that takes a single smoothed average component of demand and smoothes it a second time to allow for estimation of a trend effect.

Durbin-Watson statistic: A statistic testing the independence of errors in least squares regression against the alternative of first-order serial correlation. The statistic is a simple linear transformation of the first-order serial correlation of residuals and, although its distribution is unknown, it is tested by bounding statistics that follow R. L. Anderson's distribution.

Econometrics: The quantitative examination of economic trends and relationships using statistical techniques, and the development, examination, and refinement of those techniques.

Estimate: A numerical value obtained from a statistical sample and assigned to a population parameter. The particular value yielded by an estimator in a given set of circumstances or the rule by which such particular values are calculated.

Estimating equation: An equation involving observed quantities and an unknown that serves to estimate the latter.

Estimation: Estimation is concerned with inference about the numerical value of unknown population values from incomplete data, such as a sample. If a single figure is calculated for each unknown parameter, the process is called point estimation. If an interval is calculated within which the parameter is likely, in some sense, to lie, the process is called interval estimation.

Exogenous variable: Variable for which the values are determined outside the model but that influence the model.

Exponential smoothing: A method used in time series to smooth or to predict a series. There are various forms, but all are based on the supposition that more remote history has less importance than more recent history.

First-order serial correlation: When errors in one time period are correlated directly with errors in the ensuing time period. Also called *autocorrelation*.

Forecast: An estimate of the future based on rational study and analysis of available pertinent data, as opposed to subjective prediction.

Forecast horizon: The number of time periods into the future that are forecasted. Forecasts for next year are said to have a 1-year forecast horizon.

Forecasting: Assessing the magnitude that a quantity will assume at some future point in time, as distinct from "estimation," which attempts to assess the magnitude of an already existent quantity.

Function: A mathematical correspondence that assigns exactly one element of one set to each element of the same or another set. A variable that depends on and varies with another.

Functional form: A mathematical statement of the relationship among the variables in a model.

Independent variable: In regression analysis, a random variable, y, is expressed as a function of variables x_1, x_2,..., plus a stochastic term, the x's are known as "independent variables."

Interpolation: See *Linear interpolation*.

Linear interpolation: A method that allows the prediction of an unknown value if any two particular values on the same scale are known and the rate of change is assumed constant.

Lag: An event occurring at time t + k (k > 0) is said to lag behind an event occurring at time t, the extent of the lag being k. An event occurring k time periods before another may be regarded as having a negative lag.

Mean absolute percentage error (MAPE): The average value of the absolute value of errors expressed in percentage terms.

Model: A system of postulates, data, and inferences presented as a mathematical description of a phenomenon, such as an actual system or process. The actual phenomenon is represented by the model in order to explain, predict, and control it.

Ordinary least squares (OLS): The estimator that minimizes the sum of squared residuals.

Parameter: A quantity that describes a statistical population.

Projection: In relation to a time series, an estimate of future values based on a current trend.

R^2: The coefficient of determination; the square of the correlation coefficient between the dependent variable and its OLS estimate.

R^2 (also called the adjusted R^2): The coefficient of determination adjusted for the degrees of freedom.

Regression analysis: A statistical technique for investigating and modeling the relationship between variables.

Rho: A measure of the correlation coefficient between errors in time period t and time period t minus 1.

Serial correlation: Correlation of the error terms from different observations of the same variable. Also called *autocorrelation*.

Standard error of estimate: An expression for the standard deviation of the observed values about a regression line. An estimate of the variation likely to be encountered in making predictions from the regression equation.

Time series: A set of ordered observations on a quantitative characteristic of an individual or collective phenomenon taken at different points in time. Usually the observations are successive and equally spaced in time.

Time series analysis: The branch of quantitative forecasting in which data for one variable are examined for patterns of trend, seasonality, and cycle.

Variable: A quantity that may assume any one of a set of values.

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

www.ed.gov

ies.ed.gov