

## CHAPTER 6

# International Comparisons of Education

This chapter offers a broad perspective on education across the nations of the world. It also provides an international context for examining the condition of education in the United States. Insights into the educational practices and outcomes of the United States are obtained by comparing them with those of other education systems. Most of the education systems represent countries; however, some of the tables in this chapter also include data for subnational entities with separate education systems, such as Hong Kong. The National Center for Education Statistics (NCES) carries out a variety of activities in order to provide statistical data for international comparisons of education.

This chapter presents data drawn from materials prepared by the United Nations Educational, Scientific, and Cultural Organization (UNESCO); the Organization for Economic Cooperation and Development (OECD); and the International Association for the Evaluation of Educational Achievement (IEA). Basic summary data on enrollments and enrollment ratios, teachers, educational attainment, and finances were synthesized from data published by OECD in the Online Education Database and the annual *Education at a Glance* report, as well as from data collected by UNESCO. Even though their tabulations are carefully prepared, international data users should be cautioned about the many problems of definition and reporting involved in the collection of data about the education systems of the world (see the OECD and UNESCO entries in Appendix A: Guide to Sources).

Also presented in this chapter are data from two international assessments of student achievement that are carried out under the aegis of IEA and supported by NCES. The Trends in International Mathematics and Science Study (TIMSS), formerly known as the Third International Mathematics and Science Study, assesses the mathematics and science knowledge and skills of fourth- and eighth-graders every 4 years. The Progress in International Reading Literacy Study (PIRLS) measures the reading knowledge and skills of fourth-graders every 5 years.

This chapter includes additional information from the Program for International Student Assessment (PISA), an OECD assessment supported by NCES. PISA provides performance scores of 15-year-olds in the areas of reading, mathematics, and science literacy; it also measures general, or cross-curricular, competencies such as learning strategies. While PISA focuses on OECD countries, data from some non-OECD education systems are also provided.

Further information on survey methodologies is in Appendix A: Guide to Sources and in the publications cited in the table source notes.

## Population

Among the reporting OECD countries, Mexico had the largest percentage of its population made up of young people ages 5 to 14 (20 percent) in 2009, followed by Israel and Turkey (both at 18 percent) (table 456). OECD countries with small percentages of people in this age group included the Czech Republic, Estonia, Germany, Greece, Italy, Japan, Slovenia, and Spain (all at 9 percent), and Austria, Hungary, Poland, Portugal, the Slovak Republic, and Switzerland (all at 10 percent). In the United States, the proportion of 5- to 14-year-olds was 13 percent, which was higher than in most of the other OECD countries.

## Enrollments

In 2010, about 1.4 billion students were enrolled in schools around the world (table 454). Of these students, 691 million were in elementary-level programs, 543 million were in secondary programs, and 178 million were in postsecondary programs.

From 2000 to 2010, enrollment changes varied from region to region. Changes in elementary enrollment ranged from increases of 45 percent in Africa and 6 percent in Oceania to decreases of 12 percent in Europe, 5 percent in Central and South America (including Latin America and the Caribbean), 3 percent in Northern America (including Bermuda, Canada, and the United States), and 1 percent in Asia (table F, table 454, and figure 27). Over the same period, secondary enrollment increased by 62 percent in Africa, 29 percent in Asia, 10 percent in Central and South America, and 7 percent in Northern America, but decreased by 18 percent in Europe and 5 percent in Oceania. At the postsecondary level, enrollments increased in all major areas of the world from 2000 to 2010. Postsecondary enrollment rose by 118 percent in Asia, 88 percent in Central and South America, 63 percent in Africa, 51 percent in Northern America and in Oceania, and 29 percent in Europe. These increases are due to both growth in the percentages of people attending postsecondary institutions and population increases.

**Table F. Population and enrollment at different levels in major areas of the world: 2000 and 2010**

[In millions]

| Area of the world                | Population | Enrollment |           |               |
|----------------------------------|------------|------------|-----------|---------------|
|                                  |            | Elementary | Secondary | Postsecondary |
| <b>World total</b>               |            |            |           |               |
| 2000.....                        | 6,089.8    | 654.8      | 450.7     | 99.9          |
| 2010.....                        | 6,863.8    | 691.3      | 543.5     | 177.7         |
| <b>Africa</b>                    |            |            |           |               |
| 2000.....                        | 803.6      | 108.4      | 37.6      | 6.4           |
| 2010.....                        | 1,024.4    | 157.4      | 61.0      | 10.4          |
| <b>Asia</b>                      |            |            |           |               |
| 2000.....                        | 3,693.9    | 404.1      | 259.2     | 41.1          |
| 2010.....                        | 4,138.8    | 400.7      | 334.7     | 89.5          |
| <b>Europe</b>                    |            |            |           |               |
| 2000.....                        | 730.6      | 41.7       | 70.4      | 25.6          |
| 2010.....                        | 738.4      | 36.7       | 57.5      | 33.0          |
| <b>Central and South America</b> |            |            |           |               |
| 2000.....                        | 517.9      | 70.0       | 55.1      | 11.4          |
| 2010.....                        | 584.1      | 66.7       | 60.4      | 21.4          |
| <b>Northern America</b>          |            |            |           |               |
| 2000.....                        | 313.4      | 27.4       | 25.1      | 14.4          |
| 2010.....                        | 343.2      | 26.5       | 26.8      | 21.8          |
| <b>Oceania</b>                   |            |            |           |               |
| 2000.....                        | 30.4       | 3.1        | 3.4       | 1.0           |
| 2010.....                        | 34.9       | 3.3        | 3.2       | 1.6           |

SOURCE: United Nations Educational, Scientific, and Cultural Organization, unpublished tabulations, and U.S. Department of Commerce, Census Bureau, International Data Base.

In 2009, the reporting OECD country with the highest proportion of 18- to 21-year-olds enrolled in postsecondary education was the Republic of Korea (70 percent), followed by the United States (47 percent), Belgium (44 percent), Ireland (43 percent), and Slovenia (42 percent) (table 457). Also in 2009, the reporting OECD country with the highest proportion of 22- to 25-year-olds enrolled in postsecondary education was Slovenia (39 percent), followed by Finland (37 percent), the Republic of Korea (36 percent), Denmark (33 percent), and Poland (32 percent). The United States' proportion of enrolled 22- to 25-year-olds was 26 percent. Postsecondary enrollment varied among countries due partially to differences in how postsecondary education is defined and the age at which postsecondary education begins. For example, programs classified as postsecondary education in some countries may be classified as long-duration secondary education in other countries.

## Achievement

### Mathematics and Science at Grades 4 and 8

The 2011 TIMSS assessed students' mathematics and science performance at grade 4 in 45 countries and at grade 8 in 38 countries. A number of subnational entities also participated in TIMSS as separate education systems. Examples of subnational participants include the cities of Hong Kong and Taipei, several U.S. states and Canadian provinces, Northern Ireland and England within the United Kingdom, and the Flemish community in Belgium. Results for individual U.S. states are based on public school students only,

while U.S. national results are based on both public and private school students. TIMSS assessments are curriculum based and measure what students have actually learned against the subject matter that is expected to be taught in the participating education systems by the end of grades 4 and 8. At both grades, TIMSS scores are reported on a scale of 0 to 1,000, with the scale average set at 500.

In 2011, the average mathematics scores of U.S. fourth-graders (541) and eighth-graders (509) were higher than the TIMSS scale average of 500 (tables 460 and 461). The average U.S. fourth-grade mathematics score was higher than the average score in 37 of the 44 other countries participating at grade 4, lower than the average score in 3 countries, and not measurably different from the average score in the remaining 4 countries (table 460). The 3 countries that outperformed the United States in fourth-grade mathematics were Singapore, the Republic of Korea, and Japan. At grade 8, the average U.S. mathematics score was higher than the average score in 27 of the 37 other participating countries in 2011, lower than the average score in 4 countries, and not measurably different from the average score in the remaining 6 countries (table 461). The 4 countries that outperformed the United States in eighth-grade mathematics were the Republic of Korea, Singapore, Japan, and the Russian Federation.

Of the two U.S. states that participated in the 2011 TIMSS as separate education systems at grade 4, one state—North Carolina—had an average score for public schools that was higher than both the TIMSS scale average and the U.S. national average in mathematics (table 460). Public schools in the other state, Florida, had an average fourth-grade mathematics score that was higher than the TIMSS scale average but not measurably different from the U.S. national average. Of the nine U.S. states that participated separately at grade 8, four states—Massachusetts, Minnesota, North Carolina, and Indiana—had public school average scores that were higher than both the TIMSS scale average and the U.S. national average in mathematics (table 461). The public schools in three states—Colorado, Connecticut, and Florida—had average eighth-grade mathematics scores that were higher than the TIMSS scale average but not measurably different from the U.S. national average. The average eighth-grade score for public schools in California was not measurably different from the TIMSS scale average but was lower than the U.S. national average, while Alabama's public school average was lower than both the TIMSS scale average and the U.S. national average in mathematics.

The average science scores of both U.S. fourth-graders (544) and U.S. eighth-graders (525) were higher than the TIMSS scale average of 500 in 2011 (tables 460 and 461). The average U.S. fourth-grade science score was higher than the average score in 39 of the 44 other countries participating at grade 4 and lower than the average score in 5 countries (table 460). The 5 countries that outperformed the United States in fourth-grade science were the Republic of Korea, Singapore, Finland, Japan, and the Russian Federation. At grade 8, the average U.S. science score was higher than the average score in 28 of the 37 other participating countries in

2011, lower than the average score in 6 countries, and not measurably different from the average score in the remaining 3 countries (table 461). The 6 countries that outperformed the United States in eighth-grade science were Singapore, the Republic of Korea, Japan, Finland, Slovenia, and the Russian Federation.

Public schools in both Florida and North Carolina, which were the two U.S. states participating in the 2011 TIMSS at grade 4, had average fourth-grade science scores that were higher than the TIMSS scale average but not measurably different from the U.S. national average (table 460). Of the nine U.S. states that participated at grade 8, three states—Massachusetts, Minnesota, and Colorado—had public school average scores that were higher than both the TIMSS scale average and the U.S. national average in science (table 461). Public schools in four states—Indiana, Connecticut, North Carolina, and Florida—had average eighth-grade science scores that were higher than the TIMSS scale average but not measurably different from the U.S. national average. The average eighth-grade score for public schools in California was not measurably different from the TIMSS scale average but was lower than the U.S. national average, while Alabama's public school average was lower than both the TIMSS scale average and the U.S. national average in science.

## Reading Literacy at Grade 4

PIRLS has conducted international assessments of fourth-grade reading literacy in 2001, 2006, and 2011. In 2011, PIRLS participants consisted of 40 countries as well as a number of subnational education systems. Examples of subnational participants include the cities of Hong Kong and Taipei, the public school system of the U.S. state of Florida, several Canadian provinces, Northern Ireland and England within the United Kingdom, and the Flemish community in Belgium. PIRLS scores are reported on a scale from 0 to 1,000, with the scale average set at 500.

On the 2011 PIRLS, U.S. fourth-graders had an average reading literacy score of 556 (table 462). The U.S. average score in 2011 was 14 points higher than in 2001 and 16 points higher than in 2006. In all 3 assessment years, the U.S. average score was higher than the PIRLS scale average.

In 2011, the average reading literacy score of fourth-graders in the United States was higher than the average score in 33 of the 39 other participating countries, lower than the average score in 3 countries, and not measurably different from the average in the remaining 3 countries. The 3 countries that outperformed the United States on the 2011 PIRLS were the Russian Federation, Finland, and Singapore. Public school students in Florida scored higher than both the PIRLS scale average and the U.S. national average.

In the United States, the 2011 average reading literacy score for girls (562) was higher than the average score for boys (551). In 34 of the 39 other participating countries, the average score for girls was also higher than the average score for boys, while there was no measurable difference between girls' and boys' average scores in the remaining 5 countries.

## Reading, Mathematics, and Science Literacy at Age 15

On the 2009 PISA assessment, U.S. 15-year-olds' average score in reading literacy was 500, which was not measurably different from the OECD average of 493 (table 463). (Possible scores on PISA assessments range from 0 to 1,000.) The average reading literacy score in the United States was lower than the average score in 6 of the 33 other OECD countries, higher than the average score in 13 of the other OECD countries, and not measurably different from the average score in 14 of the OECD countries. Reading literacy results were also reported for 31 non-OECD education systems, 3 of which had a higher average score than the United States. In all participating OECD countries and non-OECD education systems, girls outperformed boys in reading. The U.S. gender gap in reading (25 points) was smaller than the OECD average gap (39 points) and smaller than the gaps in 24 of the OECD countries and 21 of the non-OECD education systems.

In mathematics literacy, U.S. 15-year-olds' average score of 487 on the 2009 PISA assessment was lower than the OECD average score of 496. The average mathematics literacy score in the United States was lower than the average score in 17 of the 33 other OECD countries, higher than the average score in 5 of the other OECD countries, and not measurably different from the average score in 11 of the OECD countries. In 6 of the 31 non-OECD education systems, the average mathematics literacy score of 15-year-olds was higher than the average score in the United States. In science literacy, the average score of 15-year-olds in the United States (502) was not measurably different from the OECD average score (501). The U.S. average science literacy score was lower than the average score in 12 of the 33 other OECD countries, higher than the average score in 9 of the other OECD countries, and not measurably different from the average score in 12 of the OECD countries. In 6 of the 31 non-OECD education systems, the average science literacy score of 15-year-olds was higher than the average score in the United States.

## Educational Attainment

In 2010, the percentage of 25- to 64-year-olds who had completed high school varied among reporting OECD countries (table 467). Countries with high percentages included the Czech Republic (92 percent); the Slovak Republic (91 percent); Estonia, the United States, and Poland (all at 89 percent); and Canada (88 percent). Ten additional countries had percentages between 80 and 87 percent. Countries with relatively low percentages of 25- to 64-year-olds who had completed high school included Turkey (31 percent), Portugal (32 percent), and Mexico (36 percent).

In 2010, the OECD country reporting the highest percentage of 25- to 64-year-olds with a bachelor's or higher degree was Norway (35 percent), followed by the United States (32 percent), Israel (31 percent), and the Netherlands (30 per-

cent) (table 468). The countries with the lowest percentages of 25- to 64-year-olds who had attained a bachelor's or higher degree were Austria (12 percent) and Slovenia and Turkey (both at 13 percent). The percentage of younger adults (25 to 34 years old) with a bachelor's or higher degree also varied in 2010 (table 468 and figure 28). The OECD country reporting the highest percentage of 25- to 34-year-olds at this level of educational attainment was Norway (46 percent). Five other countries reported that more than 35 percent of their 25- to 34-year-olds had a bachelor's or higher degree: the Republic of Korea (39 percent), the Netherlands and the United Kingdom (both at 38 percent), and Poland and Finland (both at 37 percent). The lowest percentages were reported by Austria (15 percent) and Turkey (17 percent). In the United States, 33 percent of adults in this age group had a bachelor's or higher degree.

## Degrees

In 30 of the 33 reporting OECD countries, more than half of all bachelor's and higher degrees were awarded to women in 2010 (table 472). However, the proportion of degrees awarded to women varied by field. For example, 31 of the 33 countries reported that more than 70 percent of education degrees at the bachelor's or higher level were awarded to women. In contrast, women received less than 25 percent of the computer science degrees in 27 of the 32 countries reporting data on degrees awarded in this field.

The percentages of bachelor's degrees that were awarded in mathematics and science fields—including natural sciences, mathematics and computer science, and engineering—varied across the 32 OECD countries that reported these data in 2009 (table 473). Only one of the reporting OECD countries awarded more than 30 percent of its bachelor's degrees in mathematics and science fields: the Republic of Korea (35 percent). Three of the countries awarded 15 percent or less of their bachelor's degrees in mathematics and science fields: Norway and the Netherlands (14 percent each) and Iceland (15 percent). In 2009, the United States awarded 16 percent of its bachelor's degrees in mathematics

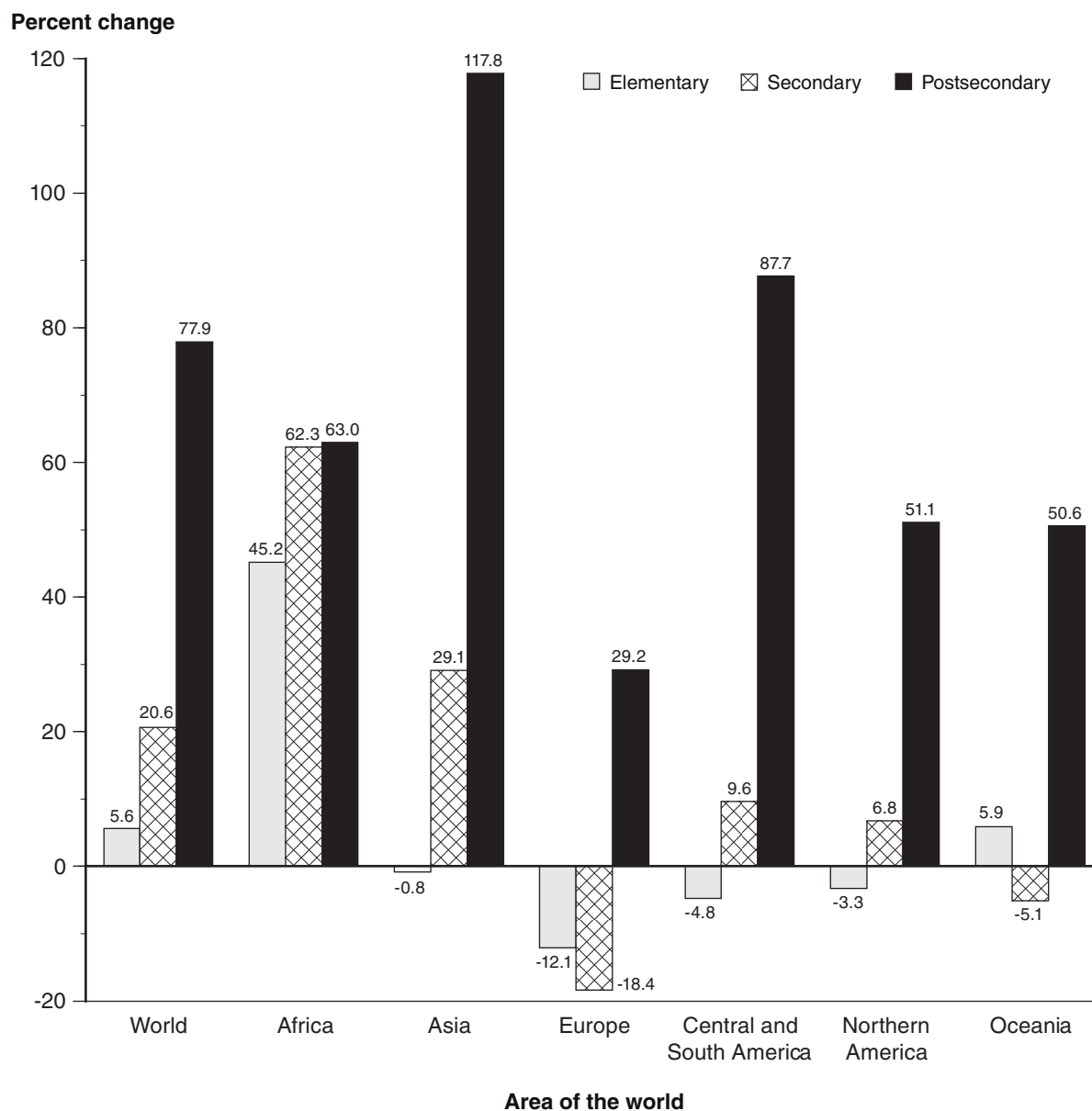
and science fields, a lower percentage than most other reporting countries.

The percentages of graduate degrees awarded in mathematics and science fields ranged widely across the 31 OECD countries that reported these data in 2009 (table 474). Six of the reporting OECD countries awarded 30 percent or more of their graduate degrees in mathematics and science fields: Japan (47 percent), Finland (34 percent), Austria and Portugal (both at 33 percent), and Germany and Sweden (both at 32 percent). Seven OECD countries awarded 15 percent or less of their graduate degrees in mathematics and science fields: Chile (8 percent), Hungary (10 percent), Poland (11 percent), Mexico (12 percent), Iceland and the United States (both at 13 percent), and the Netherlands (15 percent).

## Finances

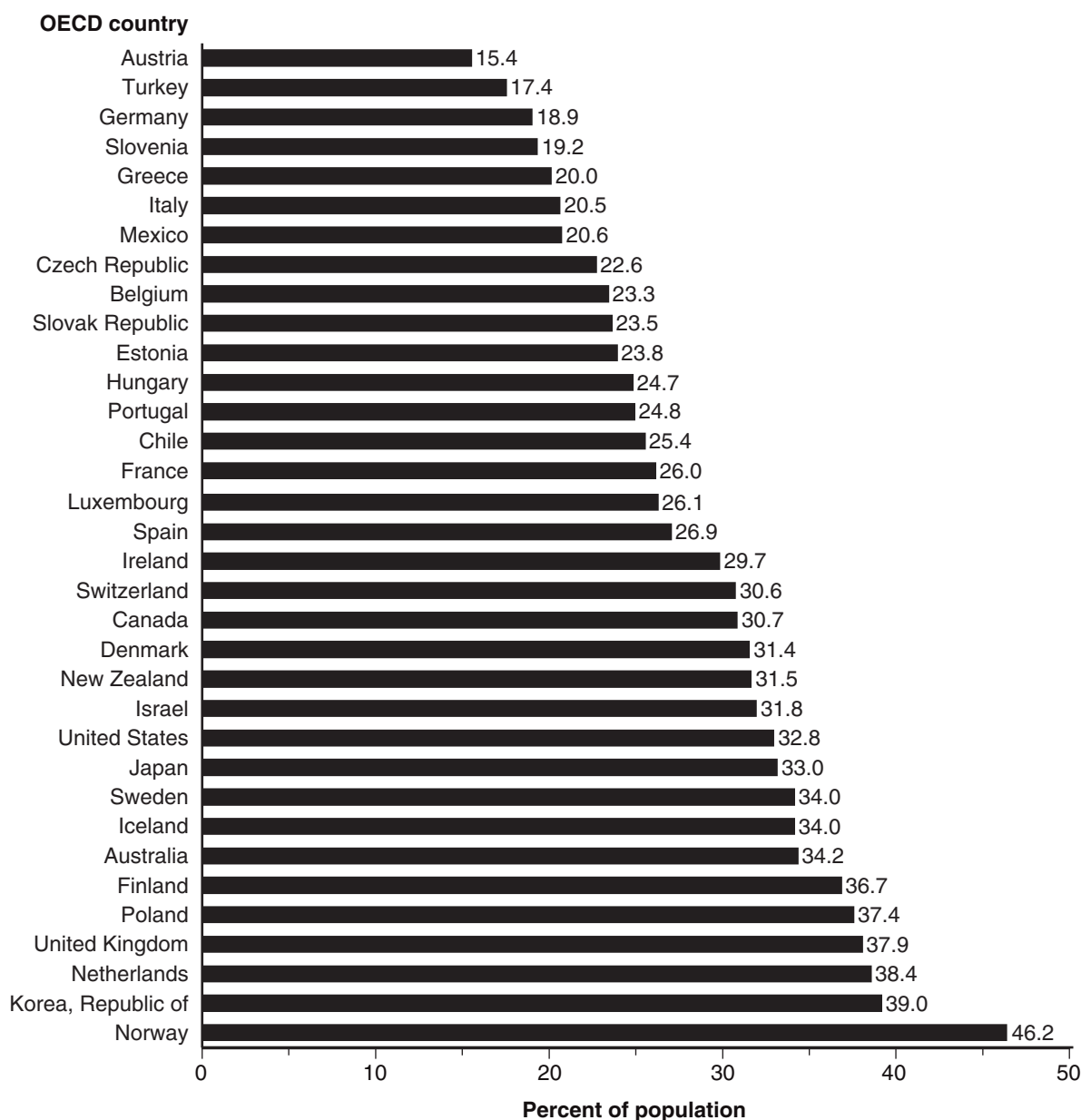
In 2009, per student expenditures at the combined elementary and secondary level of education were over \$11,000 (in current U.S. dollars) in 6 of the 31 OECD countries reporting finance data (table 476). Specifically, Luxembourg spent \$18,000 per elementary/secondary student; Switzerland spent \$13,400; Norway spent \$13,000; the United States spent \$11,800; Austria spent \$11,700; and Denmark spent \$11,100. At the higher education level, 6 countries had expenditures of over \$17,500 per student in 2009: the United States (\$29,200), Switzerland (\$21,600), Sweden (\$20,000), Norway (\$19,300), Denmark (\$18,600), and the Netherlands (\$17,800). These expenditures were adjusted to U.S. dollars using the purchasing-power-parity (PPP) index. This index is considered more stable and comparable than indexes using currency exchange rates.

A comparison of public direct expenditures on education as a percentage of gross domestic product (GDP) in reporting OECD countries shows that national investment in education in 2009 ranged from 3.6 percent in Japan to 7.3 percent in Iceland and 7.5 percent in Denmark (table 477 and figure 29). Among reporting OECD countries, the average public direct expenditure on education in 2009 was 5.4 percent of GDP. In the United States, the public direct expenditure on education as a percentage of GDP was 5.3 percent.

**Figure 27. Percentage change in enrollment, by major areas of the world and level of education: 2000 to 2010**

NOTE: Europe includes all countries of the former Union of Soviet Socialist Republics (U.S.S.R.) except Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, which are included in Asia. Turkey, the Arab states, and Israel are also included in Asia. Central and South America includes Latin America and the Caribbean. Enrollment data for Northern America include Bermuda, Canada, and the United States of America. Data include imputed values for nonrespondent countries.

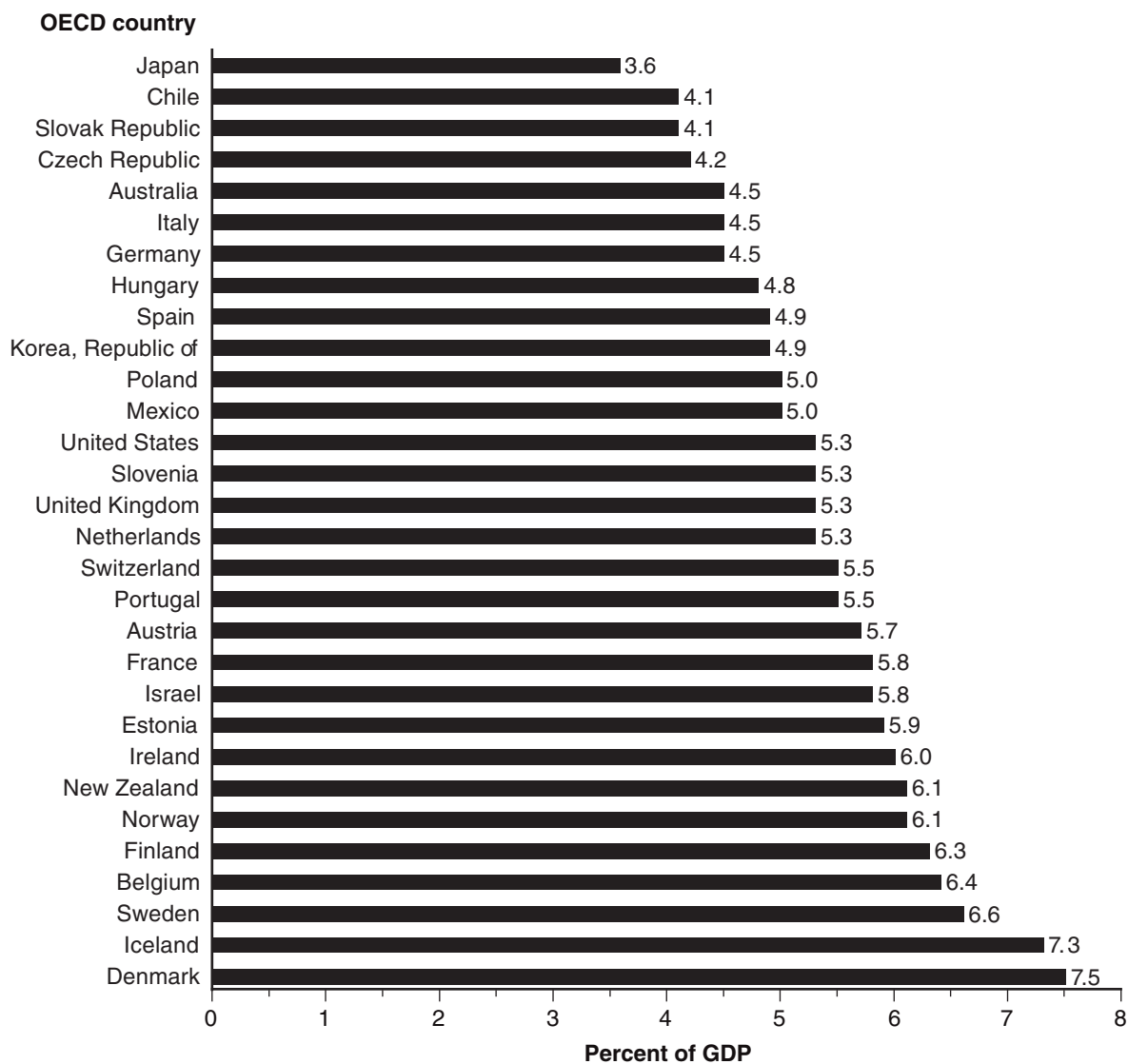
SOURCE: United Nations Educational, Scientific, and Cultural Organization (UNESCO), previously unpublished tabulations (August 2012).

**Figure 28. Percentage of the population 25 to 34 years old with a bachelor's or higher level degree, by OECD country: 2010**

NOTE: Refers to degrees classified as International Standard Classification of Education (ISCED) level 5A (first and second award) or level 6. ISCED 5A, first award, corresponds to the bachelor's degree in the United States; ISCED 5A, second award, corresponds to master's and first-professional degrees in the United States; and ISCED 6 corresponds to doctor's degrees.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2012.

**Figure 29. Public direct expenditures on education institutions as a percentage of gross domestic product (GDP), by OECD country: 2009**



NOTE: Includes both amounts spent directly by governments to hire educational personnel and to procure other resources and amounts provided by governments to public or private institutions.  
 SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance, 2012*.

**Table 454. Population, school enrollment, and teachers, by major areas of the world and level of education: Selected years, 1980 through 2010**  
[In thousands]

| Year and selected characteristic            | World total <sup>1</sup> | Major areas of the world |                     |                     |  |                               |         |
|---|--------------------------|--------------------------|---------------------|---------------------|--|-------------------------------|---------|
|   |                          | Africa                   | Asia <sup>1,2</sup> | Europe <sup>2</sup> | Central and South America <sup>3</sup> | Northern America <sup>3</sup> | Oceania |
| 1   | 2                        | 3                        | 4                   | 5                   | 6                                      | 7                             | 8       |
| <b>1980</b>                                 |                          |                          |                     |                     |  |                               |         |
| Population, all ages <sup>4</sup> .....     | 4,450,924                | 478,551                  | 2,644,076           | 695,225             | 358,609                                | 251,929                       | 22,534  |
| Enrollment, all levels .....                | 856,283                  | 74,792                   | 493,891             | 134,690             | 87,156                                 | 60,541                        | 5,213   |
| First (elementary) level <sup>5</sup> ..... | 524,493                  | 59,154                   | 333,944             | 49,038              | 56,814                                 | 22,893                        | 2,649   |
| Second level <sup>6</sup> .....             | 282,253                  | 14,187                   | 146,975             | 68,700              | 25,543                                 | 24,695                        | 2,153   |
| Third level <sup>7</sup> .....              | 49,537                   | 1,450                    | 12,972              | 16,952              | 4,799                                  | 12,954                        | 411     |
| Teachers, all levels .....                  | 38,888                   | 2,252                    | 19,316              | —                   | 3,784                                  | —                             | 277     |
| First (elementary) level <sup>5</sup> ..... | 18,509                   | 1,606                    | 10,708              | 2,575               | 1,873                                  | —                             | 134     |
| Second level <sup>6</sup> .....             | 16,487                   | 564                      | 7,471               | 5,506               | 1,526                                  | 1,309                         | 112     |
| Third level <sup>7</sup> .....              | 3,892                    | 82                       | 1,138               | —                   | 385                                    | 815                           | 31      |
| <b>1990</b>                                 |                          |                          |                     |                     |  |                               |         |
| Population, all ages <sup>4</sup> .....     | 5,287,167                | 630,148                  | 3,189,546           | 722,638             | 440,889                                | 277,533                       | 26,412  |
| Enrollment, all levels .....                | 975,281                  | 104,938                  | 561,819             | 132,629             | 108,556                                | 61,543                        | 5,797   |
| First (elementary) level <sup>5</sup> ..... | 576,977                  | 76,465                   | 361,578             | 46,580              | 65,116                                 | 24,629                        | 2,609   |
| Second level <sup>6</sup> .....             | 331,212                  | 25,764                   | 177,809             | 67,339              | 36,195                                 | 21,534                        | 2,571   |
| Third level <sup>7</sup> .....              | 67,092                   | 2,709                    | 22,432              | 18,709              | 7,245                                  | 15,379                        | 617     |
| Teachers, all levels .....                  | 47,373                   | 3,604                    | 24,527              | 9,879               | 5,110                                  | 3,938                         | 315     |
| First (elementary) level <sup>5</sup> ..... | 22,179                   | 2,271                    | 13,072              | 2,686               | 2,403                                  | 1,608                         | 139     |
| Second level <sup>6</sup> .....             | 20,208                   | 1,194                    | 9,776               | 5,658               | 2,106                                  | 1,340                         | 135     |
| Third level <sup>7</sup> .....              | 4,986                    | 139                      | 1,679               | 1,535               | 601                                    | 991                           | 41      |
| <b>1995</b>                                 |                          |                          |                     |                     |  |                               |         |
| Population, all ages <sup>4</sup> .....     | 5,699,516                | 712,904                  | 3,451,230           | 730,000             | 480,905                                | 296,092                       | 28,385  |
| Enrollment, all levels .....                | 1,086,248                | 125,297                  | 630,691             | 137,197             | 120,132                                | 65,901                        | 7,030   |
| First (elementary) level <sup>5</sup> ..... | 619,120                  | 90,412                   | 386,981             | 44,849              | 67,627                                 | 26,243                        | 3,008   |
| Second level <sup>6</sup> .....             | 387,756                  | 30,632                   | 215,228             | 71,103              | 44,333                                 | 23,595                        | 2,864   |
| Third level <sup>7</sup> .....              | 79,373                   | 4,254                    | 28,482              | 21,245              | 8,172                                  | 16,063                        | 1,158   |
| Teachers, all levels .....                  | 52,042                   | 4,209                    | 26,979              | 10,535              | 5,735                                  | 4,208                         | —       |
| First (elementary) level <sup>5</sup> ..... | 23,775                   | 2,560                    | 14,045              | 2,769               | 2,629                                  | 1,622                         | 149     |
| Second level <sup>6</sup> .....             | 22,537                   | 1,441                    | 10,931              | 6,088               | 2,406                                  | 1,503                         | —       |
| Third level <sup>7</sup> .....              | 5,730                    | 207                      | 2,003               | 1,677               | 700                                    | 1,083                         | —       |
| <b>2000</b>                                 |                          |                          |                     |                     |  |                               |         |
| Population, all ages <sup>4</sup> .....     | 6,089,811                | 803,587                  | 3,693,908           | 730,598             | 517,908                                | 313,388                       | 30,421  |
| Enrollment, all levels .....                | 1,205,402                | 152,280                  | 704,364             | 137,707             | 136,545                                | 66,967                        | 7,538   |
| First (elementary) level <sup>5</sup> ..... | 654,779                  | 108,350                  | 404,087             | 41,730              | 70,046                                 | 27,435                        | 3,130   |
| Second level <sup>6</sup> .....             | 450,724                  | 37,566                   | 259,201             | 70,407              | 55,070                                 | 25,117                        | 3,363   |
| Third level <sup>7</sup> .....              | 99,899                   | 6,364                    | 41,076              | 25,571              | 11,428                                 | 14,416                        | 1,044   |
| Teachers, all levels .....                  | 56,362                   | 4,934                    | 29,100              | 10,682              | 6,591                                  | 4,651                         | —       |
| First (elementary) level <sup>5</sup> ..... | 24,817                   | 2,866                    | 14,489              | 2,727               | 2,774                                  | 1,806                         | 155     |
| Second level <sup>6</sup> .....             | 24,853                   | 1,783                    | 12,162              | 6,083               | 2,947                                  | 1,684                         | —       |
| Third level <sup>7</sup> .....              | 6,692                    | 285                      | 2,449               | 1,872               | 870                                    | 1,161                         | —       |
| <b>2005</b>                                 |                          |                          |                     |                     |  |                               |         |
| Population, all ages <sup>4</sup> .....     | 6,473,525                | 908,043                  | 3,919,743           | 732,981             | 552,066                                | 328,033                       | 32,659  |
| Enrollment, all levels .....                | 1,333,658                | 191,890                  | 783,341             | 135,125             | 143,447                                | 72,388                        | 7,468   |
| First (elementary) level <sup>5</sup> ..... | 685,284                  | 135,526                  | 412,500             | 38,468              | 68,868                                 | 26,780                        | 3,141   |
| Second level <sup>6</sup> .....             | 509,862                  | 48,023                   | 308,411             | 64,853              | 58,505                                 | 27,039                        | 3,032   |
| Third level <sup>7</sup> .....              | 138,512                  | 8,341                    | 62,430              | 31,804              | 16,073                                 | 18,569                        | 1,294   |
| Teachers, all levels .....                  | 64,353                   | 5,900                    | 34,535              | 10,662              | 7,751                                  | 5,081                         | —       |
| First (elementary) level <sup>5</sup> ..... | 27,024                   | 3,454                    | 15,930              | 2,651               | 2,965                                  | 1,865                         | 160     |
| Second level <sup>6</sup> .....             | 28,248                   | 2,111                    | 14,733              | 5,781               | 3,562                                  | 1,865                         | —       |
| Third level <sup>7</sup> .....              | 9,081                    | 335                      | 3,872               | 2,231               | 1,225                                  | 1,351                         | —       |
| <b>2010</b>                                 |                          |                          |                     |                     |  |                               |         |
| Population, all ages <sup>4</sup> .....     | 6,863,771                | 1,024,360                | 4,138,778           | 738,421             | 584,050                                | 343,222                       | 34,940  |
| Enrollment, all levels .....                | 1,412,489                | 228,693                  | 824,858             | 127,212             | 148,515                                | 75,134                        | 8,078   |
| First (elementary) level <sup>5</sup> ..... | 691,318                  | 157,354                  | 400,724             | 36,681              | 66,708                                 | 26,536                        | 3,314   |
| Second level <sup>6</sup> .....             | 543,487                  | 60,967                   | 334,672             | 57,485              | 60,360                                 | 26,813                        | 3,191   |
| Third level <sup>7</sup> .....              | 177,684                  | 10,372                   | 89,462              | 33,047              | 21,447                                 | 21,784                        | 1,573   |
| Teachers, all levels .....                  | 71,519                   | 7,228                    | 39,388              | 10,412              | 8,399                                  | 5,635                         | —       |
| First (elementary) level <sup>5</sup> ..... | 28,532                   | 4,027                    | 16,736              | 2,638               | 3,045                                  | 1,918                         | —       |
| Second level <sup>6</sup> .....             | 32,003                   | 2,793                    | 17,880              | 5,336               | 3,660                                  | 2,128                         | —       |
| Third level <sup>7</sup> .....              | 10,983                   | 408                      | 4,772               | 2,439               | 1,694                                  | 1,589                         | —       |

—Not available.

<sup>1</sup>Enrollment and teacher data for Asia and the world total exclude Taiwan.

<sup>2</sup>Europe includes all countries of the former Union of Soviet Socialist Republics (U.S.S.R.) except Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan, which are included in Asia. Turkey, the Arab states, and Israel are also included in Asia.

<sup>3</sup>Central and South America includes Latin America and the Caribbean. Northern America includes Bermuda, Canada, and the United States of America; the population data for Northern America also include Greenland as well as St. Pierre and Miquelon.

<sup>4</sup>Estimate of midyear population.

<sup>5</sup>First-level enrollment generally consists of elementary school, grades 1–6.

<sup>6</sup>Second-level enrollment includes general education, teacher training (at the second level), and technical and vocational education. This level generally corresponds to secondary education in the United States, grades 7–12.

<sup>7</sup>Third-level enrollment includes college and university enrollment, and technical and vocational education beyond the secondary school level.

NOTE: Detail may not sum to totals because of rounding. Data include imputed values for nonrespondent countries. Enrollment and teacher data exclude several island countries or territories with small populations (less than 150,000). Some data have been revised from previously published figures.

SOURCE: United Nations Educational, Scientific, and Cultural Organization (UNESCO), unpublished tabulations; and U.S. Department of Commerce, Census Bureau, International Data Base, retrieved August 23, 2012, from <http://www.census.gov/ipc/www/idb/region.php>. (This table was prepared August 2012.)



Table 455. Selected population and enrollment statistics for countries with populations over 10 million in 2010, by continent and country: Selected years, 1990 through 2010

| Continent and country <sup>1</sup>   | Midyear population<br>(in millions) |              |              | Persons<br>per<br>square<br>kilo-<br>meter,<br>2010 | First level <sup>2</sup>     |                |                                     |                  |            | Second level <sup>3</sup>    |                    |                                     |                 |                 | Third level <sup>4</sup>     |                  |                                     |                |                 |
|--------------------------------------|-------------------------------------|--------------|--------------|---|------------------------------|----------------|-------------------------------------|------------------|------------|------------------------------|--------------------|-------------------------------------|-----------------|-----------------|------------------------------|------------------|-------------------------------------|----------------|-----------------|
|                                      | 1991                                | 2000         | 2010         |   | Enrollment (in<br>thousands) |                | Gross enrollment ratio <sup>5</sup> |                  |            | Enrollment<br>(in thousands) |                    | Gross enrollment ratio <sup>5</sup> |                 |                 | Enrollment<br>(in thousands) |                  | Gross enrollment ratio <sup>5</sup> |                |                 |
|                                      |                                     |              |              |   | 1999–2000                    | 2009–10        | 1990–91                             | 1999–2000        | 2009–10    | 1999–2000                    | 2009–10            | 1990–91                             | 1999–2000       | 2009–10         | 1999–2000                    | 2009–10          | 1990–91                             | 1999–2000      | 2009–10         |
| 1                                    | 2                                   | 3            | 4            | 5   | 6                            | 7              | 8                                   | 9                | 10         | 11                           | 12                 | 13                                  | 14              | 15              | 16                           | 17               | 18                                  | 19             | 20              |
| <b>World total<sup>6</sup></b> ..... | <b>5,370</b>                        | <b>6,090</b> | <b>6,864</b> | <b>52</b>   | <b>654,779</b>               | <b>691,318</b> | <b>99</b>                           | <b>99</b>        | <b>106</b> | <b>450,724</b>               | <b>543,487</b>     | <b>52</b>                           | <b>60</b>       | <b>70</b>       | <b>99,899</b>                | <b>177,684</b>   | <b>14</b>                           | <b>19</b>      | <b>29</b>       |
| <b>Africa</b>                        |                                     |              |              |   |                              |                |                                     |                  |            |                              |                    |                                     |                 |                 |                              |                  |                                     |                |                 |
| Algeria <sup>7</sup> .....           | 26                                  | 31           | 36           | 15  | 4,843                        | 3,312          | 100                                 | 108              | 110        | —                            | —                  | 61                                  | —               | —               | —                            | 1,144            | 11                                  | —              | 31              |
| Angola.....                          | 10                                  | 13           | 17           | 14  | —                            | 4,273          | 92                                  | —                | 124        | 355                          | 850                | 12                                  | 15              | 31              | —                            | 66               | 1                                   | —              | 4               |
| Burkina Faso.....                    | 9                                   | 12           | 16           | 59  | 852                          | 2,048          | 33                                  | 42               | 76         | 190                          | 538                | 7                                   | 10              | 21              | 11 <sup>8</sup>              | 51               | 1                                   | 1 <sup>8</sup> | 3               |
| Cameroon.....                        | 12                                  | 15           | 19           | 41  | 2,237 <sup>9</sup>           | 3,510          | 101                                 | 87 <sup>9</sup>  | 120        | 700                          | 1,283 <sup>8</sup> | 28                                  | 28              | 42 <sup>8</sup> | 66 <sup>8</sup>              | 220              | 3                                   | 4 <sup>8</sup> | 11              |
| Chad.....                            | 6                                   | 8            | 11           | 8   | 914                          | 1,727          | 54                                  | 68               | 93         | 137                          | 430                | 8 <sup>10</sup>                     | 11              | 25              | 6                            | 22 <sup>8</sup>  | 1 <sup>11,12</sup>                  | 1              | 2 <sup>8</sup>  |
| Cote d'Ivoire.....                   | 13                                  | 17           | 21           | 66  | 1,944                        | —              | 67                                  | 74               | —          | 620 <sup>8</sup>             | —                  | 22                                  | 24 <sup>8</sup> | —               | 104 <sup>8</sup>             | —                | —                                   | 7 <sup>8</sup> | —               |
| Democratic Rep.<br>of the Congo..... | 41                                  | 52           | 70           | 31  | —                            | 10,572         | 70                                  | —                | 94         | —                            | 3,484              | 21 <sup>13</sup>                    | —               | 38              | —                            | —                | 2                                   | —              | —               |
| Egypt <sup>7</sup> .....             | 56                                  | 65           | 80           | 81  | 7,947 <sup>8</sup>           | 10,004         | 94                                  | 98 <sup>8</sup>  | 101        | 8,028 <sup>8</sup>           | 6,846              | 76                                  | 83 <sup>8</sup> | 72              | —                            | 2,646            | 16 <sup>14,15</sup>                 | —              | 32              |
| Ethiopia.....                        | 49                                  | 64           | 86           | 86  | 5,847                        | 13,635         | 33                                  | 55               | 102        | 1,195                        | 4,207              | 14                                  | 14              | 36              | 68                           | 435              | 1                                   | 1              | 5               |
| Ghana <sup>7</sup> .....             | 16                                  | 19           | 24           | 104   | 2,561                        | —              | 75                                  | 85               | —          | 1,057                        | —                  | 36                                  | 41              | —               | —                            | —                | 1 <sup>11</sup>                     | —              | —               |
| Guinea.....                          | 7                                   | 8            | 10           | 42  | 790                          | 1,453          | 37                                  | 60               | 94         | —                            | —                  | 10                                  | —               | —               | —                            | —                | 1                                   | —              | —               |
| Kenya <sup>7</sup> .....             | 24                                  | 31           | 41           | 72  | 5,035                        | —              | 95                                  | 95               | —          | 1,909                        | —                  | 24 <sup>10</sup>                    | 39              | —               | 89                           | —                | 2 <sup>11</sup>                     | 3              | —               |
| Madagascar.....                      | 12                                  | 16           | 21           | 36  | 2,208                        | 4,242          | 103                                 | 103              | 149        | —                            | —                  | 18 <sup>10</sup>                    | —               | —               | 32                           | 74               | 3                                   | 2              | 4               |
| Malawi.....                          | 10                                  | 12           | 15           | 164   | 2,695                        | 3,417          | 68                                  | 139              | 135        | 487                          | 692                | 8                                   | 32              | 32              | 4                            | 10               | 1                                   | #              | 1               |
| Mali.....                            | 9                                   | 11           | 15           | 12  | 1,017                        | 2,019          | 26                                  | 55               | 80         | 258 <sup>8</sup>             | 758                | 7                                   | 17 <sup>8</sup> | 38              | 20                           | 81               | 1                                   | 2              | 6               |
| Morocco <sup>7</sup> .....           | 24                                  | 28           | 32           | 71  | 3,670                        | 3,945          | 67                                  | 92               | 111        | 1,541                        | —                  | 35                                  | 38              | —               | 276                          | —                | 11                                  | 9              | —               |
| Mozambique <sup>7</sup> .....        | 13                                  | 18           | 22           | 29  | 2,544                        | 5,278          | 67                                  | 75               | 115        | 124                          | 672                | 8                                   | 6               | 25              | 12                           | —                | # <sup>12</sup>                     | 1              | —               |
| Niger.....                           | 8                                   | 11           | 15           | 12  | 579                          | 1,726          | 29                                  | 33               | 66         | 106 <sup>8</sup>             | 303                | 7                                   | 7 <sup>8</sup>  | 13              | —                            | 17               | 1                                   | —              | 1               |
| Nigeria <sup>7</sup> .....           | 99                                  | 124          | 162          | 177   | 19,151                       | 20,682         | 91                                  | 98               | 83         | 4,104                        | 9,057              | 25                                  | 24              | 44              | —                            | —                | 4 <sup>11,16</sup>                  | —              | —               |
| Rwanda.....                          | 7                                   | 8            | 11           | 448   | 1,432                        | 2,299          | 70                                  | 104              | 143        | 130                          | 426                | 8                                   | 11              | 32              | 9                            | 63               | # <sup>17</sup>                     | 1              | 5               |
| Senegal.....                         | 8                                   | 9            | 12           | 64  | 1,108                        | 1,695          | 59                                  | 71               | 87         | 250                          | 725                | 16                                  | 16              | 37              | —                            | 92 <sup>18</sup> | 3                                   | —              | 8 <sup>18</sup> |
| South Africa.....                    | 39                                  | 45           | 49           | 40  | 7,445                        | —              | 122                                 | 106              | —          | 4,142                        | —                  | 74                                  | 85              | —               | —                            | —                | 13 <sup>19</sup>                    | —              | —               |
| Sudan <sup>7</sup> .....             | 22                                  | 27           | 33           | 18  | 2,567                        | —              | 53                                  | 48               | —          | 980                          | —                  | 24                                  | 25              | —               | 204 <sup>8</sup>             | —                | 3 <sup>11</sup>                     | 6 <sup>8</sup> | —               |
| Tunisia.....                         | 8                                   | 10           | 11           | 68  | 1,414                        | —              | 113                                 | 115              | —          | 1,104 <sup>8</sup>           | —                  | 45                                  | 76 <sup>8</sup> | —               | 180                          | —                | 9                                   | 19             | —               |
| Uganda.....                          | 17                                  | 23           | 32           | 160   | 6,559                        | 8,375          | 74 <sup>20,21</sup>                 | 131              | 121        | 547                          | 1,306 <sup>8</sup> | 13 <sup>10,21</sup>                 | 16              | 28 <sup>8</sup> | 56                           | —                | 1                                   | 3              | —               |
| United Republic<br>of Tanzania.....  | 26                                  | 33           | 44           | 50  | 4,382                        | 8,419          | 70                                  | 68               | 102        | —                            | —                  | 5                                   | —               | —               | —                            | 85               | # <sup>13</sup>                     | —              | 2               |
| Zambia.....                          | 8                                   | 10           | 13           | 18  | 1,590                        | 2,899          | 99                                  | 84               | 115        | —                            | —                  | 24                                  | —               | —               | 25 <sup>8</sup>              | —                | 2                                   | 2 <sup>8</sup> | —               |
| Zimbabwe.....                        | 10                                  | 12           | 12           | 30  | —                            | —              | 116                                 | —                | —          | —                            | —                  | 50                                  | —               | —               | —                            | 95               | 5                                   | —              | 6               |
| <b>Asia</b>                          |                                     |              |              |   |                              |                |                                     |                  |            |                              |                    |                                     |                 |                 |                              |                  |                                     |                |                 |
| Afghanistan <sup>7</sup> .....       | 14                                  | 22           | 29           | 45  | 749                          | 5,279          | 27                                  | 19               | 97         | —                            | 2,044              | 9                                   | —               | 46              | —                            | —                | 2                                   | —              | —               |
| Bangladesh.....                      | 114                                 | 132          | 156          | 1,199   | —                            | 16,987         | 72                                  | —                | —          | 10,329                       | 11,395             | 19                                  | 48              | 51              | 727                          | —                | 4                                   | 6              | —               |
| Cambodia.....                        | 10                                  | 12           | 14           | 82  | 2,248                        | 2,273          | 121                                 | 106              | 127        | 351                          | 949 <sup>8</sup>   | 32                                  | 17              | 46 <sup>8</sup> | 22                           | —                | 1                                   | 3              | —               |
| China.....                           | 1,164                               | 1,264        | 1,330        | 139   | —                            | 101,019        | 125                                 | —                | 111        | 81,488                       | 99,218             | 49                                  | 62              | 81              | 7,364                        | 31,047           | 3                                   | 8              | 26              |
| India.....                           | 854                                 | 1,006        | 1,173        | 395   | 113,613                      | —              | 97                                  | 94               | —          | 71,031                       | 107,687            | 44 <sup>10</sup>                    | 45              | 63              | 9,404                        | 20,741           | 6                                   | 9              | 18              |
| Indonesia.....                       | 185                                 | 214          | 243          | 134   | 28,202 <sup>8</sup>          | 30,342         | 115                                 | 106 <sup>8</sup> | 118        | 14,264 <sup>8</sup>          | 19,976             | 44                                  | 53 <sup>8</sup> | 77              | 3,126                        | 5,001            | 9 <sup>13</sup>                     | 15             | 23              |
| Iran, Islamic Republic of..          | 60                                  | 69           | 77           | 50  | 8,288                        | 5,974          | 112                                 | 101              | 114        | 9,955                        | 8,120              | 55                                  | 80              | 91              | 1,405                        | 3,791            | 10 <sup>14</sup>                    | 19             | 43              |
| Iraq.....                            | 17                                  | 23           | 30           | 68  | 3,639                        | —              | 111                                 | 95               | —          | 1,224                        | —                  | 47 <sup>10</sup>                    | 38              | —               | 289                          | —                | 12 <sup>17</sup>                    | 12             | —               |
| Japan.....                           | 124                                 | 127          | 128          | 350   | 7,529                        | 7,099          | 100                                 | 101              | 103        | 8,782                        | 7,296              | 97                                  | 102             | 102             | 3,982                        | 3,836            | 30 <sup>13</sup>                    | 49             | 60              |
| Kazakhstan.....                      | 17                                  | 16           | 17           | 6   | 1,208                        | 958            | 87                                  | 96               | 111        | 2,003                        | 1,714              | 98                                  | 94              | 97              | —                            | 610              | 40                                  | 28             | 38              |
| Korea, North (DPR).....              | 21                                  | 23           | 24           | 202   | —                            | —              | —                                   | —                | —          | —                            | —                  | —                                   | —               | —               | —                            | —                | —                                   | —              | —               |
| Korea, South (Republic of)..         | 43                                  | 47           | 49           | 502   | 4,030                        | 3,306          | 105                                 | 102              | 106        | 3,959                        | 3,951              | 90                                  | 99              | 97              | 3,003                        | 3,270            | 39                                  | 79             | 103             |

See notes at end of table.

Table 455. Selected population and enrollment statistics for countries with populations over 10 million in 2010, by continent and country: Selected years, 1990 through 2010—Continued

| Continent and country <sup>1</sup> | Midyear population<br>(in millions) |      |      | Persons<br>per<br>square<br>kilo-<br>meter,<br>2010 | First level <sup>2</sup>     |         |                                     |                  |         | Second level <sup>3</sup>    |                    |                                     |                 |                 | Third level <sup>4</sup>     |         |                                     |                 |         |
|------------------------------------|-------------------------------------|------|------|---|------------------------------|---------|-------------------------------------|------------------|---------|------------------------------|--------------------|-------------------------------------|-----------------|-----------------|------------------------------|---------|-------------------------------------|-----------------|---------|
|                                    | 1991                                | 2000 | 2010 |   | Enrollment (in<br>thousands) |         | Gross enrollment ratio <sup>5</sup> |                  |         | Enrollment<br>(in thousands) |                    | Gross enrollment ratio <sup>5</sup> |                 |                 | Enrollment<br>(in thousands) |         | Gross enrollment ratio <sup>5</sup> |                 |         |
|                                    |                                     |      |      |   | 1999–2000                    | 2009–10 | 1990–91                             | 1999–2000        | 2009–10 | 1999–2000                    | 2009–10            | 1990–91                             | 1999–2000       | 2009–10         | 1999–2000                    | 2009–10 | 1990–91                             | 1999–2000       | 2009–10 |
| 1                                  | 2                                   | 3    | 4    | 5   | 6                            | 7       | 8                                   | 9                | 10      | 11                           | 12                 | 13                                  | 14              | 15              | 16                           | 17      | 18                                  | 19              | 20      |
| Malaysia.....                      | 18                                  | 23   | 28   | 86  | 3,026                        | —       | 94                                  | 98               | —       | 2,205                        | —                  | 56                                  | 66              | —               | 549                          | —       | 7                                   | 26              | —       |
| Myanmar.....                       | 41                                  | 47   | 53   | 82  | 4,858                        | 5,126   | 106                                 | 105              | 126     | 2,268                        | 2,852              | 23                                  | 40              | 54              | —                            | —       | 4 <sup>13</sup>                     | —               | —       |
| Nepal <sup>7</sup> .....           | 19                                  | 25   | 29   | 202   | 3,780 <sup>9</sup>           | 4,901   | 108                                 | 118 <sup>9</sup> | —       | 1,348                        | —                  | 33                                  | 35              | —               | 94                           | 377     | 5                                   | 4               | —       |
| Pakistan.....                      | 122                                 | 152  | 184  | 239   | 13,987 <sup>18</sup>         | 18,756  | 61 <sup>22</sup>                    | 70 <sup>18</sup> | 95      | —                            | 9,685              | 23                                  | —               | 34              | —                            | —       | 3                                   | —               | —       |
| Philippines.....                   | 67                                  | 81   | 100  | 335   | 12,708                       | —       | 111                                 | 110              | —       | —                            | —                  | 73                                  | —               | —               | —                            | —       | 28                                  | —               | —       |
| Saudi Arabia.....                  | 16                                  | 21   | 26   | 12  | —                            | 3,321   | 73                                  | —                | 106     | —                            | 3,036              | 44                                  | —               | 101             | 404                          | 904     | 12                                  | 23              | 37      |
| Sri Lanka <sup>7</sup> .....       | 17                                  | 19   | 21   | 326   | —                            | 1,721   | 106                                 | —                | 99      | —                            | —                  | 74                                  | —               | —               | —                            | 253     | 5 <sup>13,23</sup>                  | —               | 15      |
| Syrian Arab Republic.....          | 13                                  | 16   | 22   | 121   | 2,775                        | 2,429   | 108                                 | 109              | 118     | 1,069                        | 2,732              | 52                                  | 45              | 72              | —                            | —       | 18                                  | —               | —       |
| Taiwan.....                        | 20                                  | 22   | 23   | 717   | —                            | —       | —                                   | —                | —       | —                            | —                  | —                                   | —               | —               | —                            | —       | —                                   | —               | —       |
| Thailand.....                      | 56                                  | 62   | 66   | 130   | 6,101                        | —       | 99                                  | 97               | —       | —                            | 4,807              | 30                                  | —               | 77              | 1,900                        | 2,427   | 19 <sup>12</sup>                    | 35              | 46      |
| Turkey.....                        | 58                                  | 67   | 78   | 101   | 6,562                        | —       | 99                                  | 101              | —       | 5,658                        | —                  | 47                                  | 71              | —               | 1,588 <sup>8</sup>           | —       | 13                                  | 25 <sup>8</sup> | —       |
| Uzbekistan.....                    | 21                                  | 25   | 28   | 66  | 2,602                        | 1,971   | 81                                  | 99               | 94      | 3,566                        | 4,449              | 99                                  | 88              | 105             | 305                          | —       | 30                                  | 13              | —       |
| Vietnam.....                       | 69                                  | 79   | 90   | 289   | 10,063                       | 6,923   | 103                                 | 108              | 106     | 7,926                        | 8,800              | 32                                  | 64              | 77              | 732                          | 2,020   | 2                                   | 10              | 22      |
| Yemen.....                         | 13                                  | 17   | 23   | 45  | 2,464 <sup>8</sup>           | 3,427   | 79 <sup>16</sup>                    | 75 <sup>8</sup>  | 87      | 1,151 <sup>8</sup>           | 1,562 <sup>8</sup> | 23 <sup>16</sup>                    | 43 <sup>8</sup> | 44 <sup>8</sup> | 173 <sup>8</sup>             | —       | 4 <sup>13</sup>                     | 10 <sup>8</sup> | —       |
| Europe                             |                                     |      |      |   |                              |         |                                     |                  |         |                              |                    |                                     |                 |                 |                              |         |                                     |                 |         |
| Belgium.....                       | 10                                  | 10   | 10   | 344   | 774                          | —       | 101                                 | 109              | —       | 1,058                        | —                  | 103                                 | 145             | —               | 356                          | —       | 40                                  | 57              | —       |
| Czech Republic.....                | 10                                  | 10   | 10   | 132   | 645                          | —       | 96                                  | 103              | —       | 958                          | —                  | 91                                  | 87              | —               | 254                          | —       | 16 <sup>24</sup>                    | 29              | —       |
| France.....                        | 59                                  | 61   | 65   | 101   | 3,885                        | 4,159   | 108                                 | 105              | 110     | 5,929                        | 5,873              | 99                                  | 108             | 113             | 2,015                        | —       | 40                                  | 54              | —       |
| Germany <sup>25</sup> .....        | 80                                  | 82   | 82   | 234   | 3,656                        | 3,068   | 101                                 | 105              | 102     | 8,307                        | 7,664              | 98                                  | 98              | 103             | —                            | —       | 34                                  | —               | —       |
| Greece.....                        | 10                                  | 11   | 11   | 82  | 645                          | —       | 98                                  | 96               | —       | 739                          | —                  | 93                                  | 89              | —               | 422                          | —       | 36                                  | 51              | —       |
| Italy <sup>7</sup> .....           | 57                                  | 58   | 61   | 207   | 2,836                        | 2,822   | 103                                 | 103              | 102     | 4,404                        | 4,626              | 83                                  | 93              | 100             | 1,770                        | —       | 32                                  | 49              | —       |
| Netherlands <sup>7</sup> .....     | 15                                  | 16   | 17   | 489   | 1,279                        | 1,294   | 102                                 | 109              | 108     | 1,379                        | 1,475              | 120                                 | 123             | 121             | 488                          | —       | 40                                  | 53              | —       |
| Poland <sup>7</sup> .....          | 38                                  | 39   | 38   | 126   | 3,319                        | —       | 98                                  | 99               | —       | 3,988                        | —                  | 81                                  | 101             | —               | 1,580                        | —       | 22                                  | 51              | —       |
| Portugal.....                      | 10                                  | 10   | 11   | 117   | 811                          | —       | 123                                 | 122              | —       | 831                          | —                  | 67                                  | 105             | —               | 374                          | —       | 23                                  | 47              | —       |
| Romania <sup>7</sup> .....         | 23                                  | 22   | 22   | 96  | 1,189                        | 842     | 91                                  | 97               | 96      | 2,226                        | 1,822              | 92                                  | 82              | 97              | 453                          | 1,000   | 10                                  | 24              | 59      |
| Russian Federation.....            | 148                                 | 147  | 143  | 9   | 6,138                        | —       | 109                                 | 103              | —       | —                            | —                  | 93                                  | —               | —               | 6,331                        | —       | 52                                  | 55              | —       |
| Spain <sup>7</sup> .....           | 39                                  | 41   | 47   | 93  | 2,540                        | 2,721   | 109                                 | 106              | 106     | 3,246                        | 3,185              | 104                                 | 111             | 125             | 1,829                        | —       | 37                                  | 59              | —       |
| Ukraine <sup>7</sup> .....         | 52                                  | 49   | 45   | 78  | 2,079                        | 1,540   | 89                                  | 108              | 99      | 5,204                        | 3,133              | 93                                  | 99              | 96              | 1,812                        | 2,635   | 47                                  | 49              | 79      |
| United Kingdom <sup>7</sup> .....  | 58                                  | 59   | 62   | 258   | 4,632                        | —       | 104                                 | 101              | —       | 5,315                        | —                  | 85                                  | 102             | —               | 2,024                        | —       | 30                                  | 58              | —       |
| North America                      |                                     |      |      |   |                              |         |                                     |                  |         |                              |                    |                                     |                 |                 |                              |         |                                     |                 |         |
| Canada.....                        | 28                                  | 31   | 34   | 4   | 2,456                        | —       | 103                                 | 100              | —       | 2,519                        | —                  | 101                                 | 102             | —               | 1,212                        | —       | 95                                  | 59              | —       |
| Cuba.....                          | 11                                  | 11   | 11   | 101   | 1,046                        | 853     | 98                                  | 101              | 103     | 790                          | 809                | 89                                  | 83              | 89              | 159                          | 801     | 21                                  | 22              | 95      |
| Guatemala.....                     | 9                                   | 11   | 14   | 127   | 1,909                        | 2,660   | 78                                  | 104              | 116     | 504                          | 983                | 23 <sup>13</sup>                    | 38              | 59              | —                            | —       | 8 <sup>12</sup>                     | —               | —       |
| Mexico.....                        | 86                                  | 100  | 112  | 58  | 14,766                       | 14,906  | 114                                 | 110              | 114     | 9,094                        | 11,682             | 53                                  | 73              | 89              | 1,963                        | 2,847   | 15                                  | 20              | 28      |
| United States.....                 | 253                                 | 282  | 309  | 34  | 24,973                       | 24,393  | 102                                 | 102              | 102     | 22,594                       | 24,193             | 93                                  | 93              | 96              | 13,203                       | 20,428  | 75                                  | 69              | 95      |
| South America                      |                                     |      |      |   |                              |         |                                     |                  |         |                              |                    |                                     |                 |                 |                              |         |                                     |                 |         |
| Argentina.....                     | 34                                  | 37   | 41   | 15  | 4,728                        | —       | 106                                 | 114              | —       | 3,428                        | —                  | 71                                  | 87              | —               | 1,767 <sup>8</sup>           | —       | 38 <sup>13</sup>                    | 53 <sup>8</sup> | —       |
| Brazil.....                        | 152                                 | 174  | 196  | 23  | 20,212                       | 16,893  | 106                                 | 151              | —       | 26,097                       | 23,539             | 38                                  | 104             | —               | 2,781                        | 6,553   | 11 <sup>26</sup>                    | 16              | —       |
| Chile.....                         | 13                                  | 15   | 17   | 23  | 1,799                        | —       | 100                                 | 100              | —       | 1,391                        | —                  | 73                                  | 83              | —               | 452                          | —       | 21 <sup>13</sup>                    | 37              | —       |
| Colombia.....                      | 34                                  | 39   | 44   | 43  | 5,221                        | 5,085   | 102                                 | 119              | 115     | 3,569                        | 5,080              | 50 <sup>13</sup>                    | 72              | 96              | 934                          | 1,674   | 13                                  | 24              | 39      |

See notes at end of table.

**Table 455. Selected population and enrollment statistics for countries with populations over 10 million in 2010, by continent and country: Selected years, 1990 through 2010—Continued**

| Continent and country <sup>1</sup> | Midyear population<br>(in millions) |      |      | Persons<br>per<br>square<br>kilo-<br>meter,<br>2010 | First level <sup>2</sup>     |                                     |         |         |                              | Second level <sup>3</sup>           |         |                  |                              |                                     | Third level <sup>4</sup> |         |                  |         |    |
|------------------------------------|-------------------------------------|------|------|---|------------------------------|-------------------------------------|---------|---------|------------------------------|-------------------------------------|---------|------------------|------------------------------|-------------------------------------|--------------------------|---------|------------------|---------|----|
|                                    | 1991                                | 2000 | 2010 |   | Enrollment (in<br>thousands) | Gross enrollment ratio <sup>5</sup> |         |         | Enrollment<br>(in thousands) | Gross enrollment ratio <sup>5</sup> |         |                  | Enrollment<br>(in thousands) | Gross enrollment ratio <sup>5</sup> |                          |         |                  |         |    |
|                                    |                                     |      |      |   |                              | 1999–2000                           | 2009–10 | 1990–91 |                              | 1999–2000                           | 2009–10 | 1990–91          |                              | 1999–2000                           | 2009–10                  | 1990–91 | 1999–2000        | 2009–10 |    |
| 1                                  | 2                                   | 3    | 4    | 5   | 6                            | 7                                   | 8       | 9       | 10                           | 11                                  | 12      | 13               | 14                           | 15                                  | 16                       | 17      | 18               | 19      | 20 |
| Ecuador .....                      | 10                                  | 12   | 15   | 53  | 1,925                        | —                                   | 116     | 116     | —                            | 917                                 | —       | 55 <sup>27</sup> | 57                           | —                                   | —                        | —       | 20               | —       | —  |
| Peru .....                         | 22                                  | 26   | 29   | 23  | 4,338                        | 3,763                               | 118     | 123     | 108                          | 2,374                               | 2,651   | 67               | 86                           | 91                                  | —                        | 1,207   | 30               | —       | 43 |
| Venezuela .....                    | 20                                  | 23   | 27   | 31  | 3,328                        | 3,458                               | 96      | 101     | 103                          | 1,543                               | 2,255   | 35               | 60                           | 83                                  | 668                      | —       | 29               | 28      | —  |
| Oceania                            |                                     |      |      |   |                              |                                     |         |         |                              |                                     |         |                  |                              |                                     |                          |         |                  |         |    |
| Australia <sup>7</sup> .....       | 17                                  | 19   | 22   | 3   | 1,906                        | 2,015                               | 108     | 101     | 105                          | 2,589                               | 2,282   | 82               | 162                          | 131                                 | 845                      | 1,276   | 35 <sup>28</sup> | 65      | 80 |

—Not available.

#Rounds to zero.

<sup>1</sup>Selection based on total population for midyear 2010.<sup>2</sup>First-level enrollment consists of elementary school, typically corresponding to grades 1–6 in the United States.<sup>3</sup>Second-level enrollment includes general education, teacher training (at the second level), and technical and vocational education.

This level generally corresponds to secondary education in the United States, grades 7–12.

<sup>4</sup>Third-level enrollment includes college and university enrollment and technical and vocational education beyond the secondary school level.<sup>5</sup>Data represent the total enrollment of all ages in the school level divided by the population of the specific age groups that correspond to the school level. Adjustments have been made for the varying lengths of first- and second-level programs. Ratios may exceed 100 because some countries have many students from outside the normal age range.<sup>6</sup>Enrollment totals and ratios exclude Democratic People's Republic of Korea.<sup>7</sup>Classification or data coverage of levels has been revised. Data by level may not be comparable over time.<sup>8</sup>Estimated by the UNESCO Institute for Statistics.<sup>9</sup>Policy change in 1999–2000: introduction of free universal primary education.<sup>10</sup>General education enrollment only. Excludes teacher training and vocational education enrollments.<sup>11</sup>Excludes nonuniversity institutions (such as teacher training colleges and technical colleges) and excludes distance-learning universities.<sup>12</sup>Data for 1992–93.<sup>13</sup>Data for 1991–92.<sup>14</sup>Excludes private institutions.<sup>15</sup>Data refer to universities and exclude Al Azhar.<sup>16</sup>Data for 1993–94.<sup>17</sup>Data for 1985–86.<sup>18</sup>National estimation.<sup>19</sup>Not including the former Independent States of Transkei, Bophuthatswana, Venda, and Ciskei.<sup>20</sup>Estimated.<sup>21</sup>Data refer to government aided and maintained schools only.<sup>22</sup>Includes preprimary education.<sup>23</sup>Excludes some nonuniversity institutions.<sup>24</sup>Includes full-time students only.<sup>25</sup>Data include both former East and West Germany.<sup>26</sup>Excludes enrollments in programs formerly classified as doctoral.<sup>27</sup>Including vocational education.<sup>28</sup>Data do not include Vocational Education and Training Institutes (VETs).

NOTE: Data do not include adult education or special education provided outside regular schools. Some data have been revised from previously published figures.

SOURCE: United Nations Educational, Scientific, and Cultural Organization (UNESCO), *Statistical Yearbook, 1999*; unpublished tabulations; and tables 3B, 5, and 14, retrieved September 10, 2012, from <http://stats.uis.unesco.org/unesco/ReportFolders/ReportFolders.aspx>. U.S. Department of Commerce, Census Bureau, International Data Base, retrieved August 24, 2012, from <http://www.census.gov/ipc/www/idb/region.php>. (This table was prepared September 2012.)

Table 456. School-age populations as a percentage of total population, by age group and country: Selected years, 1985 through 2009

| Country                          | 5- to 14-year-olds as a percent of total population |                   |                   |      |      |      |      |      |      |      |      |      | 15- to 19-year-olds as a percent of total population |                   |                   |      |      |      |      |      |      |      |      |      |
|----------------------------------|---|-------------------|-------------------|------|------|------|------|------|------|------|------|------|--|-------------------|-------------------|------|------|------|------|------|------|------|------|------|
|                                  | 1985 <sup>1</sup>                                   | 1990 <sup>1</sup> | 1995 <sup>1</sup> | 1999 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 1985 <sup>2</sup>                                    | 1990 <sup>2</sup> | 1995 <sup>2</sup> | 1999 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
| 1                                | 2   | 3                 | 4                 | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15                | 16                | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | 25   |
| <b>OECD average<sup>3</sup></b>  | —   | —                 | 12                | 13   | 13   | 13   | 13   | 13   | 12   | 12   | 12   | 12   | —  | —                 | 6                 | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 7    |
| Australia.....                   | 14  | 13                | 13                | 14   | 14   | 14   | 14   | 13   | 13   | 13   | 13   | 13   | 7  | 6                 | 6                 | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 7    |
| Austria.....                     | —   | —                 | —                 | —    | 12   | 12   | 11   | 11   | 11   | 11   | 11   | 10   | —  | —                 | —                 | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| Belgium.....                     | 11  | 11                | 11                | 12   | 12   | 12   | 12   | 12   | 12   | 11   | 11   | 11   | 6  | 5                 | 5                 | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| Canada.....                      | 13  | 12                | 12                | 14   | —    | 13   | 13   | 13   | 12   | 12   | 12   | 11   | 6  | 5                 | 5                 | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 7    |
| Chile.....                       | —   | —                 | —                 | —    | 19   | 18   | 18   | 18   | 17   | 16   | 15   | 15   | —  | —                 | —                 | —    | 9    | 9    | 9    | 9    | 9    | 9    | 9    | 9    |
| Czech Republic.....              | ( <sup>4</sup> )                                    | ( <sup>4</sup> )  | 12                | 12   | 12   | 11   | 11   | 10   | 10   | 10   | 9    | 9    | ( <sup>4</sup> )                                     | ( <sup>4</sup> )  | 6                 | 7    | 7    | 7    | 7    | 6    | 6    | 6    | 6    | 6    |
| Denmark.....                     | 12  | 10                | 10                | 12   | 12   | 13   | 13   | 13   | 13   | 13   | 12   | 12   | 6  | 6                 | 5                 | 5    | 5    | 5    | 5    | 6    | 6    | 6    | 6    | 6    |
| Estonia.....                     | ( <sup>4</sup> )                                    | ( <sup>4</sup> )  | —                 | —    | —    | —    | —    | 11   | 10   | 10   | 10   | 9    | ( <sup>4</sup> )                                     | ( <sup>4</sup> )  | —                 | —    | —    | —    | 8    | 8    | 8    | 8    | 7    | 7    |
| Finland.....                     | 11  | 12                | 11                | 13   | 12   | 12   | 12   | 12   | 12   | 12   | 11   | 11   | 6  | 5                 | 5                 | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| France.....                      | 13  | 12                | 12                | 13   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 6  | 6                 | 5                 | 7    | 7    | 6    | 6    | 7    | 6    | 6    | 6    | 6    |
| Germany <sup>5</sup> .....       | 9   | 9                 | 10                | 11   | 11   | 10   | 10   | 10   | 10   | 10   | 10   | 9    | 6  | 4                 | 4                 | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 5    |
| Greece.....                      | —   | —                 | 11                | 11   | 10   | 10   | 10   | 10   | 10   | 10   | 9    | 9    | —  | 5                 | 6                 | 7    | 6    | 6    | 6    | 6    | 5    | 5    | 5    | 5    |
| Hungary.....                     | —   | —                 | —                 | —    | 12   | 11   | 11   | 11   | 11   | 10   | 10   | 10   | —  | —                 | —                 | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| Iceland.....                     | 16  | 15                | 14                | 16   | 16   | 16   | 15   | 15   | 15   | 14   | 14   | 14   | 7  | 7                 | 6                 | 8    | 7    | 7    | 7    | 7    | 7    | 7    | 8    | 7    |
| Ireland.....                     | 18  | 18                | 15                | 15   | 14   | 14   | 14   | 14   | 13   | 13   | 13   | 13   | 8  | 8                 | 8                 | 9    | 8    | 8    | 8    | 7    | 7    | 7    | 6    | 6    |
| Israel.....                      | —   | —                 | —                 | —    | 18   | 18   | 18   | 18   | 18   | 18   | 18   | 18   | —  | —                 | —                 | —    | 9    | 9    | 8    | 8    | 8    | 8    | 8    | 8    |
| Italy.....                       | 13  | 10                | 9                 | 10   | 10   | 10   | 10   | 9    | 9    | 9    | 9    | 9    | 6  | 6                 | 5                 | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 5    |
| Japan.....                       | 14  | 12                | 10                | 10   | 10   | 10   | 9    | 9    | 9    | 9    | 9    | 9    | 6  | 7                 | 5                 | 6    | 6    | 6    | 5    | 5    | 5    | 5    | 5    | 5    |
| Korea, Republic of.....          | —   | —                 | 14                | 14   | 14   | 14   | 14   | 14   | 14   | 13   | 13   | 12   | —  | —                 | 7                 | 8    | 7    | 7    | 6    | 7    | 7    | 7    | 7    | 7    |
| Luxembourg.....                  | 10  | 10                | 11                | 12   | 13   | 13   | 13   | 13   | 13   | 12   | 12   | 12   | 5  | 4                 | 4                 | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| Mexico.....                      | —   | —                 | —                 | —    | 22   | 22   | 22   | 21   | 21   | 21   | 21   | 20   | —  | —                 | —                 | —    | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| Netherlands.....                 | 12  | 11                | 11                | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 12   | 7  | 5                 | 5                 | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| New Zealand.....                 | 15  | 13                | 13                | 15   | 15   | 15   | 15   | 15   | 14   | 14   | 14   | 14   | 7  | 7                 | 6                 | 7    | 7    | 7    | 7    | 7    | 8    | 8    | 8    | 7    |
| Norway.....                      | 13  | 11                | 11                | 13   | 13   | 14   | 14   | 13   | 13   | 13   | 13   | 13   | 6  | 6                 | 5                 | 6    | 6    | 6    | 6    | 6    | 6    | 7    | 7    | 7    |
| Poland.....                      | —   | —                 | —                 | —    | 13   | 13   | 12   | 12   | 12   | 11   | 11   | 10   | —  | —                 | —                 | —    | 9    | 8    | 8    | 8    | 8    | 7    | 7    | 7    |
| Portugal.....                    | —   | —                 | —                 | —    | 10   | 11   | 10   | 10   | 10   | 10   | 10   | 10   | —  | —                 | —                 | —    | 6    | 6    | 6    | 6    | 6    | 6    | 5    | 5    |
| Slovak Republic.....             | ( <sup>4</sup> )                                    | ( <sup>4</sup> )  | —                 | —    | 13   | 13   | 13   | 12   | 12   | 11   | 11   | 10   | ( <sup>4</sup> )                                     | ( <sup>4</sup> )  | —                 | —    | 8    | 8    | 8    | 8    | 8    | 7    | 7    | 7    |
| Slovenia.....                    | ( <sup>4</sup> )                                    | ( <sup>4</sup> )  | —                 | —    | —    | —    | —    | 10   | 10   | 9    | 9    | 9    | ( <sup>4</sup> )                                     | ( <sup>4</sup> )  | —                 | —    | —    | —    | 6    | 6    | 6    | 6    | 6    | 5    |
| Spain.....                       | 15  | 13                | 10                | 10   | 10   | 10   | 10   | 9    | 9    | 9    | 9    | 9    | 7  | 7                 | 6                 | 7    | 6    | 6    | 6    | 5    | 5    | 5    | 5    | 5    |
| Sweden.....                      | 11  | 10                | 11                | 13   | 13   | 13   | 13   | 12   | 12   | 11   | 11   | 11   | 5  | 5                 | 5                 | 6    | 6    | 6    | 6    | 6    | 7    | 7    | 7    | 7    |
| Switzerland.....                 | 11  | 10                | 10                | 12   | 12   | 12   | 11   | 11   | 11   | 11   | 11   | 10   | 6  | 5                 | 5                 | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    | 6    |
| Turkey.....                      | 21  | 21                | 20                | 21   | —    | 19   | 19   | 19   | 19   | 19   | 18   | 18   | 9  | 9                 | 9                 | 11   | —    | 9    | 9    | 9    | 9    | 9    | 9    | 9    |
| United Kingdom.....              | 11  | 11                | 12                | 13   | 13   | 13   | 13   | 12   | 12   | 12   | 12   | 11   | 6  | 5                 | 5                 | 6    | 6    | 6    | 7    | 7    | 7    | 7    | 7    | 6    |
| United States.....               | 13  | 13                | 13                | 15   | 15   | 14   | 14   | 14   | 14   | 13   | 13   | 13   | 6  | 5                 | 6                 | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 7    | 7    |
| <b>Other reporting countries</b> | —   | —                 | —                 | —    | 20   | 21   | 20   | 19   | 19   | 18   | 18   | 17   | —  | —                 | —                 | —    | 11   | 11   | 10   | 10   | 10   | 9    | 9    | 9    |
| Brazil.....                      | ( <sup>4</sup> )                                    | ( <sup>4</sup> )  | 14                | 14   | 12   | 12   | 11   | 10   | 10   | 10   | 9    | 9    | ( <sup>4</sup> )                                     | ( <sup>4</sup> )  | —                 | —    | 8    | 9    | 9    | 9    | 8    | 8    | 7    | 7    |

—Not available.

<sup>1</sup>Data are for the 5- to 13-year-old population.<sup>2</sup>Data are for the 14- to 17-year-old population.<sup>3</sup>Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year. However, if data were reported for less than 75 percent of the countries that were members of OECD in a given year, the average for that year is omitted.<sup>4</sup>Country did not exist in its current form in the given year.<sup>5</sup>Data for 1985 are for the former West Germany.SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, selected years, 1987 through 2001; and Online Education Database, retrieved April 23, 2012, from <http://stats.oecd.org/Index.aspx>. (This table was prepared April 2012.)

Table 457. Percentage of population enrolled in secondary and postsecondary education, by age group and country: Selected years, 1985 through 2009

| Country                         | Secondary education, 2009 |                    |                    |                    |                    |                    |                    |                              | Postsecondary education (total tertiary education) |                  |      |      |      |                    |                  |      |      |      |                    |                  |      |      |      |
|---------------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------------|--|------------------|------|------|------|--------------------|------------------|------|------|------|--------------------|------------------|------|------|------|
|                                 | 16<br>years<br>old        | 17<br>years<br>old | 18 to 21 years old |                    |                    |                    |                    | 22 years<br>old and<br>older | 18 to 21 years old                                 |                  |      |      |      | 22 to 25 years old |                  |      |      |      | 26 to 29 years old |                  |      |      |      |
|                                 |                           |                    | Total              | 18<br>years<br>old | 19<br>years<br>old | 20<br>years<br>old | 21<br>years<br>old |                              | 1985   | 1990             | 2005 | 2008 | 2009 | 1985               | 1990             | 2005 | 2008 | 2009 | 1985               | 1990             | 2005 | 2008 | 2009 |
|                                 |                           |                    |                    |                    |                    |                    |                    |                              |  |                  |      |      |      |                    |                  |      |      |      |                    |                  |      |      |      |
| 1                               | 2                         | 3                  | 4                  | 5                  | 6                  | 7                  | 8                  | 9                            | 10   | 11               | 12   | 13   | 14   | 15                 | 16               | 17   | 18   | 19   | 20                 | 21               | 22   | 23   | 24   |
| OECD average <sup>1</sup> ..... | 93                        | 85                 | 26                 | 53                 | 25                 | 13                 | 9                  | 2                            | —  | —                | 28   | 29   | 30   | —                  | —                | 23   | 24   | 24   | —                  | —                | 10   | 10   | 10   |
| Australia.....                  | 92                        | 76                 | 22                 | 35                 | 21                 | 17                 | 14                 | 3                            | —  | —                | 34   | 35   | 36   | —                  | —                | 21   | 22   | 23   | —                  | —                | 10   | 10   | 11   |
| Austria.....                    | 91                        | 76                 | 19                 | 46                 | 19                 | 8                  | 4                  | #                            | —  | —                | 16   | 18   | 19   | —                  | —                | 20   | 23   | 24   | —                  | —                | 9    | 12   | 13   |
| Belgium.....                    | 100                       | 99                 | —                  | 47                 | 23                 | 13                 | —                  | —                            | 25   | —                | 43   | 42   | 44   | 7                  | —                | 19   | 20   | 21   | 2                  | —                | 6    | 6    | 6    |
| Canada.....                     | 93                        | 78                 | —                  | 28                 | 11                 | 6                  | —                  | —                            | —  | —                | —    | 34   | 36   | —                  | —                | —    | 23   | 20   | —                  | —                | —    | 8    | 8    |
| Chile.....                      | 87                        | 84                 | 12                 | 31                 | 11                 | 4                  | 2                  | #                            | —  | —                | —    | 31   | 34   | —                  | —                | —    | 22   | 24   | —                  | —                | —    | 9    | 10   |
| Czech Republic.....             | 100                       | 95                 | 32                 | 83                 | 37                 | 7                  | 3                  | #                            | ( <sup>2</sup> )                                   | ( <sup>2</sup> ) | 23   | 25   | 25   | ( <sup>2</sup> )   | ( <sup>2</sup> ) | 21   | 25   | 26   | ( <sup>2</sup> )   | ( <sup>2</sup> ) | 6    | 7    | 7    |
| Denmark.....                    | 92                        | 85                 | 47                 | 80                 | 55                 | 31                 | 21                 | 2                            | 7  | 7                | 10   | 12   | 12   | 16                 | 18               | 34   | 34   | 33   | 8                  | 9                | 20   | 19   | 19   |
| Estonia.....                    | 96                        | 91                 | 26                 | 76                 | 19                 | 8                  | 4                  | #                            | ( <sup>2</sup> )                                   | ( <sup>2</sup> ) | 32   | 31   | 31   | ( <sup>2</sup> )   | ( <sup>2</sup> ) | 22   | 23   | 24   | ( <sup>2</sup> )   | ( <sup>2</sup> ) | 12   | 10   | 10   |
| Finland.....                    | 95                        | 94                 | 40                 | 93                 | 33                 | 17                 | 16                 | 4                            | 9  | 14               | 24   | 23   | 23   | 17                 | 21               | 40   | 39   | 37   | 8                  | 10               | 20   | 21   | 19   |
| France.....                     | 93                        | 87                 | 20                 | 47                 | 22                 | 9                  | 4                  | #                            | 19   | 25               | 36   | 36   | 36   | 10                 | 12               | 20   | 19   | 19   | 4                  | 4                | 5    | 5    | 5    |
| Germany <sup>3</sup> .....      | 95                        | 89                 | 41                 | 78                 | 46                 | 25                 | 16                 | #                            | 9  | 9                | 13   | 14   | 16   | —                  | 16               | 23   | 23   | 24   | 9                  | 10               | 13   | 12   | 12   |
| Greece.....                     | 93                        | 84                 | 13                 | 19                 | 10                 | 6                  | 16                 | #                            | —  | —                | 65   | 51   | —    | —                  | —                | 18   | 29   | —    | —                  | —                | 8    | 11   | —    |
| Hungary.....                    | 97                        | 95                 | 28                 | 67                 | 28                 | 12                 | 6                  | 1                            | —  | —                | 29   | 31   | 29   | —                  | —                | 23   | 24   | 24   | —                  | —                | 9    | 8    | 8    |
| Iceland.....                    | 94                        | 85                 | 51                 | 75                 | 69                 | 36                 | 23                 | 3                            | —  | —                | 12   | 11   | 11   | —                  | —                | 28   | 26   | 26   | —                  | —                | 16   | 15   | 16   |
| Ireland.....                    | 102                       | 84                 | 11                 | 37                 | 3                  | 1                  | 2                  | #                            | —  | 21               | 38   | 39   | 43   | —                  | —                | 13   | 12   | 10   | —                  | —                | 5    | 6    | —    |
| Israel.....                     | 92                        | 88                 | #                  | 17                 | 2                  | 1                  | #                  | #                            | —  | —                | 12   | 12   | 13   | —                  | —                | 25   | 25   | 26   | —                  | —                | 15   | 17   | 18   |
| Italy.....                      | 92                        | 86                 | 26                 | 74                 | 21                 | 6                  | 3                  | #                            | —  | —                | 29   | 28   | 27   | —                  | —                | 23   | 25   | 25   | —                  | —                | 8    | 8    | 8    |
| Japan.....                      | 96                        | 94                 | #                  | 3                  | 1                  | —                  | —                  | #                            | —  | —                | —    | —    | —    | —                  | —                | —    | —    | —    | —                  | —                | —    | —    | —    |
| Korea, Republic of.....         | 96                        | 93                 | #                  | 7                  | 1                  | #                  | #                  | #                            | —  | —                | 65   | 70   | 70   | —                  | —                | 32   | 34   | 36   | —                  | —                | 6    | 7    | 8    |
| Luxembourg.....                 | 85                        | 83                 | 38                 | 69                 | 44                 | 24                 | 14                 | #                            | —  | —                | —    | —    | —    | —                  | —                | —    | —    | —    | —                  | —                | —    | —    | —    |
| Mexico.....                     | 60                        | 46                 | 12                 | 19                 | 26                 | 3                  | 1                  | 2                            | —  | —                | 16   | 18   | 19   | —                  | —                | 9    | 10   | 10   | —                  | —                | 3    | 3    | 3    |
| Netherlands.....                | 98                        | 88                 | 37                 | 61                 | 42                 | 27                 | 16                 | 1                            | 14   | 18               | 29   | 32   | 32   | 12                 | 13               | 24   | 26   | 26   | 6                  | 5                | 7    | 8    | 8    |
| New Zealand.....                | 94                        | 78                 | 15                 | 29                 | 14                 | 10                 | 8                  | 3                            | —  | 21               | 34   | 35   | 36   | —                  | 15               | 23   | 21   | 23   | —                  | —                | 11   | 11   | 12   |
| Norway.....                     | 95                        | 92                 | 39                 | 87                 | 38                 | 18                 | 9                  | 1                            | 9  | 14               | 19   | 19   | 19   | 14                 | 17               | 30   | 29   | 28   | 6                  | 8                | 14   | 13   | 13   |
| Poland.....                     | 97                        | 95                 | 36                 | 91                 | 38                 | 12                 | 6                  | #                            | —  | —                | 31   | 34   | 34   | —                  | —                | 30   | 31   | 32   | —                  | —                | 6    | 6    | 6    |
| Portugal.....                   | 97                        | 87                 | 25                 | 48                 | 28                 | 16                 | 10                 | 4                            | 6  | —                | 27   | 29   | 31   | 5                  | —                | 21   | 19   | 18   | 2                  | —                | 8    | 8    | 7    |
| Slovak Republic.....            | 94                        | 90                 | 31                 | 80                 | 36                 | 7                  | 2                  | #                            | ( <sup>2</sup> )                                   | ( <sup>2</sup> ) | 22   | 25   | 26   | ( <sup>2</sup> )   | ( <sup>2</sup> ) | 16   | 21   | 23   | ( <sup>2</sup> )   | ( <sup>2</sup> ) | 5    | 7    | 7    |
| Slovenia.....                   | 99                        | 94                 | 32                 | 84                 | 25                 | 26                 | —                  | 1                            | ( <sup>2</sup> )                                   | ( <sup>2</sup> ) | 37   | 41   | 42   | ( <sup>2</sup> )   | ( <sup>2</sup> ) | 35   | 38   | 39   | ( <sup>2</sup> )   | ( <sup>2</sup> ) | 11   | 11   | 11   |
| Spain.....                      | 96                        | 82                 | 20                 | 40                 | 22                 | 13                 | 8                  | 1                            | 15   | 21               | 34   | 34   | 35   | 11                 | 14               | 22   | 21   | 22   | 4                  | 5                | 9    | 8    | 9    |
| Sweden.....                     | 100                       | 98                 | 38                 | 93                 | 27                 | 15                 | 12                 | 2                            | 8  | 9                | 17   | 16   | 16   | 11                 | 11               | 32   | 28   | 28   | 7                  | 6                | 16   | 14   | 15   |
| Switzerland.....                | 91                        | 87                 | —                  | 78                 | 49                 | 22                 | —                  | —                            | 6  | 6                | 12   | 13   | 14   | 11                 | 12               | 20   | 22   | 22   | 5                  | 6                | 10   | 11   | 11   |
| Turkey.....                     | 60                        | 50                 | 6                  | 26                 | —                  | —                  | —                  | —                            | —  | 7                | 20   | 25   | 29   | —                  | 4                | 11   | 14   | 17   | —                  | 2                | 4    | 5    | 6    |
| United Kingdom.....             | 93                        | 76                 | 12                 | 27                 | 10                 | 6                  | 4                  | 1                            | 15   | 16               | 28   | 29   | 30   | 7                  | 11               | 13   | 12   | 13   | —                  | —                | 7    | 7    | 7    |
| United States.....              | 93                        | 85                 | 7                  | 23                 | 5                  | #                  | #                  | #                            | 37   | 41               | 45   | 47   | 47   | 15                 | 17               | 23   | 24   | 26   | 8                  | 9                | 11   | 11   | 12   |
| Other reporting countries       |                           |                    |                    |                    |                    |                    |                    |                              |  |                  |      |      |      |                    |                  |      |      |      |                    |                  |      |      |      |
| Brazil.....                     | 86                        | 83                 | 30                 | 55                 | 31                 | 19                 | 14                 | 3                            | —  | —                | 10   | 14   | 13   | —                  | —                | 9    | 12   | 13   | —                  | —                | 5    | 7    | 7    |
| Russian Federation.....         | 72                        | 40                 | #                  | 14                 | 5                  | 2                  | 2                  | #                            | ( <sup>2</sup> )                                   | ( <sup>2</sup> ) | 41   | 44   | —    | ( <sup>2</sup> )   | ( <sup>2</sup> ) | 26   | 27   | —    | ( <sup>2</sup> )   | ( <sup>2</sup> ) | —    | #    | —    |

—Not available.

#Rounds to zero.

<sup>1</sup>Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year. However, if data were reported for less than 75 percent of the countries that were members of OECD in a given year, the average for that year is omitted.

<sup>2</sup>Country did not exist in its current form in the given year.

<sup>3</sup>Data for 1985 are for the former West Germany.

NOTE: Data refer to programs classified by the Organization for Economic Cooperation and Development (OECD) as International Standard Classification of Education (ISCED) level 3, level 5A (first and second award), level 5B, and level 6. ISCED

level 3 corresponds to secondary education in the United States. ISCED levels 5A (first and second award), 5B, and 6 together make up total tertiary education, which corresponds to 2-year and 4-year college undergraduate and graduate programs in the United States. Includes both full-time and part-time students. Some increases in enrollment rates may be due to more complete reporting by countries. Enrollment figures may not be directly comparable due to differing definitions of postsecondary (tertiary) education and the age at which it begins. Differences in reference dates between enrollment and population data can result in enrollment rates that exceed 100 percent. Postsecondary data for Luxembourg are not shown because tertiary students study for only 1 year in Luxembourg.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, selected years, 1987 through 2001; and Online Education Database, retrieved April 17, 2012, from <http://stats.oecd.org/Index.aspx>. (This table was prepared April 2012.)

Table 458. Pupil/teacher ratios in public and private elementary and secondary schools, by level of education and country: Selected years, 2000 through 2010

| Country                          | Elementary        |                   |                   |                   |                     |                     |                     | Junior high school (lower secondary) |                   |                   |                   |                     |                     |                   | Senior high school (upper secondary) |                      |                       |                         |                       |                       |                        |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|---------------------|---------------------|---------------------|--------------------------------------|-------------------|-------------------|-------------------|---------------------|---------------------|-------------------|--------------------------------------|----------------------|-----------------------|-------------------------|-----------------------|-----------------------|------------------------|
|                                  | 2000              | 2005              | 2006              | 2007              | 2008                | 2009                | 2010                | 2000                                 | 2005              | 2006              | 2007              | 2008                | 2009                | 2010              | 2000                                 | 2005                 | 2006                  | 2007                    | 2008                  | 2009                  | 2010                   |
| 1                                | 2                 | 3                 | 4                 | 5                 | 6                   | 7                   | 8                   | 9                                    | 10                | 11                | 12                | 13                  | 14                  | 15                | 16                                   | 17                   | 18                    | 19                      | 20                    | 21                    | 22                     |
| <b>OECD average<sup>1</sup>.</b> | <b>17.7</b>       | <b>17.0</b>       | <b>16.4</b>       | <b>16.2</b>       | <b>16.2</b>         | <b>16.0</b>         | <b>15.9</b>         | —                                    | <b>14.0</b>       | <b>13.6</b>       | <b>13.4</b>       | <b>13.5</b>         | <b>13.5</b>         | <b>13.5</b>       | <b>13.7</b>                          | <b>13.5</b>          | <b>13.1</b>           | <b>13.1</b>             | <b>13.1</b>           | <b>13.4</b>           | <b>13.6</b>            |
| Australia.....                   | 17.3              | 16.2              | 16.0              | 15.9              | 15.8                | 15.8                | 15.7                | —                                    | —                 | —                 | —                 | —                   | —                   | —                 | —                                    | 12.1 <sup>2,3</sup>  | 12.2 <sup>2,3</sup>   | 12.1 <sup>2,3</sup>     | 12.0 <sup>2,3</sup>   | 12.0 <sup>2,3</sup>   | 12.0 <sup>2,3</sup>    |
| Austria.....                     | —                 | 14.1              | 13.9              | 13.6              | 12.9                | 12.6                | 12.2                | —                                    | 10.6              | 10.4              | 10.3              | 9.9                 | 9.6                 | 9.3               | —                                    | 11.3                 | 11.3                  | 11.0                    | 10.5                  | 10.2                  | 10.1                   |
| Belgium.....                     | 15.0 <sup>4</sup> | 12.8              | 12.6              | 12.6 <sup>5</sup> | 12.6 <sup>5</sup>   | 12.5 <sup>5</sup>   | 12.4 <sup>5</sup>   | —                                    | 9.4               | 9.4               | 9.2 <sup>5</sup>  | 8.1 <sup>5</sup>    | 8.1 <sup>5</sup>    | 8.1 <sup>5</sup>  | 9.7 <sup>3,6</sup>                   | 9.9 <sup>6</sup>     | 10.2 <sup>6</sup>     | 10.2 <sup>5,6</sup>     | 10.8 <sup>5,6</sup>   | 10.2 <sup>5,6</sup>   | 10.1 <sup>5,6</sup>    |
| Canada.....                      | 18.1              | —                 | —                 | —                 | —                   | —                   | —                   | 18.1                                 | —                 | —                 | —                 | 16.6 <sup>4,7</sup> | 17.7 <sup>4,7</sup> | —                 | 19.5                                 | —                    | —                     | 16.4 <sup>3,4,7,8</sup> | 14.7                  | 15.8                  | —                      |
| Chile.....                       | —                 | 25.9              | 25.5              | 24.7              | 24.1                | 22.4                | 24.6                | —                                    | 25.9              | 25.5              | 24.7              | 24.1                | 22.4                | 25.1              | —                                    | 26.6                 | 26.3                  | 25.7                    | 25.2                  | 24.7                  | 26.1                   |
| Czech Republic.....              | 19.7              | 17.5              | 17.3              | 18.7              | 18.1                | 18.4                | 18.7                | 14.7                                 | 13.5              | 12.3              | 12.3              | 11.8                | 11.5                | 11.2              | 11.5                                 | 12.8                 | 11.9                  | 12.3                    | 12.2                  | 12.2                  | 12.1                   |
| Denmark.....                     | 10.4              | —                 | —                 | —                 | —                   | —                   | —                   | 11.4                                 | 11.9 <sup>7</sup> | 11.4 <sup>7</sup> | 11.2 <sup>7</sup> | 10.1 <sup>7</sup>   | 9.9 <sup>7</sup>    | 11.5 <sup>7</sup> | 14.4                                 | —                    | —                     | —                       | —                     | —                     | —                      |
| Estonia.....                     | —                 | —                 | 14.1              | 14.4              | 16.4                | 16.2                | 16.2                | —                                    | —                 | —                 | 12.3              | 11.4                | 16.0                | 15.7              | 14.9                                 | —                    | 13.3                  | 12.2 <sup>6</sup>       | 12.4 <sup>6</sup>     | 16.8 <sup>6</sup>     | 16.6 <sup>6</sup>      |
| Finland.....                     | 16.9              | 15.9              | 15.0              | 15.0              | 14.4                | 13.6                | 14.0                | 10.7                                 | 10.0              | 9.7               | 9.9               | 10.6                | 10.1                | 9.8               | 17.0 <sup>6,9</sup>                  | 18.0 <sup>6,9</sup>  | 15.8 <sup>6,9</sup>   | 15.9 <sup>6</sup>       | 15.9 <sup>6</sup>     | 16.6 <sup>6</sup>     | 17.1 <sup>6</sup>      |
| France.....                      | 19.8              | 19.4              | 19.3 <sup>5</sup> | 19.7 <sup>5</sup> | 19.9 <sup>5</sup>   | 19.7 <sup>5</sup>   | 18.7 <sup>5</sup>   | 14.7                                 | 14.2              | 14.1 <sup>5</sup> | 14.3 <sup>5</sup> | 14.6 <sup>5</sup>   | 14.9 <sup>5</sup>   | 15.0 <sup>5</sup> | 10.4                                 | 10.3                 | 9.7 <sup>5</sup>      | 9.6 <sup>5</sup>        | 9.4 <sup>5</sup>      | 9.6 <sup>5</sup>      | 9.7 <sup>5</sup>       |
| Germany.....                     | 19.8              | 18.8              | 18.7              | 18.3              | 18.0                | 17.4                | 16.7                | 15.7                                 | 15.5              | 15.5              | 15.2              | 15.0                | 15.1                | 14.9              | 13.9                                 | 14.0                 | 14.3                  | 14.3                    | 14.0                  | 13.9                  | 13.2                   |
| Greece.....                      | 13.4              | 11.1              | 10.6              | 10.1              | 10.1 <sup>10</sup>  | —                   | —                   | 10.8                                 | 7.9               | 8.0               | 7.7               | 7.7 <sup>10</sup>   | —                   | —                 | 10.5                                 | 8.8                  | 8.3                   | 7.3                     | 7.3 <sup>10</sup>     | —                     | —                      |
| Hungary.....                     | 10.9              | 10.6              | 10.4              | 10.2              | 10.6                | 10.7                | 10.8                | 10.9                                 | 10.4              | 10.2              | 10.2              | 10.9                | 10.8                | 10.7              | 11.4 <sup>6</sup>                    | 12.2                 | 12.3                  | 12.1                    | 12.3                  | 12.8                  | 12.5                   |
| Iceland.....                     | —                 | —                 | —                 | —                 | —                   | —                   | —                   | 12.7 <sup>7</sup>                    | 11.3 <sup>7</sup> | 10.6 <sup>7</sup> | 10.4 <sup>7</sup> | 10.0 <sup>7</sup>   | 9.9 <sup>7</sup>    | 10.3 <sup>7</sup> | 9.7                                  | 10.8 <sup>6</sup>    | 10.8 <sup>6</sup>     | 10.2 <sup>6</sup>       | 10.6 <sup>6</sup>     | 10.9 <sup>6</sup>     | 11.3                   |
| Ireland.....                     | 21.5              | 17.9              | 19.4              | 17.9              | 17.8                | 15.9                | 15.9                | —                                    | —                 | —                 | —                 | —                   | —                   | —                 | 15.9 <sup>3,6</sup>                  | 15.5 <sup>3,6</sup>  | 14.6 <sup>3,6</sup>   | 13.2 <sup>3,6,8</sup>   | 12.8 <sup>3,6,8</sup> | 12.6 <sup>3,6,8</sup> | 14.4 <sup>3,6,8</sup>  |
| Israel.....                      | —                 | 17.3              | 17.2              | 16.4              | 16.3                | 17.0                | 20.6 <sup>8</sup>   | —                                    | 13.4              | 14.1              | 12.4              | 12.2                | 13.7                | 12.8 <sup>8</sup> | —                                    | 13.4                 | 13.2                  | 11.8                    | 10.9                  | 10.8                  | 11.0 <sup>8</sup>      |
| Italy.....                       | 11.0              | 10.6              | 10.7              | 10.5              | 10.6 <sup>8</sup>   | 10.7 <sup>8</sup>   | 11.3 <sup>8</sup>   | 10.4                                 | 10.1              | 10.3              | 9.4               | 9.7 <sup>8</sup>    | 10.0 <sup>8</sup>   | 11.9 <sup>8</sup> | 10.2                                 | 11.0                 | 11.0                  | 10.8                    | 11.8 <sup>8</sup>     | 11.8 <sup>8</sup>     | 12.1 <sup>8</sup>      |
| Japan.....                       | 20.9              | 19.4              | 19.2              | 19.0              | 18.8                | 18.6                | 18.4                | 16.8                                 | 15.1              | 14.9              | 14.8              | 14.7                | 14.5                | 14.4              | 14.0                                 | 13.0 <sup>6</sup>    | 12.7 <sup>6</sup>     | 12.5 <sup>6</sup>       | 12.3 <sup>6</sup>     | 12.2 <sup>6</sup>     | 12.2 <sup>6</sup>      |
| Korea, Republic of..             | 32.1              | 28.0              | 26.7              | 25.6              | 24.1                | 22.5                | 21.1                | 21.5                                 | 20.8              | 20.8              | 20.5              | 20.2                | 19.9                | 19.7              | 20.9                                 | 16.0                 | 15.9                  | 16.2                    | 16.5                  | 16.7                  | 16.5                   |
| Luxembourg.....                  | 15.9 <sup>8</sup> | —                 | 11.3 <sup>8</sup> | 11.2 <sup>8</sup> | 12.1 <sup>8</sup>   | 11.6                | 10.1                | —                                    | —                 | —                 | —                 | —                   | —                   | —                 | 9.2 <sup>3,8</sup>                   | 9.0 <sup>3,8</sup>   | 9.0 <sup>3,6,8</sup>  | 9.0 <sup>3,8</sup>      | 9.1 <sup>3,8</sup>    | 9.1 <sup>3</sup>      | 9.1 <sup>3</sup>       |
| Mexico.....                      | 27.2              | 28.3              | 28.0              | 28.0              | 28.0                | 28.1                | 28.1                | 34.8                                 | 33.7              | 33.4              | 33.3              | 33.9                | 33.0                | 32.7              | 26.5                                 | 25.8                 | 25.4                  | 25.7                    | 25.8                  | 25.6                  | 26.9                   |
| Netherlands.....                 | 16.8 <sup>4</sup> | 15.9 <sup>4</sup> | 15.3 <sup>4</sup> | 15.6 <sup>4</sup> | 15.8 <sup>4,8</sup> | 15.8 <sup>4,8</sup> | 15.7 <sup>4,8</sup> | —                                    | —                 | —                 | —                 | —                   | —                   | —                 | 17.1 <sup>3</sup>                    | 16.2 <sup>3</sup>    | 15.8 <sup>3,6</sup>   | 15.7 <sup>3,6</sup>     | 15.8 <sup>3,6,8</sup> | 16.1 <sup>3,6,8</sup> | 16.5 <sup>3,6,8</sup>  |
| New Zealand.....                 | 20.6              | 18.1              | 17.7              | 17.5              | 17.1                | 16.3                | 16.2                | 19.9                                 | 16.8              | 16.6              | 16.2              | 16.2                | 16.3                | 16.3              | 13.1                                 | 12.9                 | 12.7                  | 13.3                    | 12.8                  | 12.8                  | 14.4                   |
| Norway.....                      | 12.4              | —                 | 10.9 <sup>8</sup> | 11.0 <sup>8</sup> | 10.8 <sup>8</sup>   | 10.7 <sup>8</sup>   | 10.5 <sup>8</sup>   | 9.9                                  | —                 | 10.2 <sup>8</sup> | 10.2 <sup>8</sup> | 10.1 <sup>8</sup>   | 9.9 <sup>8</sup>    | 9.9 <sup>8</sup>  | 9.7                                  | —                    | 9.7 <sup>6,8</sup>    | 9.8 <sup>6,8</sup>      | 9.9 <sup>6,8</sup>    | 9.4 <sup>6,8</sup>    | 9.4 <sup>8</sup>       |
| Poland.....                      | 12.7              | 11.7              | 11.5              | 11.0              | 10.5                | 10.2                | 10.0                | 11.5                                 | 12.7              | 12.6              | 12.4              | 12.9                | 12.9                | 12.7              | 16.9                                 | 12.9                 | 12.8                  | 12.2                    | 12.2                  | 12.0                  | 12.1                   |
| Portugal.....                    | 12.1              | 10.8              | 10.6              | 11.8              | 11.3                | 11.3                | 10.9                | 10.4                                 | 8.2               | 8.3               | 7.9               | 8.1                 | 7.6                 | 7.9               | 7.9                                  | 8.0                  | 7.5 <sup>6</sup>      | 8.4 <sup>6</sup>        | 7.3 <sup>6</sup>      | 7.7 <sup>6</sup>      | 7.2 <sup>6</sup>       |
| Slovak Republic.....             | 18.3              | 18.9              | 18.6              | 17.9              | 18.6                | 17.7                | 17.1                | 13.5                                 | 14.1              | 13.7              | 13.9              | 14.5                | 14.0                | 13.6              | 12.8                                 | 14.3                 | 14.2                  | 14.1                    | 15.1                  | 15.1                  | 14.6                   |
| Slovenia.....                    | —                 | 15.0              | 14.9              | 15.2              | 15.8                | 16.7                | 16.2                | —                                    | 11.1              | 10.2              | 9.5               | 8.9                 | 7.9                 | 8.0               | —                                    | 14.6                 | 14.0 <sup>6</sup>     | 13.9 <sup>6</sup>       | 13.7 <sup>6</sup>     | 14.3 <sup>6</sup>     | 14.3 <sup>6</sup>      |
| Spain.....                       | 14.9              | 14.3              | 14.2              | 13.6              | 13.1                | 13.3                | 13.2                | —                                    | 12.5              | 12.5              | 11.7              | 10.3                | 10.1                | 10.1              | 11.9 <sup>3</sup>                    | 8.1                  | 7.8                   | 7.7                     | 8.7                   | 9.3                   | 9.6                    |
| Sweden.....                      | 12.8              | 12.2              | 12.1              | 12.3              | 12.2                | 12.1                | 11.7                | 12.8                                 | 12.0              | 11.4              | 11.5              | 11.4                | 11.3                | 11.4              | 15.2                                 | 14.0                 | 13.8                  | 13.6                    | 14.7                  | 13.2                  | 13.1                   |
| Switzerland <sup>9</sup> .....   | —                 | 14.6              | 15.1              | 14.8              | 15.4                | 15.4                | 14.9                | —                                    | 11.7              | 12.3              | 12.3              | 12.1                | 12.0                | 11.8              | —                                    | 10.5 <sup>2</sup>    | 10.5 <sup>2</sup>     | 10.6 <sup>2</sup>       | 10.4 <sup>2</sup>     | 10.4 <sup>2</sup>     | 10.3 <sup>2</sup>      |
| Turkey.....                      | 30.5              | 25.8              | 26.7              | 26.2              | 24.4                | 22.9                | 21.7                | —                                    | ↑                 | ↑                 | ↑                 | ↑                   | ↑                   | ↑                 | 14.0                                 | 16.2                 | 15.8                  | 16.2                    | 17.0                  | 16.9                  | 17.6                   |
| United Kingdom.....              | 21.2              | 20.7              | 19.8              | 19.4              | 20.2                | 19.9                | 19.8                | 17.6 <sup>2</sup>                    | 17.0              | 16.7              | 16.7              | 15.0                | 16.1                | 17.1              | 12.5 <sup>2</sup>                    | 11.8 <sup>2,6</sup>  | 11.6 <sup>2,6</sup>   | 11.3 <sup>2,6</sup>     | 12.4 <sup>6</sup>     | 12.3 <sup>6</sup>     | 15.2 <sup>6</sup>      |
| United States.....               | 15.8              | 14.9              | 14.6              | 14.6              | 15.0                | 14.8                | 14.5                | 16.3                                 | 15.1              | 14.7              | 14.7              | 14.8                | 14.3                | 14.0              | 14.1                                 | 16.0                 | 15.7                  | 15.6                    | 15.6                  | 15.1                  | 15.0                   |
| <b>Other reporting countries</b> |                   |                   |                   |                   |                     |                     |                     |                                      |                   |                   |                   |                     |                     |                   |                                      |                      |                       |                         |                       |                       |                        |
| Brazil.....                      | —                 | 22.9              | 22.5              | 25.8              | 24.5                | 24.0                | 23.4                | —                                    | 18.1              | 17.6              | 22.3              | 21.2                | 21.0                | 20.4              | —                                    | 17.6                 | 17.0                  | 20.2                    | 18.4                  | 18.1                  | 17.3                   |
| Russian Federation.....          | —                 | —                 | —                 | 17.0 <sup>8</sup> | 17.3 <sup>8</sup>   | 17.9 <sup>8</sup>   | 19.2 <sup>8</sup>   | —                                    | —                 | —                 | —                 | —                   | —                   | —                 | —                                    | 11.2 <sup>6,11</sup> | 9.9 <sup>3,6,11</sup> | 8.8 <sup>3,6,12</sup>   | 8.7 <sup>3,6,12</sup> | 8.7 <sup>3,6,12</sup> | 11.3 <sup>3,6,12</sup> |

—Not available.

†Not applicable. This level of education does not exist within the national education structure; students in the age group normally associated with this education level are reported in other levels.

<sup>1</sup>Refers to the mean of the data values for all reporting Organization for Economic Cooperation and Development (OECD) countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year. However, if data were reported for less than 75 percent of the countries that were members of OECD in a given year, the average for that year is omitted.<sup>2</sup>Includes only general programs.<sup>3</sup>Includes junior high school data.<sup>4</sup>Includes preprimary data.<sup>5</sup>Excludes independent private institutions.<sup>6</sup>Includes postsecondary non-higher-education.<sup>7</sup>Includes elementary school data.<sup>8</sup>Public schools only.<sup>9</sup>Includes occupation-specific education corresponding to that offered at the vocational associate's degree level in the United States.<sup>10</sup>Data included for Greece for 2008 are from 2007.<sup>11</sup>Excludes general programs.<sup>12</sup>Excludes part-time personnel in public institutions.

NOTE: The pupil/teacher ratio is the number of full-time-equivalent students divided by the number of full-time-equivalent teachers, including teachers for students with disabilities and other special teachers. In this table, elementary school corresponds to International Standard Classification of Education (ISCED) level 1 (U.S. grades 1 through 6), junior high school corresponds to ISCED level 2 (U.S. grades 7 through 9), and senior high school corresponds to ISCED level 3 (U.S. grades 10 through 12).

SOURCE: Organization for Economic Cooperation and Development (OECD), Online Education Database; and *Education at a Glance*, 2002 through 2012. (This table was prepared June 2012.)

**Table 459. Teachers' statutory teaching and total working time and average class size in public elementary and secondary schools, by level of education and country: 2010**

| Country                               | Statutory teaching and total working time |                                      |   |                               |                                      |   |                            |                                      |   |                             |                                      |   | Average class size |                                      |
|---------------------------------------|---|--------------------------------------|---|-------------------------------|--------------------------------------|---|----------------------------|--------------------------------------|---|-----------------------------|--------------------------------------|---|--------------------|--------------------------------------|
|                                       | Number of weeks of instruction            |                                      |   | Number of days of instruction |                                      |   | Net teaching time in hours |                                      |   | Total working time in hours |                                      |   |                    |                                      |
|                                       | Elementary                                | Junior high school (lower secondary) | Senior high school (upper secondary) <sup>1</sup> | Elementary                    | Junior high school (lower secondary) | Senior high school (upper secondary) <sup>1</sup> | Elementary                 | Junior high school (lower secondary) | Senior high school (upper secondary) <sup>1</sup> | Elementary                  | Junior high school (lower secondary) | Senior high school (upper secondary) <sup>1</sup> | Elementary         | Junior high school (lower secondary) |
| 1                                     | 2   | 3                                    | 4   | 5                             | 6                                    | 7   | 8                          | 9                                    | 10  | 11                          | 12                                   | 13  | 14                 | 15                                   |
| OECD average <sup>2</sup> .....       | 38  | 38                                   | 38  | 187                           | 185                                  | 183   | 782                        | 704                                  | 658   | 1,678                       | 1,673                                | 1,676   | 21                 | 23                                   |
| Australia <sup>3</sup> .....          | 40  | 40                                   | 40  | 196                           | 196                                  | 193   | 868                        | 819                                  | 803   | †                           | †                                    | †   | 23                 | 23                                   |
| Austria <sup>3</sup> .....            | 38  | 38                                   | 38  | 180                           | 180                                  | 180   | 779                        | 607                                  | 589   | 1,776                       | 1,776                                | †   | 18                 | 22                                   |
| Belgium (Flemish) <sup>3</sup> .....  | 37  | 37                                   | 37  | 179                           | 180                                  | 180   | 761                        | 675                                  | 630   | †                           | †                                    | †   | —                  | —                                    |
| Belgium (French) <sup>3</sup> .....   | 38  | 38                                   | 38  | 183                           | 183                                  | 183   | 732                        | 671                                  | 610   | †                           | †                                    | †   | 21                 | —                                    |
| Canada <sup>3</sup> .....             | 37  | 37                                   | 37  | 183                           | 183                                  | 183   | 799                        | 740                                  | 744   | †                           | †                                    | †   | —                  | —                                    |
| Chile <sup>3</sup> .....              | 38  | 38                                   | 38  | 179                           | 179                                  | 179   | 1,087                      | 1,087                                | 1,087   | 2,068                       | 2,068                                | 2,068   | 27                 | 28                                   |
| Czech Republic <sup>3</sup> .....     | 41  | 41                                   | 41  | 196                           | 196                                  | 196   | 862                        | 647                                  | 617   | 1,696                       | 1,696                                | 1,696   | 20                 | 21                                   |
| Denmark <sup>4</sup> .....            | 42  | 42                                   | 42  | 200                           | 200                                  | 200   | 650                        | 650                                  | 377   | 1,680                       | 1,680                                | 1,680   | 20                 | 21                                   |
| England <sup>4</sup> .....            | 38  | 38                                   | 38  | 190                           | 190                                  | 190   | 684                        | 703                                  | 703   | 1,265                       | 1,265                                | 1,265   | —                  | —                                    |
| Estonia <sup>5</sup> .....            | 39  | 39                                   | 39  | 175                           | 175                                  | 175   | 630                        | 630                                  | 578   | 1,540                       | 1,540                                | 1,540   | 18                 | 19                                   |
| Finland <sup>6</sup> .....            | 38  | 38                                   | 38  | 189                           | 189                                  | 189   | 680                        | 595                                  | 553   | †                           | †                                    | †   | 19                 | 20                                   |
| France <sup>4</sup> .....             | 35  | 35                                   | 35  | —                             | —                                    | —   | 918                        | 646                                  | 632   | †                           | †                                    | †   | 23                 | 24                                   |
| Germany <sup>3</sup> .....            | 40  | 40                                   | 40  | 193                           | 193                                  | 193   | 805                        | 756                                  | 713   | 1,793                       | 1,793                                | 1,793   | 21                 | 25                                   |
| Greece <sup>3</sup> .....             | 36  | 31                                   | 31  | 177                           | 153                                  | 153   | 589                        | 415                                  | 415   | †                           | †                                    | †   | 17                 | 22                                   |
| Hungary <sup>6</sup> .....            | 37  | 37                                   | 37  | 183                           | 183                                  | 183   | 604                        | 604                                  | 604   | 1,864                       | 1,864                                | 1,864   | 21                 | 22                                   |
| Iceland <sup>3</sup> .....            | 37  | 37                                   | 35  | 180                           | 180                                  | 170   | 624                        | 624                                  | 544   | 1,800                       | 1,800                                | 1,800   | 18                 | 20                                   |
| Ireland <sup>3</sup> .....            | 37  | 33                                   | 33  | 183                           | 167                                  | 167   | 915                        | 735                                  | 735   | †                           | †                                    | †   | 24                 | —                                    |
| Israel <sup>3</sup> .....             | 38  | 37                                   | 37  | 183                           | 175                                  | 175   | 820                        | 598                                  | 521   | †                           | †                                    | †   | 29                 | 31                                   |
| Italy <sup>6</sup> .....              | 39  | 39                                   | 39  | 175                           | 175                                  | 175   | 770                        | 630                                  | 630   | †                           | †                                    | †   | 19                 | 21                                   |
| Japan <sup>4</sup> .....              | 40  | 40                                   | 40  | 201                           | 201                                  | 198   | 707                        | 602                                  | 500   | 1,876                       | 1,876                                | 1,876   | 28                 | 33                                   |
| Korea, Republic of <sup>5</sup> ..... | 40  | 40                                   | 40  | 220                           | 220                                  | 220   | 807                        | 627                                  | 616   | 1,680                       | 1,680                                | 1,680   | 27                 | 35                                   |
| Luxembourg <sup>3</sup> .....         | 36  | 36                                   | 36  | 176                           | 176                                  | 176   | 739                        | 634                                  | 634   | †                           | †                                    | †   | 15                 | 19                                   |
| Mexico <sup>3</sup> .....             | 42  | 42                                   | 36  | 200                           | 200                                  | 172   | 800                        | 1,047                                | 843   | †                           | †                                    | †   | 20                 | 28                                   |
| Netherlands <sup>5,7</sup> .....      | 40  | —                                    | —   | 195                           | —                                    | —   | 930                        | 750                                  | 750   | 1,659                       | 1,659                                | 1,659   | 22                 | —                                    |
| New Zealand <sup>3</sup> .....        | 39  | 38                                   | 38  | 194                           | 192                                  | 190   | 930                        | 845                                  | 760   | †                           | †                                    | †   | —                  | —                                    |
| Norway <sup>3</sup> .....             | 38  | 38                                   | 38  | 190                           | 190                                  | 190   | 741                        | 654                                  | 523   | 1,688                       | 1,688                                | 1,688   | †                  | †                                    |
| Poland <sup>3</sup> .....             | 38  | 38                                   | 37  | 186                           | 184                                  | 183   | 502                        | 497                                  | 494   | 1,520                       | 1,504                                | 1,496   | 19                 | 23                                   |
| Portugal <sup>5</sup> .....           | 37  | 37                                   | 37  | 173                           | 173                                  | 173   | 865                        | 761                                  | 761   | 1,456                       | 1,456                                | 1,456   | 20                 | 22                                   |
| Scotland <sup>5</sup> .....           | 38  | 38                                   | 38  | 190                           | 190                                  | 190   | 855                        | 855                                  | 855   | 1,365                       | 1,365                                | 1,365   | —                  | —                                    |
| Slovak Republic <sup>3</sup> .....    | 38  | 38                                   | 38  | 189                           | 189                                  | 189   | 841                        | 652                                  | 624   | 1,583                       | 1,583                                | 1,583   | 18                 | 21                                   |
| Slovenia <sup>3</sup> .....           | 40  | 40                                   | 40  | 190                           | 190                                  | 190   | 690                        | 690                                  | 633   | —                           | —                                    | —   | 18                 | 20                                   |
| Spain <sup>3</sup> .....              | 37  | 37                                   | 36  | 176                           | 176                                  | 171   | 880                        | 713                                  | 693   | 1,425                       | 1,425                                | 1,425   | 20                 | 24                                   |
| Sweden.....                           | †   | †                                    | †   | †                             | †                                    | †   | †                          | †                                    | †   | 1,767                       | 1,767                                | 1,767   | —                  | —                                    |
| Switzerland.....                      | —   | —                                    | —   | —                             | —                                    | —   | —                          | —                                    | —   | —                           | —                                    | —   | 19                 | 19                                   |
| Turkey <sup>3</sup> .....             | 37  | †                                    | 37  | 175                           | †                                    | 175   | 621                        | †                                    | 551   | 1,816                       | †                                    | 1,816   | 26                 | †                                    |
| United Kingdom.....                   | —   | —                                    | —   | —                             | —                                    | —   | —                          | —                                    | —   | —                           | —                                    | —   | 26                 | 21                                   |
| United States <sup>4</sup> .....      | 36  | 36                                   | 36  | 180                           | 180                                  | 180   | 1,097                      | 1,068                                | 1,051   | 1,913                       | 1,977                                | 1,998   | 20                 | 24                                   |
| Other reporting countries             |   |                                      |   |                               |                                      |   |                            |                                      |   |                             |                                      |   |                    |                                      |
| Brazil.....                           | 40  | 40                                   | 40  | 200                           | 200                                  | 200   | 800                        | 800                                  | 800   | 800                         | 800                                  | 800   | 26                 | 30                                   |
| China.....                            | 35  | 35                                   | 35  | 175                           | 175                                  | 175   | —                          | —                                    | —   | —                           | —                                    | —   | 37                 | 54                                   |
| Indonesia <sup>4</sup> .....          | 44  | 44                                   | 44  | 244                           | 200                                  | 200   | 697                        | 544                                  | 638   | 1,069                       | 1,069                                | 1,069   | 27                 | 36                                   |
| Russian Federation <sup>4</sup> ..... | 34  | 35                                   | 35  | 164                           | 169                                  | 169   | 615                        | 507                                  | 507   | †                           | †                                    | †   | 17                 | 18                                   |

—Not available.

†Not applicable according to the Organization for Economic Cooperation and Development (OECD).

<sup>1</sup>General programs only.

<sup>2</sup>Refers to the mean of the data values for all reporting OECD countries, to which each country or country component reporting data contributes equally.

<sup>3</sup>Typical teaching time reported.

<sup>4</sup>Actual teaching time reported.

<sup>5</sup>Maximum teaching time reported.

<sup>6</sup>Minimum teaching time reported.

<sup>7</sup>Average class size data are for 2006.

NOTE: In this table, elementary school corresponds to International Standard Classification of Education (ISCED) level 1 (U.S. grades 1 through 6), junior high school corresponds to ISCED level 2 (U.S. grades 7 through 9), and senior high school corresponds to ISCED level 3 (U.S. grades 10 through 12).

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2012. (This table was prepared June 2012.)

**Table 460. Average fourth-grade scores and annual instructional time in mathematics and science, by country or other education system: 2011**  
[Standard errors appear in parentheses]

| Country or other education system <sup>1</sup> | Total instructional hours per year | Mathematics                |                                   |                 |   | Science                    |                               |  |   |
|--|------------------------------------|----------------------------|-----------------------------------|-----------------|---|----------------------------|-------------------------------|--|---|
|  |                                    | Average score <sup>2</sup> | Instructional time in mathematics |                 | As a percent of total instructional hours | Average score <sup>2</sup> | Instructional time in science |  | As a percent of total instructional hours |
|  |                                    |                            | Hours per year                    |                 |   |                            | Hours per year                |  |   |
| 1  | 2                                  | 3                          | 4                                 | 5               | 6   | 7                          | 8                             |  |   |
| <b>TIMSS average<sup>3</sup></b>               | <b>897 (2.0)</b>                   | <b>500 (†)</b>             | <b>162 (0.5)</b>                  | <b>18 (0.1)</b> | <b>500 (†)</b>                            | <b>85 (0.5)</b>            | <b>10 (0.1)</b>               |  |   |
| Armenia <sup>4</sup>                           | 851 <sup>4</sup> (17.1)            | 452 (3.5)                  | 139 <sup>4</sup> (1.7)            | 16 (0.2)        | 416 (3.8)                                 | 54 <sup>5</sup> (0.6)      | 6 (0.1)                       |  |   |
| Australia                                      | 1,008 (6.9)                        | 516 (2.9)                  | 230 <sup>5</sup> (5.8)            | 23 (0.6)        | 516 (2.8)                                 | 65 <sup>5</sup> (2.3)      | 6 (0.2)                       |  |   |
| Austria  | 808 (6.9)                          | 508 (2.6)                  | 146 (2.1)                         | 18 (0.3)        | 532 (2.8)                                 | 96 (2.3)                   | 12 (0.3)                      |  |   |
| Azerbaijan <sup>6,7</sup>                      | 804 (27.7)                         | 463 (5.8)                  | 130 (3.3)                         | 18 (0.7)        | 438 (5.6)                                 | 61 (1.4)                   | 8 (0.3)                       |  |   |
| Bahrain  | 964 (10.8)                         | 436 (3.3)                  | 131 <sup>4</sup> (4.4)            | 14 (0.4)        | 449 (3.5)                                 | 85 <sup>4</sup> (2.7)      | 9 (0.3)                       |  |   |
| Belgium (Flemish)-BEL                          | 1,010 <sup>4</sup> (16.8)          | 549 (1.9)                  | 224 <sup>4</sup> (4.1)            | 21 (0.3)        | 509 (2.0)                                 | — (†)                      | — (†)                         |  |   |
| Chile  | 1,228 <sup>4</sup> (22.6)          | 462 (2.3)                  | 231 <sup>5</sup> (6.7)            | 19 (0.6)        | 480 (2.4)                                 | 161 <sup>5</sup> (6.4)     | 13 (0.5)                      |  |   |
| Chinese Taipei-CHN                             | 989 <sup>4</sup> (13.4)            | 591 (2.0)                  | 133 (3.9)                         | 12 (0.4)        | 552 (2.2)                                 | 90 (2.3)                   | 9 (0.3)                       |  |   |
| Croatia <sup>6</sup>                           | 776 (19.4)                         | 490 (1.9)                  | 134 (2.3)                         | 18 (0.4)        | 516 (2.1)                                 | 95 (2.4)                   | 13 (0.4)                      |  |   |
| Czech Republic                                 | 782 (8.2)                          | 511 (2.4)                  | 163 (3.0)                         | 21 (0.4)        | 536 (2.5)                                 | 60 (2.2)                   | 8 (0.3)                       |  |   |
| Denmark <sup>6</sup>                           | 863 <sup>4</sup> (9.4)             | 537 (2.6)                  | 124 <sup>5</sup> (2.0)            | 15 (0.3)        | 528 (2.8)                                 | 62 <sup>5</sup> (1.9)      | 7 (0.2)                       |  |   |
| England-GBR                                    | 970 <sup>4</sup> (8.3)             | 542 (3.5)                  | 188 <sup>5</sup> (3.3)            | 19 (0.4)        | 529 (2.9)                                 | 76 <sup>5</sup> (3.2)      | 8 (0.3)                       |  |   |
| Finland  | 779 (9.8)                          | 545 (2.3)                  | 139 (2.5)                         | 18 (0.4)        | 570 (2.6)                                 | 98 (1.9)                   | 13 (0.4)                      |  |   |
| Georgia <sup>7,8</sup>                         | 748 <sup>4</sup> (18.7)            | 450 (3.7)                  | 148 <sup>4</sup> (3.9)            | 21 (0.6)        | 455 (3.8)                                 | 110 <sup>4</sup> (2.7)     | 16 (0.4)                      |  |   |
| Germany  | 863 <sup>4</sup> (11.2)            | 528 (2.2)                  | 163 <sup>4</sup> (3.1)            | 19 (0.3)        | 528 (2.9)                                 | 75 <sup>5</sup> (3.5)      | 8 (0.4)                       |  |   |
| Hong Kong-CHN <sup>6</sup>                     | 1,059 <sup>4</sup> (11.2)          | 602 (3.4)                  | 158 <sup>4</sup> (3.0)            | 15 (0.3)        | 535 (3.8)                                 | 88 <sup>4</sup> (4.2)      | 8 (0.4)                       |  |   |
| Hungary  | 760 (12.2)                         | 515 (3.4)                  | 148 (3.3)                         | 20 (0.5)        | 534 (3.7)                                 | 72 (2.2)                   | 10 (0.3)                      |  |   |
| Iran, Islamic Republic of                      | 727 (11.2)                         | 431 (3.5)                  | 146 (3.9)                         | 20 (0.4)        | 453 (3.7)                                 | 106 (3.2)                  | 14 (0.4)                      |  |   |
| Ireland  | 854 (#)                            | 527 (2.6)                  | 150 (2.8)                         | 18 (0.3)        | 516 (3.4)                                 | 63 (6.6)                   | 7 (0.8)                       |  |   |
| Italy  | 1,085 (12.6)                       | 508 (2.6)                  | 214 (3.9)                         | 20 (0.4)        | 524 (2.7)                                 | 78 <sup>4</sup> (1.8)      | 7 (0.2)                       |  |   |
| Japan  | 891 (3.7)                          | 585 (1.7)                  | 150 (1.6)                         | 17 (0.1)        | 559 (1.9)                                 | 91 (0.8)                   | 10 (0.1)                      |  |   |
| Kazakhstan <sup>6</sup>                        | 779 (10.6)                         | 501 (4.5)                  | 140 (2.7)                         | 18 (0.4)        | 495 (5.1)                                 | 57 (1.3)                   | 8 (0.2)                       |  |   |
| Korea, Republic of                             | 789 (11.4)                         | 605 (1.9)                  | 121 (3.0)                         | 15 (0.4)        | 587 (2.0)                                 | 92 (2.5)                   | 11 (0.4)                      |  |   |
| Kuwait <sup>6</sup>                            | 928 <sup>4</sup> (23.1)            | 342 <sup>9</sup> (3.4)     | 120 <sup>4</sup> (4.9)            | 13 (0.4)        | 347 <sup>10</sup> (4.7)                   | 85 <sup>5</sup> (5.8)      | 10 (0.6)                      |  |   |
| Lithuania <sup>6,8</sup>                       | 649 (9.0)                          | 534 (2.4)                  | 133 (2.6)                         | 21 (0.5)        | 515 (2.4)                                 | 60 (1.5)                   | 9 (0.3)                       |  |   |
| Malta  | 891 <sup>4</sup> (0.2)             | 496 (1.3)                  | 183 <sup>4</sup> (0.1)            | 21 (#)          | 446 <sup>9</sup> (1.9)                    | 39 <sup>4</sup> (0.1)      | 4 (#)                         |  |   |
| Morocco  | 1,040 <sup>4</sup> (23.6)          | 335 <sup>9</sup> (4.0)     | 174 <sup>5</sup> (3.5)            | 17 (0.4)        | 264 <sup>9</sup> (4.5)                    | 44 <sup>5</sup> (5.5)      | 5 (0.6)                       |  |   |
| Netherlands <sup>11</sup>                      | 1,074 <sup>5</sup> (9.9)           | 540 (1.7)                  | 195 <sup>5</sup> (7.0)            | 18 (0.5)        | 531 (2.2)                                 | 42 <sup>5</sup> (2.4)      | 4 (0.2)                       |  |   |
| New Zealand                                    | 925 (3.9)                          | 486 (2.6)                  | 168 (2.4)                         | 18 (0.3)        | 497 (2.3)                                 | 52 <sup>5</sup> (3.0)      | 6 (0.3)                       |  |   |
| Northern Ireland-GBR <sup>11</sup>             | 970 <sup>4</sup> (11.0)            | 562 (2.9)                  | 232 <sup>5</sup> (6.1)            | 24 (0.6)        | 517 (2.6)                                 | 72 <sup>5</sup> (3.9)      | 8 (0.4)                       |  |   |
| Norway <sup>12</sup>                           | 817 (10.7)                         | 495 (2.8)                  | 157 (4.1)                         | 19 (0.6)        | 494 (2.3)                                 | 55 (2.2)                   | 7 (0.3)                       |  |   |
| Oman   | 999 <sup>5</sup> (17.4)            | 385 <sup>10</sup> (2.9)    | 170 <sup>5</sup> (3.1)            | 17 (0.3)        | 377 (4.3)                                 | 120 <sup>5</sup> (2.4)     | 12 (0.2)                      |  |   |
| Poland   | 764 <sup>4</sup> (13.5)            | 481 (2.2)                  | 157 <sup>4</sup> (3.0)            | 21 (0.5)        | 505 (2.6)                                 | 64 <sup>4</sup> (3.1)      | 8 (0.4)                       |  |   |
| Portugal                                       | 940 <sup>4</sup> (13.1)            | 532 (3.4)                  | 250 <sup>4</sup> (4.3)            | 27 (0.4)        | 522 (3.9)                                 | 162 <sup>4</sup> (4.1)     | 17 (0.8)                      |  |   |
| Qatar <sup>6</sup>                             | 1,068 (9.1)                        | 413 (3.5)                  | 185 (6.3)                         | 17 (0.6)        | 394 (4.3)                                 | 135 (6.8)                  | 13 (0.6)                      |  |   |
| Romania  | 796 (17.9)                         | 482 (5.8)                  | 148 (3.9)                         | 19 (0.5)        | 505 (5.9)                                 | 56 (6.2)                   | 7 (0.8)                       |  |   |
| Russian Federation                             | 660 <sup>4</sup> (8.0)             | 542 (3.7)                  | 104 (1.0)                         | 16 (0.2)        | 552 (3.5)                                 | 49 (0.7)                   | 8 (0.2)                       |  |   |
| Saudi Arabia                                   | 977 <sup>4</sup> (19.4)            | 410 (5.3)                  | 147 <sup>4</sup> (6.6)            | 15 (0.5)        | 429 (5.4)                                 | 82 <sup>4</sup> (4.2)      | 8 (0.5)                       |  |   |
| Serbia <sup>6</sup>                            | 778 (18.5)                         | 516 (3.0)                  | 153 (2.1)                         | 20 (0.5)        | 516 (3.1)                                 | 72 (5.0)                   | 10 (0.9)                      |  |   |
| Singapore <sup>6</sup>                         | 1,012 (#)                          | 606 (3.2)                  | 208 (3.2)                         | 21 (0.3)        | 583 (3.4)                                 | 96 (2.1)                   | 9 (0.2)                       |  |   |
| Slovak Republic                                | 780 (8.8)                          | 507 (3.8)                  | 147 (1.4)                         | 19 (0.1)        | 532 (3.8)                                 | 101 (4.3)                  | 13 (0.6)                      |  |   |
| Slovenia                                       | 684 (#)                            | 513 (2.2)                  | 169 (2.6)                         | 25 (0.4)        | 520 (2.7)                                 | 101 (1.2)                  | 15 (0.2)                      |  |   |
| Spain  | 884 <sup>4</sup> (9.7)             | 482 (2.9)                  | 167 <sup>4</sup> (2.3)            | 19 (0.2)        | 505 (3.0)                                 | 145 <sup>4</sup> (2.6)     | 16 (0.3)                      |  |   |
| Sweden   | 849 <sup>4</sup> (11.3)            | 504 (2.0)                  | 138 <sup>5</sup> (3.8)            | 17 (0.5)        | 533 (2.7)                                 | 75 <sup>5</sup> (3.0)      | 9 (0.4)                       |  |   |
| Thailand                                       | 1,201 <sup>4</sup> (20.9)          | 458 (4.8)                  | 167 (5.2)                         | 14 (0.6)        | 472 (5.6)                                 | 109 (4.9)                  | 9 (0.5)                       |  |   |
| Tunisia  | 963 <sup>4</sup> (22.9)            | 359 <sup>10</sup> (3.9)    | 175 <sup>4</sup> (2.9)            | 19 (0.3)        | 346 <sup>10</sup> (5.3)                   | 93 <sup>4</sup> (5.4)      | 10 (0.6)                      |  |   |
| Turkey   | 900 (19.3)                         | 469 (4.7)                  | 126 <sup>5</sup> (2.5)            | 15 (0.4)        | 463 (4.5)                                 | 94 (1.8)                   | 11 (0.3)                      |  |   |
| United Arab Emirates                           | 1,025 <sup>4</sup> (8.5)           | 434 (2.0)                  | 154 <sup>5</sup> (2.4)            | 15 (0.2)        | 428 (2.5)                                 | 108 <sup>5</sup> (3.0)     | 11 (0.3)                      |  |   |
| United States <sup>9</sup>                     | 1,078 (7.3)                        | 541 (1.8)                  | 206 <sup>4</sup> (4.6)            | 19 (0.5)        | 544 (2.1)                                 | 105 <sup>4</sup> (3.1)     | 10 (0.3)                      |  |   |
| Yemen  | 831 <sup>4</sup> (14.1)            | 248 <sup>9</sup> (6.0)     | 135 <sup>4</sup> (6.4)            | 16 (0.7)        | 209 <sup>9</sup> (7.3)                    | 91 <sup>4</sup> (5.6)      | 11 (0.6)                      |  |   |
| <b>Benchmarking education systems</b>          |                                    |                            |                                   |                 |   |                            |                               |  |   |
| Abu Dhabi-IAE                                  | 1,033 <sup>4</sup> (18.1)          | 417 (4.6)                  | 150 <sup>5</sup> (4.3)            | 15 (0.4)        | 411 (4.9)                                 | 110 <sup>5</sup> (6.8)     | 11 (0.6)                      |  |   |
| Alberta-CAN <sup>6</sup>                       | 1,006 (8.8)                        | 507 (2.5)                  | 169 <sup>5</sup> (3.2)            | 17 (0.4)        | 541 (2.4)                                 | 130 <sup>5</sup> (4.1)     | 13 (0.6)                      |  |   |
| Dubai-IAE                                      | 993 <sup>4</sup> (0.7)             | 468 (1.6)                  | 158 <sup>5</sup> (2.3)            | 16 (0.2)        | 461 (2.3)                                 | 99 <sup>5</sup> (1.6)      | 10 (0.2)                      |  |   |
| Florida-USA <sup>8,13,14</sup>                 | 1,073 <sup>4</sup> (19.7)          | 545 (2.9)                  | 217 <sup>5</sup> (8.8)            | 20 (0.9)        | 545 (3.7)                                 | 113 <sup>5</sup> (9.6)     | 10 (0.8)                      |  |   |
| North Carolina-USA <sup>6,8,14</sup>           | 1,113 <sup>4</sup> (22.9)          | 554 (4.2)                  | 221 <sup>4</sup> (13.5)           | 20 (1.2)        | 538 (4.6)                                 | 94 <sup>4</sup> (6.0)      | 9 (0.4)                       |  |   |
| Ontario-CAN                                    | 969 (7.4)                          | 518 (3.1)                  | 201 <sup>4</sup> (4.1)            | 21 (0.5)        | 528 (3.0)                                 | 92 <sup>4</sup> (3.2)      | 10 (0.3)                      |  |   |
| Quebec-CAN                                     | 916 (5.1)                          | 533 (2.4)                  | 229 (5.0)                         | 25 (0.6)        | 516 (2.7)                                 | 50 (1.7)                   | 5 (0.2)                       |  |   |

—Not available.

†Not applicable.

#Rounds to zero.

<sup>1</sup>Most of the education systems represent complete countries, but some represent subnational entities such as U.S. states, Canadian provinces, and England (which is part of the United Kingdom). The name of each subnational entity appears in italics and includes as a suffix the three-letter International Organization for Standardization (ISO) abbreviation for its complete country. Examples include *Florida-USA*, *Ontario-CAN*, and *England-GBR*.

<sup>2</sup>Trends in International Mathematics and Science Study (TIMSS) scores are reported on a scale from 0 to 1,000, with the scale average set at 500 and the standard deviation set at 100.

<sup>3</sup>The TIMSS average includes only education systems that are members of the International Association for the Evaluation of Educational Achievement (IAE), which develops and implements TIMSS at the international level. "Benchmarking" education systems are not members of the IAE and are therefore not included in the average.

<sup>4</sup>Data are available for at least 70 percent but less than 85 percent of students.

<sup>5</sup>Data are available for at least 50 percent but less than 70 percent of students.

<sup>6</sup>National Defined Population covers 90 to 95 percent of National Target Population.

<sup>7</sup>Exclusion rates for Azerbaijan and Georgia are slightly underestimated as some conflict zones were not covered and no official statistics were available.

<sup>8</sup>National Target Population does not include all of the International Target Population defined by TIMSS.

<sup>9</sup>The TIMSS & PIRLS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 25 percent.

<sup>10</sup>The TIMSS & PIRLS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 15 percent, though it is less than 25 percent.

<sup>11</sup>Met guidelines for sample participation rates only after replacement schools were included.

<sup>12</sup>Nearly satisfied guidelines for sample participation rates after replacement schools were included.

<sup>13</sup>National Defined Population covers less than 90 percent of National Target Population (but at least 77 percent).

<sup>14</sup>All U.S. state data are based on public school students only.

NOTE: Countries were required to sample students in the grade that corresponded to the end of 4 years of formal schooling, providing that the mean age at the time of testing was at least 9.5 years. Instructional times shown in this table are actual or implemented times (as opposed to intended times prescribed by the curriculum). Principals reported total instructional hours per day and school days per year. Total instructional hours per year were calculated by multiplying the number of school days per year by the number of instructional hours per day. Teachers reported instructional hours per week in mathematics and science. Instructional hours per year in mathematics and science were calculated by dividing weekly instructional hours by the number of school days per week and then multiplying by the number of school days per year.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2011; *TIMSS 2011 International Results in Mathematics*, by Ina V.S. Mullis et al.; and *TIMSS 2011 International Results in Science*, by Michael O. Martin et al. (This table was prepared December 2012.)



**Table 461. Average eighth-grade scores and annual instructional time in mathematics and science, by country or other education system: 2011**  
[Standard errors appear in parentheses]

| Country or other education system <sup>1</sup> | Total instructional hours per year | Mathematics                |                                   |                 |   | Science                    |  |  |   |
|--|------------------------------------|----------------------------|-----------------------------------|-----------------|---|----------------------------|--|--|---|
|  |                                    | Average score <sup>2</sup> | Instructional time in mathematics |                 | As a percent of total instructional hours | Average score <sup>2</sup> | Instructional time in science <sup>3</sup> |  | As a percent of total instructional hours |
|  |                                    |                            | Hours per year                    |                 |   |                            | Hours per year                             |  |   |
| 1  | 2                                  | 3                          | 4                                 | 5               | 6   | 7                          | 8  |  |   |
| <b>TIMSS average<sup>4</sup></b>               | <b>1,031 (2.3)</b>                 | <b>500 (†)</b>             | <b>138 (0.5)</b>                  | <b>14 (0.1)</b> | <b>500 (†)</b>                            | <b>158 (0.8)</b>           | <b>11 (0.1)</b>                            |  |   |
| Armenia.....                                   | 979 <sup>5</sup> (12.8)            | 467 (2.7)                  | 143 <sup>5</sup> (3.0)            | 15 (0.2)        | 437 (3.1)                                 | 240 <sup>6</sup> (4.9)     | † (†)                                      |  |   |
| Australia.....                                 | 1,039 (7.2)                        | 505 (5.1)                  | 143 <sup>6</sup> (3.5)            | 14 (0.3)        | 519 (4.8)                                 | 131 <sup>6</sup> (4.5)     | 12 (0.4)                                   |  |   |
| Bahrain.....                                   | 1,019 (1.1)                        | 409 <sup>7</sup> (2.0)     | 142 <sup>5</sup> (2.5)            | 14 (0.3)        | 452 (2.0)                                 | 130 <sup>5</sup> (2.8)     | 13 (0.3)                                   |  |   |
| Chile.....                                     | 1,245 <sup>5</sup> (23.5)          | 416 (2.6)                  | 193 <sup>5</sup> (4.5)            | 15 (0.3)        | 461 (2.5)                                 | 134 <sup>5</sup> (3.8)     | 11 (0.3)                                   |  |   |
| Chinese Taipei-CHN.....                        | 1,153 (11.7)                       | 609 (3.2)                  | 166 (2.4)                         | 15 (0.2)        | 564 (2.3)                                 | 157 (2.7)                  | 14 (0.3)                                   |  |   |
| England-GBR <sup>8</sup> .....                 | 992 <sup>5</sup> (8.4)             | 507 (5.5)                  | 116 <sup>5</sup> (2.1)            | 11 (0.3)        | 533 (4.9)                                 | 102 <sup>6</sup> (3.1)     | 10 (0.4)                                   |  |   |
| Finland.....                                   | 934 (11.7)                         | 514 (2.5)                  | 105 (1.8)                         | 11 (0.2)        | 552 (2.5)                                 | 190 <sup>5</sup> (6.0)     | † (†)                                      |  |   |
| Georgia <sup>9,10</sup> .....                  | 833 <sup>5</sup> (10.8)            | 431 (3.8)                  | 123 <sup>5</sup> (3.3)            | 15 (0.5)        | 420 (3.0)                                 | 198 <sup>5</sup> (6.8)     | † (†)                                      |  |   |
| Ghana.....                                     | 1,153 <sup>5</sup> (18.9)          | 331 <sup>11</sup> (4.3)    | 165 <sup>5</sup> (6.8)            | 14 (0.6)        | 306 <sup>7</sup> (5.2)                    | 148 <sup>5</sup> (6.1)     | 13 (0.4)                                   |  |   |
| Hong Kong-CHN.....                             | 1,026 <sup>5</sup> (11.3)          | 586 (3.8)                  | 138 <sup>5</sup> (2.9)            | 13 (0.3)        | 535 (3.4)                                 | 103 <sup>5</sup> (4.6)     | 10 (0.4)                                   |  |   |
| Hungary.....                                   | 836 (12.2)                         | 505 (3.5)                  | 119 (1.9)                         | 15 (0.3)        | 522 (3.1)                                 | 236 (4.8)                  | 28 ! (13.1)                                |  |   |
| Indonesia.....                                 | 1,494 <sup>5</sup> (40.9)          | 386 <sup>7</sup> (4.3)     | 173 <sup>5</sup> (7.9)            | 12 (0.6)        | 406 (4.5)                                 | 190 <sup>5</sup> (12.2)    | 10 (0.5)                                   |  |   |
| Iran, Islamic Republic of.....                 | 994 (15.9)                         | 415 <sup>7</sup> (4.3)     | 124 (3.3)                         | 13 (0.3)        | 474 (4.0)                                 | 120 (3.6)                  | 12 (0.4)                                   |  |   |
| Israel <sup>12</sup> .....                     | 1,108 <sup>5</sup> (14.1)          | 516 (4.1)                  | 165 <sup>5</sup> (3.0)            | 15 (0.2)        | 516 (4.0)                                 | 132 (3.9)                  | 12 (0.4)                                   |  |   |
| Italy.....                                     | 1,085 (9.4)                        | 498 (2.4)                  | 155 (2.5)                         | 14 (0.2)        | 501 (2.5)                                 | 73 (1.0)                   | 7 (0.1)                                    |  |   |
| Japan.....                                     | 1,016 (6.7)                        | 570 (2.6)                  | 108 (1.4)                         | 11 (0.1)        | 558 (2.4)                                 | 128 (1.7)                  | 12 (0.3)                                   |  |   |
| Jordan.....                                    | 1,041 (11.9)                       | 406 <sup>7</sup> (3.7)     | 130 (3.8)                         | 13 (0.4)        | 449 (4.0)                                 | 134 (3.1)                  | 13 (0.4)                                   |  |   |
| Kazakhstan.....                                | 920 (9.9)                          | 487 (4.0)                  | 117 (3.2)                         | 13 (0.4)        | 490 (4.3)                                 | 244 (4.8)                  | 27 ! (11.0)                                |  |   |
| Korea, Republic of.....                        | 1,006 (12.1)                       | 613 (2.9)                  | 137 (1.8)                         | 13 (0.2)        | 560 (2.0)                                 | 126 (2.5)                  | 11 (0.2)                                   |  |   |
| Lebanon.....                                   | 1,028 <sup>5</sup> (12.7)          | 449 (3.7)                  | 178 <sup>5</sup> (3.9)            | 17 (0.4)        | 406 (4.9)                                 | † (†)                      | † (†)                                      |  |   |
| Lithuania <sup>9</sup> .....                   | 898 (13.9)                         | 502 (2.5)                  | 132 (2.7)                         | 15 (0.4)        | 514 (2.6)                                 | 251 <sup>5</sup> (5.2)     | † (†)                                      |  |   |
| Macedonia, Republic of.....                    | 1,023 <sup>5</sup> (21.4)          | 426 <sup>7</sup> (5.2)     | 122 <sup>6</sup> (4.6)            | 13 (0.6)        | 407 (5.4)                                 | 334 <sup>6</sup> (14.7)    | † (†)                                      |  |   |
| Malaysia.....                                  | 1,198 <sup>5</sup> (13.7)          | 440 (5.4)                  | 123 <sup>5</sup> (3.4)            | 10 (0.3)        | 426 (6.3)                                 | 126 (3.6)                  | 10 (0.3)                                   |  |   |
| Morocco.....                                   | 1,303 <sup>5</sup> (24.9)          | 371 <sup>11</sup> (2.0)    | 148 <sup>5</sup> (2.1)            | 12 (0.2)        | 376 (2.2)                                 | 144 <sup>5</sup> (2.0)     | † (†)                                      |  |   |
| New Zealand.....                               | 959 (4.4)                          | 488 (5.5)                  | 141 (1.8)                         | 15 (0.2)        | 512 (4.6)                                 | 130 <sup>5</sup> (2.6)     | 14 (0.3)                                   |  |   |
| Norway.....                                    | 880 (6.3)                          | 475 (2.4)                  | 125 (3.4)                         | 14 (0.4)        | 494 (2.6)                                 | 101 (3.3)                  | 11 (0.4)                                   |  |   |
| Oman.....                                      | 1,044 <sup>5</sup> (17.7)          | 366 <sup>7</sup> (2.8)     | 161 <sup>5</sup> (5.1)            | 16 (0.4)        | 420 (3.2)                                 | 161 <sup>6</sup> (3.8)     | 16 (0.3)                                   |  |   |
| Palestinian National Authority.....            | 918 (7.3)                          | 404 <sup>7</sup> (3.5)     | 134 (4.0)                         | 15 (0.4)        | 420 (3.2)                                 | 107 (3.4)                  | 12 (0.4)                                   |  |   |
| Qatar.....                                     | 1,054 (1.3)                        | 410 <sup>7</sup> (3.1)     | 162 (3.6)                         | 15 (0.4)        | 419 (3.4)                                 | 131 (6.9)                  | 12 (0.5)                                   |  |   |
| Romania.....                                   | 984 (15.5)                         | 458 (4.0)                  | 145 (3.7)                         | 15 (0.3)        | 465 (3.5)                                 | 281 (10.1)                 | † (†)                                      |  |   |
| Russian Federation <sup>13</sup> .....         | 882 (8.7)                          | 539 (3.6)                  | 142 (2.0)                         | 16 (0.3)        | 542 (3.2)                                 | 208 (1.6)                  | 24 ! (8.8)                                 |  |   |
| Saudi Arabia.....                              | 1,050 <sup>5</sup> (20.9)          | 394 <sup>7</sup> (4.6)     | 134 <sup>5</sup> (5.4)            | 13 (0.4)        | 436 (3.9)                                 | 124 <sup>5</sup> (6.8)     | 12 (0.5)                                   |  |   |
| Singapore <sup>13</sup> .....                  | 1,106 (#)                          | 611 (3.8)                  | 138 (1.7)                         | 13 (0.2)        | 590 (4.3)                                 | 115 (2.1)                  | 11 (0.2)                                   |  |   |
| Slovenia.....                                  | 798 (#)                            | 505 (2.2)                  | 121 (1.5)                         | 15 (0.2)        | 543 (2.7)                                 | 251 (4.6)                  | 31 (4.6)                                   |  |   |
| Sweden.....                                    | 969 <sup>5</sup> (13.4)            | 484 (1.9)                  | 97 <sup>6</sup> (2.2)             | 10 (0.3)        | 509 (2.5)                                 | 94 <sup>6</sup> (3.1)      | 9 (0.4)                                    |  |   |
| Syrian Arab Republic.....                      | 811 (14.2)                         | 380 <sup>7</sup> (4.5)     | 118 <sup>5</sup> (4.7)            | 15 (0.5)        | 426 (3.9)                                 | 150 <sup>5</sup> (7.5)     | † (†)                                      |  |   |
| Thailand.....                                  | 1,270 <sup>5</sup> (15.1)          | 427 (4.3)                  | 129 (4.3)                         | 10 (0.3)        | 451 (3.9)                                 | 119 (2.9)                  | 9 (0.3)                                    |  |   |
| Tunisia.....                                   | 1,299 <sup>5</sup> (25.4)          | 425 (2.8)                  | 131 <sup>5</sup> (3.0)            | 10 (0.2)        | 439 (2.5)                                 | 64 <sup>5</sup> (1.9)      | 5 (0.1)                                    |  |   |
| Turkey.....                                    | 889 (16.7)                         | 452 (3.9)                  | 117 (1.8)                         | 14 (0.3)        | 483 (3.4)                                 | 99 (1.1)                   | 12 (0.2)                                   |  |   |
| Ukraine.....                                   | 901 (10.7)                         | 479 (3.9)                  | 132 (3.5)                         | 15 (0.4)        | 501 (3.4)                                 | 239 (4.0)                  | 27 ! (11.4)                                |  |   |
| United Arab Emirates.....                      | 1,046 <sup>5</sup> (8.0)           | 456 (2.1)                  | 157 <sup>5</sup> (2.9)            | 15 (0.3)        | 465 (2.4)                                 | 115 <sup>6</sup> (2.7)     | 11 (0.3)                                   |  |   |
| United States <sup>13</sup> .....              | 1,114 (6.6)                        | 509 (2.6)                  | 157 <sup>6</sup> (3.2)            | 14 (0.3)        | 525 (2.6)                                 | 139 <sup>14</sup> (2.4)    | 13 <sup>14</sup> (0.2)                     |  |   |
| <b>Benchmarking education systems</b>          |                                    |                            |                                   |                 |   |                            |  |  |   |
| Abu Dhabi-UAE.....                             | 1,045 <sup>5</sup> (16.6)          | 449 (3.7)                  | 158 <sup>5</sup> (5.8)            | 15 (0.5)        | 461 (4.0)                                 | 111 <sup>6</sup> (4.8)     | 11 (0.5)                                   |  |   |
| Alabama-USA <sup>9,15</sup> .....              | 1,135 <sup>5</sup> (16.0)          | 466 (5.9)                  | 166 <sup>6</sup> (8.9)            | 15 (0.9)        | 485 (6.2)                                 | 167 <sup>6</sup> (6.0)     | 15 (0.5)                                   |  |   |
| Alberta-CAN <sup>13</sup> .....                | 1,031 (10.0)                       | 505 (2.6)                  | 156 (4.2)                         | 19 (0.4)        | 546 (2.4)                                 | 145 <sup>5</sup> (4.0)     | 10 (0.4)                                   |  |   |
| California-USA <sup>9,13,15</sup> .....        | 1,040 <sup>5</sup> (15.2)          | 493 (4.9)                  | 172 <sup>6</sup> (8.0)            | 17 (0.7)        | 499 (4.6)                                 | † (†)                      | 14 (0.7)                                   |  |   |
| Colorado-USA <sup>9,15</sup> .....             | 1,148 (17.0)                       | 518 (4.9)                  | 173 <sup>5</sup> (8.6)            | 15 (0.8)        | 542 (4.4)                                 | 138 <sup>6</sup> (6.0)     | 12 (0.5)                                   |  |   |

See notes at end of table.

**Table 461. Average eighth-grade scores and annual instructional time in mathematics and science, by country or other education system: 2011—Continued**  
[Standard errors appear in parentheses]

| Country or other education system <sup>1</sup>    | Total instructional hours per year | Mathematics                |                        |   |           | Science                    |                |  |  |
|---|------------------------------------|----------------------------|------------------------|---|-----------|----------------------------|----------------|--|--|
|   |                                    | Average score <sup>2</sup> | Hours per year         | Instructional time in mathematics         |           | Average score <sup>2</sup> | Hours per year | Instructional time in science <sup>3</sup> |  |
|   |                                    |                            |                        | As a percent of total instructional hours |           |                            |                | As a percent of total instructional hours  |  |
| 1   | 2                                  | 3                          | 4                      | 5   | 6         | 7                          | 8              |  |  |
| <i>Connecticut-USA<sup>9,13,15</sup></i> .....    | 1,071 (19.3)                       | 518 (4.8)                  | 144 <sup>5</sup> (4.4) | 14 (0.5)                                  | 532 (4.6) | 139 <sup>6</sup> (6.2)     | 13 (0.6)       |  |  |
| <i>Dubai-UAE</i> .....                            | 1,022 <sup>5</sup> (1.5)           | 478 (2.1)                  | 155 <sup>5</sup> (3.6) | 15 (0.3)                                  | 485 (2.5) | 125 <sup>6</sup> (3.6)     | 11 (0.3)       |  |  |
| <i>Florida-USA<sup>9,13,15</sup></i> .....        | 1,119 <sup>5</sup> (17.0)          | 513 (6.4)                  | 144 <sup>6</sup> (7.4) | 13 (0.7)                                  | 530 (7.3) | †                          | 13 (0.8)       |  |  |
| <i>Indiana-USA<sup>9,13,15</sup></i> .....        | 1,133 <sup>5</sup> (14.9)          | 522 (5.1)                  | 149 <sup>6</sup> (6.9) | 13 (0.7)                                  | 533 (4.8) | 132 <sup>6</sup> (6.5)     | 12 (0.6)       |  |  |
| <i>Massachusetts-USA<sup>9,13,15</sup></i> .....  | 1,087 (13.6)                       | 561 (5.3)                  | 154 <sup>5</sup> (5.4) | 14 (0.6)                                  | 567 (5.1) | 156 <sup>6</sup> (6.1)     | 15 (0.6)       |  |  |
| <i>Minnesota-USA<sup>9,15</sup></i> .....         | 1,043 (14.8)                       | 545 (4.6)                  | 142 <sup>5</sup> (7.5) | 14 (0.7)                                  | 553 (4.6) | 140 <sup>6</sup> (8.3)     | 14 (0.9)       |  |  |
| <i>North Carolina-USA<sup>9,12,15</sup></i> ..... | 1,159 (16.0)                       | 537 (6.8)                  | 185 <sup>6</sup> (9.7) | 16 (0.8)                                  | 532 (6.3) | †                          | 16 (1.2)       |  |  |
| <i>Ontario-CAN<sup>13</sup></i> .....             | 971 <sup>5</sup> (7.5)             | 512 (2.5)                  | 181 <sup>5</sup> (3.9) | 16 (0.5)                                  | 521 (2.5) | 96 <sup>5</sup> (3.5)      | 11 (0.3)       |  |  |
| <i>Quebec-CAN</i> .....                           | 913 (3.3)                          | 532 (2.3)                  | 147 (4.1)              | 15 (0.5)                                  | 520 (2.5) | 102 <sup>5</sup> (3.0)     | 14 (0.4)       |  |  |

†Not applicable.

#Rounds to zero.

!Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡Reporting standards not met. Either data are available for less than 50 percent of the students or the coefficient of variation (CV) is 50 percent or greater.

<sup>1</sup>Most of the education systems represent complete countries, but some represent subnational entities such as U.S. states, Canadian provinces, and England (which is part of the United Kingdom). The name of each subnational entity appears in italics and includes as a suffix the three-letter International Organization for Standardization (ISO) abbreviation for its complete country. Examples include *Florida-USA*, *Ontario-CAN*, and *England-GBR*.

<sup>2</sup>Trends in International Mathematics and Science Study (TIMSS) scores are reported on a scale from 0 to 1,000, with the scale average set at 500 and the standard deviation set at 100.

<sup>3</sup>General/integrated science instructional time is shown for the 27 participating countries that teach science as a general or integrated subject at the eighth grade. For the 15 participating countries that teach the sciences as separate subjects (biology, chemistry, etc.) at the eighth grade, total instructional time across science subjects is shown.

<sup>4</sup>The TIMSS average includes only education systems that are members of the International Association for the Evaluation of Educational Achievement (IAE), which develops and implements TIMSS at the international level. "Benchmarking" education systems are not members of the IEA and are therefore not included in the average.

<sup>5</sup>Data are available for at least 70 percent but less than 85 percent of students.

<sup>6</sup>Data are available for at least 50 percent but less than 70 percent of students.

<sup>7</sup>The TIMSS & PIRLS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 15 percent, though it is less than 25 percent.

<sup>8</sup>Nearly satisfied guidelines for sample participation rate after replacement schools were included.

<sup>9</sup>National Target Population does not include all of the International Target Population defined by TIMSS.

<sup>10</sup>Exclusion rates for Georgia are slightly underestimated as some conflict zones were not covered and no official statistics were available.

<sup>11</sup>The TIMSS & PIRLS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 25 percent.

<sup>12</sup>National Defined Population covers less than 90 percent of National Target Population (but at least 77 percent).

<sup>13</sup>National Defined Population covers 90 to 95 percent of National Target Population.

<sup>14</sup>Data are for 2007 and are from *TIMSS 2007 International Results in Science*. Met guidelines for sample participation rates only after replacement schools were included. Data are available for at least 50 percent but less than 70 percent of students.

<sup>15</sup>All U.S. state data are based on public school students only.

NOTE: Countries were required to sample students in the grade that corresponded to the end of 8 years of formal schooling, providing that the mean age at the time of testing was at least 13.5 years. Instructional times shown in this table are actual or implemented times (as opposed to intended times prescribed by the curriculum). Principals reported total instructional hours per day and school days per year. Total instructional hours per year were calculated by multiplying the number of school days per year by the number of instructional hours per day. Teachers reported instructional hours per week in mathematics and science. Instructional hours per year in mathematics and science were calculated by dividing weekly instructional hours by the number of school days per week and then multiplying by the number of school days per year.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2011; *TIMSS 2011 International Results in Mathematics*, by Ina V.S. Mullis et al.; and *TIMSS 2011 International Results in Science*, by Michael O. Martin et al. (This table was prepared December 2012.)

**Table 462. Average reading literacy scale scores of fourth-graders and percentage whose schools emphasize reading skills and strategies at or before second grade or at third grade, by sex and country or other education system: 2001, 2006, and 2011**  
[Standard errors appear in parentheses]

|  | Average reading literacy scale score <sup>2</sup> |            |                    |            |                     |                           | Percent of fourth-graders in 2011, by grade at which reading skills and strategies emphasized <sup>3</sup> |              |                     |              |                  |              |                  |              |
|--|---|------------|--------------------|------------|---------------------|---------------------------|--|--------------|---------------------|--------------|------------------|--------------|------------------|--------------|
| Country or other education system <sup>1</sup> | 2001  | 2006       | 2011               |            |                     | At or before second grade | At third grade   |              |                     |              |                  |              |                  |              |
|  |   |            | Total              | Male       | Female              |                           |  |              |                     |              |                  |              |                  |              |
| 1  | 2   | 3          | 4                  | 5          | 6                   | 7                         | 8  |              |                     |              |                  |              |                  |              |
| <b>PIRLS average<sup>4</sup></b>               | <b>500</b>  | <b>(†)</b> | <b>500</b>         | <b>(†)</b> | <b>500</b>          | <b>(†)</b>                | <b>504</b>   | <b>(0.5)</b> | <b>520</b>          | <b>(0.5)</b> | <b>28</b>        | <b>(0.5)</b> | <b>68</b>        | <b>(0.5)</b> |
| Australia .....                                | —   | (†)        | —                  | (†)        | 527                 | (2.2)                     | 519  | (2.7)        | 536                 | (2.7)        | 73               | (4.0)        | 27               | (4.0)        |
| Austria .....                                  | —   | (†)        | 538                | (2.2)      | 529                 | (2.0)                     | 525  | (2.3)        | 533                 | (2.2)        | 29               | (4.2)        | 71               | (4.2)        |
| Azerbaijan <sup>5</sup> .....                  | —   | (†)        | —                  | (†)        | 462 <sup>6</sup>    | (3.3)                     | 456 <sup>6</sup>   | (3.5)        | 470 <sup>6</sup>    | (3.6)        | 19               | (3.6)        | 79               | (3.8)        |
| Belgium (Flemish)-BEL .....                    | —   | (†)        | 500                | (2.6)      | 506 <sup>6,7</sup>  | (2.9)                     | 504 <sup>6,7</sup>   | (3.1)        | 509 <sup>6,7</sup>  | (3.1)        | 29               | (5.0)        | 70               | (5.1)        |
| Bulgaria .....                                 | 550   | (3.8)      | 547                | (4.4)      | 532                 | (4.1)                     | 524  | (4.3)        | 539                 | (4.5)        | 25               | (3.5)        | 74               | (3.6)        |
| Canada .....                                   | —   | (†)        | —                  | (†)        | 548 <sup>6</sup>    | (1.6)                     | 542 <sup>6</sup>   | (2.1)        | 555 <sup>6</sup>    | (1.7)        | 55               | (2.7)        | 44               | (2.7)        |
| Chinese Taipei-CHN .....                       | —   | (†)        | 535                | (2.0)      | 553                 | (1.9)                     | 546  | (2.1)        | 561                 | (2.1)        | 17               | (3.0)        | 80               | (3.0)        |
| Colombia .....                                 | 422   | (4.4)      | —                  | (†)        | 448                 | (4.1)                     | 448  | (4.6)        | 447                 | (4.6)        | 13               | (3.3)        | 81               | (3.6)        |
| Croatia .....                                  | —   | (†)        | —                  | (†)        | 553 <sup>6</sup>    | (1.9)                     | 546 <sup>6</sup>   | (2.2)        | 560 <sup>6</sup>    | (2.1)        | 31               | (4.1)        | 68               | (4.2)        |
| Czech Republic .....                           | 537   | (2.3)      | —                  | (†)        | 545                 | (2.2)                     | 542  | (2.5)        | 549                 | (2.5)        | 24               | (3.8)        | 74               | (4.0)        |
| Denmark .....                                  | —   | (†)        | 546                | (2.3)      | 554 <sup>6</sup>    | (1.7)                     | 548 <sup>6</sup>   | (2.1)        | 560 <sup>6</sup>    | (1.9)        | 21               | (2.4)        | 79               | (2.4)        |
| England-GBR .....                              | 553 <sup>4,5</sup>                                | (3.4)      | 539                | (2.6)      | 552 <sup>7</sup>    | (2.6)                     | 540 <sup>7</sup>   | (3.1)        | 563 <sup>7</sup>    | (3.0)        | 84               | (3.3)        | 15               | (3.2)        |
| Finland .....                                  | —   | (†)        | —                  | (†)        | 568                 | (1.9)                     | 558  | (2.2)        | 578                 | (2.3)        | 10               | (2.6)        | 87               | (2.8)        |
| France .....                                   | 525   | (2.4)      | 522                | (2.1)      | 520                 | (2.6)                     | 518  | (2.4)        | 522                 | (3.4)        | 18               | (3.3)        | 81               | (3.4)        |
| Georgia <sup>5</sup> .....                     | —   | (†)        | 471 <sup>6,8</sup> | (3.1)      | 488 <sup>8</sup>    | (3.1)                     | 477 <sup>8</sup>   | (4.0)        | 499 <sup>8</sup>    | (2.7)        | 20               | (2.8)        | 79               | (2.9)        |
| Germany .....                                  | 539   | (1.9)      | 548                | (2.2)      | 541                 | (2.2)                     | 537  | (2.7)        | 545                 | (2.3)        | 30               | (3.4)        | 69               | (3.3)        |
| Hong Kong-CHN .....                            | 528   | (3.1)      | 564                | (2.4)      | 571 <sup>9</sup>    | (2.3)                     | 563 <sup>9</sup>   | (2.5)        | 579 <sup>9</sup>    | (2.3)        | 16               | (3.5)        | 81               | (3.8)        |
| Hungary .....                                  | 543   | (2.2)      | 551                | (3.0)      | 539                 | (2.9)                     | 532  | (3.2)        | 547                 | (3.2)        | 28               | (4.1)        | 71               | (4.0)        |
| Indonesia .....                                | —   | (†)        | 405                | (4.1)      | 428                 | (4.2)                     | 419  | (4.3)        | 437                 | (4.5)        | ±                | (†)          | 88               | (3.2)        |
| Iran, Islamic Republic of .....                | 414   | (4.2)      | 421                | (3.1)      | 457                 | (2.8)                     | 448  | (4.3)        | 467                 | (4.3)        | 7                | (1.6)        | 85               | (2.4)        |
| Ireland .....                                  | —   | (†)        | —                  | (†)        | 552                 | (2.3)                     | 544  | (3.0)        | 559                 | (2.9)        | 40               | (4.0)        | 60               | (4.0)        |
| Israel .....                                   | 509 <sup>10</sup>                                 | (2.8)      | 512 <sup>10</sup>  | (3.3)      | 541 <sup>9</sup>    | (2.7)                     | 538 <sup>9</sup>   | (3.4)        | 544 <sup>9</sup>    | (3.1)        | 59               | (4.7)        | 41               | (4.7)        |
| Italy .....                                    | 541   | (2.4)      | 551                | (2.9)      | 541                 | (2.2)                     | 540  | (2.7)        | 543                 | (2.4)        | 15               | (2.5)        | 84               | (2.5)        |
| Lithuania .....                                | 543 <sup>8</sup>                                  | (2.6)      | 537 <sup>8</sup>   | (1.6)      | 528 <sup>6,8</sup>  | (2.0)                     | 520 <sup>6,8</sup>   | (2.4)        | 537 <sup>6,8</sup>  | (2.4)        | 23               | (3.3)        | 76               | (3.4)        |
| Malta .....                                    | —   | (†)        | —                  | (†)        | 477                 | (1.4)                     | 468  | (2.0)        | 486                 | (1.9)        | 14               | (0.1)        | 86               | (0.1)        |
| Morocco .....                                  | 350 <sup>11</sup>                                 | (9.6)      | 323                | (5.9)      | 310 <sup>12</sup>   | (3.9)                     | 296 <sup>12</sup>  | (4.6)        | 326 <sup>12</sup>   | (4.0)        | ±                | (†)          | 48               | (4.0)        |
| Netherlands .....                              | 554 <sup>7</sup>                                  | (2.5)      | 547 <sup>7</sup>   | (1.5)      | 546 <sup>7</sup>    | (1.9)                     | 543 <sup>7</sup>   | (2.2)        | 549 <sup>7</sup>    | (2.1)        | 22 <sup>13</sup> | (4.4)        | 78 <sup>13</sup> | (4.4)        |
| New Zealand .....                              | 529   | (3.6)      | 532                | (2.0)      | 531                 | (1.9)                     | 521  | (2.7)        | 541                 | (2.2)        | 73               | (3.6)        | 27               | (3.6)        |
| Northern Ireland-GBR .....                     | —   | (†)        | —                  | (†)        | 558 <sup>7</sup>    | (2.4)                     | 550 <sup>7</sup>   | (3.2)        | 567 <sup>7</sup>    | (2.5)        | 55 <sup>13</sup> | (4.6)        | 45 <sup>13</sup> | (4.6)        |
| Norway .....                                   | 499   | (2.9)      | 498 <sup>13</sup>  | (2.6)      | 507 <sup>11</sup>   | (1.9)                     | 500 <sup>11</sup>  | (2.7)        | 514 <sup>11</sup>   | (2.2)        | 14               | (3.4)        | 83               | (3.9)        |
| Oman .....                                     | —   | (†)        | —                  | (†)        | 391 <sup>14</sup>   | (2.8)                     | 371 <sup>14</sup>  | (3.4)        | 411 <sup>14</sup>   | (3.0)        | 4                | (0.9)        | 86               | (2.0)        |
| Poland .....                                   | —   | (†)        | 519                | (2.4)      | 526                 | (2.1)                     | 519  | (2.7)        | 533                 | (2.5)        | 6 <sup>!</sup>   | (2.1)        | 94               | (2.1)        |
| Portugal .....                                 | —   | (†)        | —                  | (†)        | 541                 | (2.6)                     | 534  | (2.8)        | 548                 | (3.0)        | 25               | (4.1)        | 75               | (4.1)        |
| Qatar .....                                    | —   | (†)        | 353                | (1.1)      | 425 <sup>6</sup>    | (3.5)                     | 411 <sup>6</sup>   | (4.2)        | 441 <sup>6</sup>    | (4.7)        | 24               | (3.0)        | 66               | (3.4)        |
| Romania .....                                  | 512   | (4.6)      | 489                | (5.0)      | 502                 | (4.3)                     | 495  | (4.3)        | 510                 | (4.8)        | 14               | (3.4)        | 85               | (3.5)        |
| Russian Federation .....                       | 528 <sup>6</sup>                                  | (4.4)      | 565 <sup>6</sup>   | (3.4)      | 568                 | (2.7)                     | 559  | (3.1)        | 578                 | (2.8)        | 50               | (3.7)        | 50               | (3.7)        |
| Saudi Arabia .....                             | —   | (†)        | —                  | (†)        | 430                 | (4.4)                     | 402  | (8.2)        | 456                 | (3.1)        | 7                | (1.7)        | 78               | (3.5)        |
| Singapore .....                                | 528   | (5.2)      | 558                | (2.9)      | 567 <sup>6</sup>    | (3.3)                     | 559 <sup>6</sup>   | (3.6)        | 576 <sup>6</sup>    | (3.5)        | 46               | (#)          | 54               | (#)          |
| Slovak Republic .....                          | 518   | (2.8)      | 531                | (2.8)      | 535                 | (2.8)                     | 530  | (2.8)        | 540                 | (3.1)        | 24               | (3.2)        | 76               | (3.3)        |
| Slovenia .....                                 | 502   | (2.0)      | 522                | (2.1)      | 530                 | (2.0)                     | 523  | (2.7)        | 539                 | (2.2)        | 8                | (1.8)        | 87               | (2.4)        |
| Spain .....                                    | —   | (†)        | 513                | (2.5)      | 513                 | (2.3)                     | 511  | (2.8)        | 516                 | (2.5)        | 29               | (3.2)        | 71               | (3.2)        |
| Sweden .....                                   | 561   | (2.2)      | 549                | (2.3)      | 542                 | (2.1)                     | 535  | (2.5)        | 549                 | (2.4)        | 37 <sup>13</sup> | (4.5)        | 63 <sup>13</sup> | (4.5)        |
| Trinidad and Tobago .....                      | —   | (†)        | 436                | (4.9)      | 471                 | (3.8)                     | 456  | (4.3)        | 487                 | (4.5)        | 32               | (3.8)        | 66               | (4.0)        |
| United Arab Emirates .....                     | —   | (†)        | —                  | (†)        | 439                 | (2.2)                     | 425  | (3.5)        | 452                 | (3.0)        | 15               | (1.3)        | 68               | (2.2)        |
| United States .....                            | 542 <sup>6,7</sup>                                | (3.8)      | 540 <sup>7</sup>   | (3.5)      | 556 <sup>6</sup>    | (1.5)                     | 551 <sup>6</sup>   | (1.7)        | 562 <sup>6</sup>    | (1.9)        | 75 <sup>13</sup> | (2.7)        | 24 <sup>13</sup> | (2.7)        |
| <b>Benchmarking education systems</b>          |   |            |                    |            |                     |                           |  |              |                     |              |                  |              |                  |              |
| Abu Dhabi-UAE .....                            | —   | (†)        | —                  | (†)        | 424                 | (4.7)                     | 406  | (6.3)        | 442                 | (5.5)        | 11               | (2.6)        | 61               | (4.4)        |
| Alberta-CAN .....                              | —   | (†)        | 560 <sup>6</sup>   | (2.4)      | 548 <sup>6</sup>    | (2.9)                     | 543 <sup>6</sup>   | (3.1)        | 553 <sup>6</sup>    | (3.1)        | 52               | (4.5)        | 48               | (4.5)        |
| Andalusia-ESP .....                            | —   | (†)        | —                  | (†)        | 515                 | (2.3)                     | 511  | (2.8)        | 519                 | (2.4)        | 26               | (3.6)        | 74               | (3.6)        |
| Dubai-UAE .....                                | —   | (†)        | —                  | (†)        | 476                 | (2.0)                     | 470  | (3.5)        | 483                 | (3.9)        | 28               | (0.3)        | 66               | (0.3)        |
| Florida-USA <sup>15</sup> .....                | —   | (†)        | —                  | (†)        | 569 <sup>8,10</sup> | (2.9)                     | 561 <sup>8,10</sup>  | (3.0)        | 576 <sup>8,10</sup> | (3.4)        | 82 <sup>13</sup> | (4.7)        | 18 <sup>13</sup> | (4.7)        |
| Maltese-MLT .....                              | —   | (†)        | —                  | (†)        | 457                 | (1.5)                     | 445  | (2.2)        | 470                 | (2.0)        | 14               | (0.1)        | 86               | (0.1)        |
| Ontario-CAN .....                              | 548 <sup>6</sup>                                  | (3.3)      | 555 <sup>6</sup>   | (2.7)      | 552 <sup>6</sup>    | (2.6)                     | 546 <sup>6</sup>   | (2.8)        | 558 <sup>6</sup>    | (3.3)        | 75               | (4.0)        | 25               | (4.0)        |
| Quebec-CAN .....                               | 537   | (3.0)      | 533                | (2.8)      | 538                 | (2.1)                     | 531  | (2.4)        | 544                 | (2.6)        | 23               | (3.9)        | 75               | (4.1)        |

—Not available.

†Not applicable.

#Rounds to zero.

!Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡Reporting standards not met. The coefficient of variation (CV) for this estimate is 50 percent or greater.

<sup>1</sup>Most of the education systems represent complete countries, but some represent subnational entities such as U.S. states, Canadian provinces, and England (which is part of the United Kingdom). The name of each subnational entity appears in italics and includes as a suffix the three-letter International Organization for Standardization (ISO) abbreviation for its complete country. Examples include *Florida-USA*, *Ontario-CAN*, and *England-GBR*.<sup>2</sup>Progress in International Reading Literacy Study (PIRLS) scores are reported on a scale from 0 to 1,000, with the scale average set at 500 and the standard deviation set at 100.<sup>3</sup>Based on principals' reports of the earliest grade at which each of 11 reading skills and strategies first receive a major emphasis in instruction. A school is counted as emphasizing reading skills and strategies at a certain grade (or before) only if its principal reported that all 11 skills and strategies are emphasized at that grade (or before). A small percentage of fourth-graders (1 percent in the United States) are not shown because their schools first emphasized reading skills and strategies at fourth grade or later.<sup>4</sup>The PIRLS average includes only education systems that are members of the International Association for the Evaluation of Educational Achievement (IAE), which develops and implements PIRLS

at the international level. "Benchmarking" education systems are not members of the IEA and are therefore not included in the average.

<sup>5</sup>Exclusion rates for Azerbaijan and Georgia are slightly underestimated as some conflict zones were not covered and no official statistics were available for 2011.<sup>6</sup>National Defined Population covers 90 percent to 95 percent of National Target Population.<sup>7</sup>Met guidelines for sample participation rates only after replacement schools were included.<sup>8</sup>National Target Population does not include all of the International Target Population.<sup>9</sup>National Defined Population covers less than 90 percent of National Target Population.<sup>10</sup>National Defined Population covers less than 80 percent of National Target Population.<sup>11</sup>Nearly satisfied guidelines for sample participation rates after replacement schools were included.<sup>12</sup>The TIMSS & PIRLS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 25 percent.<sup>13</sup>Data are available for at least 70 percent but less than 85 percent of students.<sup>14</sup>The TIMSS & PIRLS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 15 percent, though it is less than 25 percent.<sup>15</sup>All data for Florida are based on public schools only.

SOURCE: International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study (PIRLS), 2001, 2006, and 2011. (This table was prepared February 2013).

**Table 463. Average reading literacy, mathematics literacy, and science literacy scores of 15-year-old students, by sex and country: 2009**  
[Standard errors appear in parentheses]

| Country or other jurisdiction     | Reading literacy |       |        | Mathematics literacy |      |        | Science literacy |       |        |       |     |       |
|-----------------------------------|------------------|-------|--------|----------------------|------|--------|------------------|-------|--------|-------|-----|-------|
|                                   | Total            | Male  | Female | Total                | Male | Female | Total            | Male  | Female |       |     |       |
| 1                                 | 2                | 3     | 4      | 5                    | 6    | 7      | 8                | 9     | 10     |       |     |       |
| OECD total <sup>1</sup> .....     | 492              | (1.2) | 475    | (1.4)                | 508  | (1.2)  | 488              | (1.2) | 496    | (1.2) | 494 | (1.3) |
| OECD average <sup>2</sup> .....   | 493              | (0.5) | 474    | (0.6)                | 513  | (0.5)  | 496              | (0.5) | 501    | (0.6) | 501 | (0.6) |
| Australia.....                    | 515              | (2.3) | 496    | (2.9)                | 533  | (2.6)  | 514              | (2.5) | 519    | (3.0) | 509 | (2.8) |
| Austria.....                      | 470              | (2.9) | 449    | (3.8)                | 490  | (4.0)  | 496              | (2.7) | 506    | (3.4) | 486 | (4.0) |
| Belgium.....                      | 506              | (2.3) | 493    | (3.4)                | 520  | (2.9)  | 515              | (2.3) | 526    | (3.3) | 504 | (3.0) |
| Canada.....                       | 524              | (1.5) | 507    | (1.8)                | 542  | (1.7)  | 527              | (1.6) | 533    | (2.0) | 521 | (1.7) |
| Chile.....                        | 449              | (3.1) | 439    | (3.9)                | 461  | (3.6)  | 421              | (3.1) | 431    | (3.7) | 410 | (3.6) |
| Czech Republic.....               | 478              | (2.9) | 456    | (3.7)                | 504  | (3.0)  | 493              | (2.8) | 495    | (3.9) | 490 | (3.0) |
| Denmark.....                      | 495              | (2.1) | 480    | (2.5)                | 509  | (2.5)  | 503              | (2.6) | 511    | (3.0) | 495 | (2.9) |
| Estonia.....                      | 501              | (2.6) | 480    | (2.9)                | 524  | (2.8)  | 512              | (2.6) | 516    | (2.9) | 508 | (2.9) |
| Finland.....                      | 536              | (2.3) | 508    | (2.6)                | 563  | (2.4)  | 541              | (2.2) | 542    | (2.5) | 539 | (2.5) |
| France.....                       | 496              | (3.4) | 475    | (4.3)                | 515  | (3.4)  | 497              | (3.1) | 505    | (3.8) | 489 | (3.4) |
| Germany.....                      | 497              | (2.7) | 478    | (3.6)                | 518  | (2.9)  | 513              | (2.9) | 520    | (3.6) | 505 | (3.3) |
| Greece.....                       | 483              | (4.3) | 459    | (5.5)                | 506  | (3.5)  | 466              | (3.9) | 473    | (5.4) | 459 | (3.3) |
| Hungary.....                      | 494              | (3.2) | 475    | (3.9)                | 513  | (3.6)  | 490              | (3.5) | 496    | (4.2) | 484 | (3.9) |
| Iceland.....                      | 500              | (1.4) | 478    | (2.1)                | 522  | (1.9)  | 507              | (1.4) | 508    | (2.0) | 505 | (1.9) |
| Ireland.....                      | 496              | (3.0) | 476    | (4.2)                | 515  | (3.1)  | 487              | (2.5) | 491    | (3.4) | 483 | (3.0) |
| Israel.....                       | 474              | (3.6) | 452    | (5.2)                | 495  | (3.4)  | 447              | (3.3) | 451    | (4.7) | 443 | (3.3) |
| Italy.....                        | 486              | (1.6) | 464    | (2.3)                | 510  | (1.9)  | 483              | (1.9) | 490    | (2.3) | 475 | (2.2) |
| Japan.....                        | 520              | (3.5) | 501    | (5.6)                | 540  | (3.7)  | 529              | (3.3) | 534    | (5.3) | 524 | (3.9) |
| Korea, Republic of.....           | 539              | (3.5) | 523    | (4.9)                | 558  | (3.8)  | 546              | (4.0) | 548    | (6.2) | 544 | (4.5) |
| Luxembourg.....                   | 472              | (1.3) | 453    | (1.9)                | 492  | (1.5)  | 489              | (1.2) | 499    | (2.0) | 479 | (1.3) |
| Mexico.....                       | 425              | (2.0) | 413    | (2.1)                | 438  | (2.1)  | 419              | (1.8) | 425    | (2.1) | 412 | (1.9) |
| Netherlands.....                  | 508              | (5.1) | 496    | (5.1)                | 521  | (5.3)  | 526              | (4.7) | 534    | (4.8) | 517 | (5.1) |
| New Zealand.....                  | 521              | (2.4) | 499    | (3.6)                | 544  | (2.6)  | 519              | (2.3) | 523    | (3.2) | 515 | (2.9) |
| Norway.....                       | 503              | (2.6) | 480    | (3.0)                | 527  | (2.9)  | 498              | (2.4) | 500    | (2.7) | 495 | (2.8) |
| Poland.....                       | 500              | (2.6) | 476    | (2.8)                | 525  | (2.9)  | 495              | (2.8) | 497    | (3.0) | 493 | (3.2) |
| Portugal.....                     | 489              | (3.1) | 470    | (3.5)                | 508  | (2.9)  | 487              | (2.9) | 493    | (3.3) | 481 | (3.1) |
| Slovak Republic.....              | 477              | (2.5) | 452    | (3.5)                | 503  | (2.8)  | 497              | (3.1) | 498    | (3.7) | 495 | (3.4) |
| Slovenia.....                     | 483              | (1.0) | 456    | (1.6)                | 511  | (1.4)  | 501              | (1.2) | 502    | (1.8) | 501 | (1.7) |
| Spain.....                        | 481              | (2.0) | 467    | (2.2)                | 496  | (2.2)  | 483              | (2.1) | 493    | (2.3) | 474 | (2.5) |
| Sweden.....                       | 497              | (2.9) | 475    | (3.2)                | 521  | (3.1)  | 494              | (2.9) | 493    | (3.1) | 495 | (3.3) |
| Switzerland.....                  | 501              | (2.4) | 481    | (2.9)                | 520  | (2.7)  | 534              | (3.3) | 544    | (3.7) | 524 | (3.4) |
| Turkey.....                       | 464              | (3.5) | 443    | (3.7)                | 486  | (4.1)  | 445              | (4.4) | 451    | (4.6) | 440 | (5.6) |
| United Kingdom.....               | 494              | (2.3) | 481    | (3.5)                | 507  | (2.9)  | 492              | (2.4) | 503    | (3.2) | 482 | (3.3) |
| United States.....                | 500              | (3.7) | 488    | (4.2)                | 513  | (3.8)  | 487              | (3.6) | 497    | (4.0) | 477 | (3.8) |
| Non-OECD education systems        |                  |       |        |                      |      |        |                  |       |        |       |     |       |
| Albania.....                      | 385              | (4.0) | 355    | (5.1)                | 417  | (3.9)  | 377              | (4.0) | 372    | (4.7) | 383 | (4.2) |
| Argentina.....                    | 398              | (4.6) | 379    | (5.1)                | 415  | (4.9)  | 388              | (4.1) | 394    | (4.5) | 383 | (4.4) |
| Azerbaijan.....                   | 362              | (3.3) | 350    | (3.7)                | 374  | (3.3)  | 431              | (2.8) | 435    | (3.1) | 427 | (3.0) |
| Brazil.....                       | 412              | (2.7) | 397    | (2.9)                | 425  | (2.8)  | 386              | (2.4) | 394    | (2.4) | 379 | (2.6) |
| Bulgaria.....                     | 429              | (6.7) | 400    | (7.3)                | 461  | (5.8)  | 428              | (5.9) | 426    | (6.2) | 430 | (6.0) |
| Colombia.....                     | 413              | (3.7) | 408    | (4.5)                | 418  | (4.0)  | 381              | (3.2) | 398    | (4.0) | 366 | (3.3) |
| Croatia.....                      | 476              | (2.9) | 452    | (3.4)                | 503  | (3.7)  | 460              | (3.1) | 465    | (3.6) | 454 | (3.9) |
| Dubai (United Arab Emirates)..... | 459              | (1.1) | 435    | (1.7)                | 485  | (1.5)  | 453              | (1.1) | 454    | (1.5) | 451 | (1.6) |
| Hong Kong-China.....              | 533              | (2.1) | 518    | (3.3)                | 550  | (2.8)  | 555              | (2.7) | 561    | (4.2) | 547 | (3.4) |
| Indonesia.....                    | 402              | (3.7) | 383    | (3.8)                | 420  | (3.9)  | 371              | (3.7) | 371    | (4.1) | 372 | (4.0) |
| Jordan.....                       | 405              | (3.3) | 377    | (4.7)                | 434  | (4.1)  | 387              | (3.7) | 386    | (5.1) | 387 | (5.2) |
| Kazakhstan.....                   | 390              | (3.1) | 369    | (3.2)                | 412  | (3.4)  | 405              | (3.0) | 405    | (3.1) | 405 | (3.3) |
| Kyrgyzstan.....                   | 314              | (3.2) | 287    | (3.8)                | 340  | (3.2)  | 331              | (2.9) | 328    | (3.4) | 334 | (2.8) |
| Latvia.....                       | 484              | (3.0) | 460    | (3.4)                | 507  | (3.1)  | 482              | (3.1) | 483    | (3.5) | 481 | (3.4) |
| Liechtenstein.....                | 499              | (2.8) | 484    | (4.5)                | 516  | (4.5)  | 536              | (4.1) | 547    | (5.2) | 523 | (5.9) |
| Lithuania.....                    | 468              | (2.4) | 439    | (2.8)                | 498  | (2.6)  | 477              | (2.6) | 474    | (3.1) | 480 | (3.0) |
| Macao-China.....                  | 487              | (0.9) | 470    | (1.3)                | 504  | (1.2)  | 525              | (0.9) | 531    | (1.3) | 520 | (1.4) |
| Montenegro.....                   | 408              | (1.7) | 382    | (2.1)                | 434  | (2.1)  | 403              | (2.0) | 408    | (2.2) | 396 | (2.4) |
| Panama.....                       | 371              | (6.5) | 354    | (7.0)                | 387  | (7.3)  | 360              | (5.2) | 362    | (5.6) | 357 | (6.1) |
| Peru.....                         | 370              | (4.0) | 359    | (4.2)                | 381  | (4.9)  | 365              | (4.0) | 374    | (4.6) | 356 | (4.4) |
| Qatar.....                        | 372              | (0.8) | 347    | (1.3)                | 397  | (1.0)  | 368              | (0.7) | 366    | (1.2) | 371 | (1.0) |
| Romania.....                      | 424              | (4.1) | 403    | (4.6)                | 445  | (4.3)  | 427              | (3.4) | 429    | (3.9) | 425 | (3.8) |
| Russian Federation.....           | 459              | (3.3) | 437    | (3.6)                | 482  | (3.4)  | 468              | (3.3) | 469    | (3.7) | 467 | (3.5) |
| Serbia.....                       | 442              | (2.4) | 422    | (3.3)                | 462  | (2.5)  | 442              | (2.9) | 448    | (3.8) | 437 | (3.2) |
| Shanghai-China.....               | 556              | (2.4) | 536    | (3.0)                | 576  | (2.3)  | 600              | (2.8) | 599    | (3.7) | 601 | (3.1) |
| Singapore.....                    | 526              | (1.1) | 511    | (1.7)                | 542  | (1.5)  | 562              | (1.4) | 565    | (1.9) | 559 | (2.0) |
| Chinese Taipei.....               | 495              | (2.6) | 477    | (3.7)                | 514  | (3.6)  | 543              | (3.4) | 546    | (4.8) | 541 | (4.8) |
| Thailand.....                     | 421              | (2.6) | 400    | (3.3)                | 438  | (3.1)  | 419              | (3.2) | 421    | (3.9) | 417 | (3.8) |
| Trinidad and Tobago.....          | 416              | (1.2) | 387    | (1.9)                | 445  | (1.6)  | 414              | (1.3) | 410    | (2.3) | 418 | (1.5) |
| Tunisia.....                      | 404              | (2.9) | 387    | (3.2)                | 418  | (3.0)  | 371              | (3.0) | 378    | (3.3) | 366 | (3.2) |
| Uruguay.....                      | 426              | (2.6) | 404    | (3.2)                | 445  | (2.8)  | 427              | (2.6) | 433    | (3.0) | 421 | (2.9) |

<sup>1</sup>Illustrates how a country compares with the OECD area as a whole. Computed taking the OECD countries as a single entity, to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools.

<sup>2</sup>Refers to the mean of the data values for all OECD countries, to which each country contributes equally, regardless of the absolute size of the student population of each country.

NOTE: PISA scores are reported on a scale from 0 to 1,000.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009, *PISA 2009 Results: What Students Know and Can Do—Student Performance in Reading, Mathematics and Science (Volume I)*. (This table was prepared December 2010.)

**Table 464. Average reading scores and percentage distribution of 15-year-old students scoring at each reading literacy proficiency level, by country: 2009**

[Standard errors appear in parentheses]

| Country or other jurisdiction   | Average reading score | Percentage distribution at levels of reading proficiency <sup>1</sup> |       |          |       |          |      |         |      |         |      |         |      |         |      |         |       |        |
|---------------------------------|-----------------------|---|-------|----------|-------|----------|------|---------|------|---------|------|---------|------|---------|------|---------|-------|--------|
|                                 |                       | Below level 1b  |       | Level 1b |       | Level 1a |      | Level 2 |      | Level 3 |      | Level 4 |      | Level 5 |      | Level 6 |       |        |
| 1                               | 2                     | 3   |       | 4        |       | 5        |      | 6       |      | 7       |      | 8       |      | 9       |      | 10      |       |        |
| OECD total <sup>2</sup> .....   | 492                   | (1.2)   | 1.1   | (0.07)   | 4.8   | (0.15)   | 13.8 | (0.26)  | 24.4 | (0.30)  | 27.9 | (0.32)  | 19.9 | (0.31)  | 7.0  | (0.24)  | 1.0   | (0.13) |
| OECD average <sup>3</sup> ..... | 493                   | (0.5)   | 1.1   | (0.05)   | 4.6   | (0.08)   | 13.1 | (0.13)  | 24.0 | (0.16)  | 28.9 | (0.16)  | 20.7 | (0.16)  | 6.8  | (0.10)  | 0.8   | (0.03) |
| Australia.....                  | 515                   | (2.3)   | 1.0   | (0.12)   | 3.3   | (0.27)   | 10.0 | (0.39)  | 20.4 | (0.57)  | 28.5 | (0.73)  | 24.1 | (0.65)  | 10.7 | (0.54)  | 2.1   | (0.31) |
| Austria.....                    | 470                   | (2.9)   | 1.9   | (0.42)   | 8.1   | (0.81)   | 17.5 | (0.99)  | 24.1 | (0.96)  | 26.0 | (0.92)  | 17.4 | (0.85)  | 4.5  | (0.45)  | 0.4 ! | (0.13) |
| Belgium.....                    | 506                   | (2.3)   | 1.1   | (0.25)   | 4.7   | (0.46)   | 11.9 | (0.64)  | 20.3 | (0.67)  | 25.8 | (0.85)  | 24.9 | (0.75)  | 10.1 | (0.51)  | 1.1   | (0.19) |
| Canada.....                     | 524                   | (1.5)   | 0.4   | (0.06)   | 2.0   | (0.19)   | 7.9  | (0.34)  | 20.2 | (0.61)  | 30.0 | (0.69)  | 26.8 | (0.58)  | 11.0 | (0.41)  | 1.8   | (0.17) |
| Chile.....                      | 449                   | (3.1)   | 1.3   | (0.24)   | 7.4   | (0.77)   | 21.9 | (0.95)  | 33.2 | (1.11)  | 25.6 | (1.15)  | 9.3  | (0.71)  | 1.3  | (0.25)  | #     | (†)    |
| Czech Republic.....             | 478                   | (2.9)   | 0.8 ! | (0.29)   | 5.5   | (0.60)   | 16.8 | (1.06)  | 27.4 | (0.99)  | 27.0 | (1.00)  | 17.4 | (0.97)  | 4.7  | (0.45)  | 0.4 ! | (0.12) |
| Denmark.....                    | 495                   | (2.1)   | 0.4   | (0.11)   | 3.1   | (0.30)   | 11.7 | (0.72)  | 26.0 | (0.94)  | 33.1 | (1.21)  | 20.9 | (1.11)  | 4.4  | (0.45)  | 0.3 ! | (0.12) |
| Estonia.....                    | 501                   | (2.6)   | 0.3 ! | (0.13)   | 2.4   | (0.38)   | 10.6 | (0.86)  | 25.6 | (1.26)  | 33.8 | (1.00)  | 21.2 | (0.81)  | 5.4  | (0.52)  | 0.6 ! | (0.20) |
| Finland.....                    | 536                   | (2.3)   | 0.2   | (0.07)   | 1.5   | (0.20)   | 6.4  | (0.44)  | 16.7 | (0.62)  | 30.1 | (0.85)  | 30.6 | (0.88)  | 12.9 | (0.74)  | 1.6   | (0.24) |
| France.....                     | 496                   | (3.4)   | 2.3   | (0.52)   | 5.6   | (0.53)   | 11.8 | (0.84)  | 21.1 | (1.03)  | 27.2 | (1.04)  | 22.4 | (1.07)  | 8.5  | (0.83)  | 1.1   | (0.25) |
| Germany.....                    | 497                   | (2.7)   | 0.8   | (0.23)   | 4.4   | (0.46)   | 13.3 | (0.79)  | 22.2 | (0.87)  | 28.8 | (1.09)  | 22.8 | (0.88)  | 7.0  | (0.57)  | 0.6   | (0.15) |
| Greece.....                     | 483                   | (4.3)   | 1.4   | (0.38)   | 5.6   | (0.86)   | 14.3 | (1.07)  | 25.6 | (1.06)  | 29.3 | (1.20)  | 18.2 | (0.98)  | 5.0  | (0.54)  | 0.6   | (0.17) |
| Hungary.....                    | 494                   | (3.2)   | 0.6 ! | (0.23)   | 4.7   | (0.82)   | 12.3 | (0.95)  | 23.8 | (1.24)  | 31.0 | (1.25)  | 21.6 | (1.11)  | 5.8  | (0.67)  | 0.3 ! | (0.13) |
| Iceland.....                    | 500                   | (1.4)   | 1.1   | (0.18)   | 4.2   | (0.43)   | 11.5 | (0.71)  | 22.2 | (0.80)  | 30.6 | (0.94)  | 21.9 | (0.84)  | 7.5  | (0.62)  | 1.0   | (0.19) |
| Ireland.....                    | 496                   | (3.0)   | 1.5   | (0.36)   | 3.9   | (0.47)   | 11.8 | (0.71)  | 23.3 | (1.00)  | 30.6 | (0.91)  | 21.9 | (0.91)  | 6.3  | (0.50)  | 0.7 ! | (0.22) |
| Israel.....                     | 474                   | (3.6)   | 3.9   | (0.66)   | 8.0   | (0.66)   | 14.7 | (0.63)  | 22.5 | (0.96)  | 25.5 | (0.95)  | 18.1 | (0.73)  | 6.4  | (0.54)  | 1.0   | (0.16) |
| Italy.....                      | 486                   | (1.6)   | 1.4   | (0.23)   | 5.2   | (0.32)   | 14.4 | (0.45)  | 24.0 | (0.54)  | 28.9 | (0.55)  | 20.2 | (0.48)  | 5.4  | (0.30)  | 0.4   | (0.10) |
| Japan.....                      | 520                   | (3.5)   | 1.3   | (0.6)    | 3.4   | (0.49)   | 8.9  | (0.66)  | 18.0 | (0.84)  | 28.0 | (0.88)  | 27.0 | (0.95)  | 11.5 | (0.71)  | 1.9   | (0.36) |
| Korea, Republic of.....         | 539                   | (3.5)   | ‡     | (†)      | 0.9 ! | (0.30)   | 4.7  | (0.63)  | 15.4 | (1.01)  | 33.0 | (1.23)  | 32.9 | (1.42)  | 11.9 | (0.96)  | 1.0   | (0.20) |
| Luxembourg.....                 | 472                   | (1.3)   | 3.1   | (0.27)   | 7.3   | (0.45)   | 15.7 | (0.59)  | 24.0 | (0.70)  | 27.0 | (0.65)  | 17.3 | (0.61)  | 5.2  | (0.43)  | 0.5 ! | (0.15) |
| Mexico.....                     | 425                   | (2.0)   | 3.2   | (0.34)   | 11.4  | (0.48)   | 25.5 | (0.56)  | 33.0 | (0.57)  | 21.2 | (0.59)  | 5.3  | (0.39)  | 0.4  | (0.07)  | #     | (†)    |
| Netherlands.....                | 508                   | (5.1)   | ‡     | (†)      | 1.8   | (0.31)   | 12.5 | (1.36)  | 24.7 | (1.53)  | 27.6 | (1.24)  | 23.5 | (1.66)  | 9.1  | (1.00)  | 0.7   | (0.22) |
| New Zealand.....                | 521                   | (2.4)   | 0.9   | (0.22)   | 3.2   | (0.45)   | 10.2 | (0.58)  | 19.3 | (0.75)  | 25.8 | (0.76)  | 24.8 | (0.81)  | 12.9 | (0.76)  | 2.9   | (0.38) |
| Norway.....                     | 503                   | (2.6)   | 0.5   | (0.14)   | 3.4   | (0.39)   | 11.0 | (0.66)  | 23.6 | (0.84)  | 30.9 | (0.86)  | 22.1 | (1.16)  | 7.6  | (0.87)  | 0.8   | (0.20) |
| Poland.....                     | 500                   | (2.6)   | 0.6   | (0.15)   | 3.1   | (0.35)   | 11.3 | (0.66)  | 24.5 | (1.08)  | 31.0 | (0.98)  | 22.3 | (0.99)  | 6.5  | (0.55)  | 0.7   | (0.15) |
| Portugal.....                   | 489                   | (3.1)   | 0.6   | (0.14)   | 4.0   | (0.41)   | 13.0 | (0.97)  | 26.4 | (1.09)  | 31.6 | (1.09)  | 19.6 | (0.92)  | 4.6  | (0.48)  | 0.2 ! | (0.10) |
| Slovak Republic.....            | 477                   | (2.5)   | 0.8 ! | (0.28)   | 5.6   | (0.62)   | 15.9 | (0.83)  | 28.1 | (1.04)  | 28.5 | (1.14)  | 16.7 | (0.79)  | 4.2  | (0.48)  | 0.3 ! | (0.11) |
| Slovenia.....                   | 483                   | (1.0)   | 0.8   | (0.09)   | 5.2   | (0.34)   | 15.2 | (0.49)  | 25.6 | (0.71)  | 29.2 | (0.86)  | 19.3 | (0.80)  | 4.3  | (0.54)  | 0.3 ! | (0.12) |
| Spain.....                      | 481                   | (2.0)   | 1.2   | (0.18)   | 4.7   | (0.39)   | 13.6 | (0.64)  | 26.8 | (0.84)  | 32.6 | (0.95)  | 17.7 | (0.68)  | 3.2  | (0.29)  | ‡     | (†)    |
| Sweden.....                     | 497                   | (2.9)   | 1.5   | (0.25)   | 4.3   | (0.38)   | 11.7 | (0.71)  | 23.5 | (0.99)  | 29.8 | (0.98)  | 20.3 | (0.92)  | 7.7  | (0.59)  | 1.3   | (0.25) |
| Switzerland.....                | 501                   | (2.4)   | 0.7   | (0.15)   | 4.1   | (0.38)   | 12.1 | (0.62)  | 22.7 | (0.70)  | 29.7 | (0.78)  | 22.6 | (0.82)  | 7.4  | (0.68)  | 0.7 ! | (0.22) |
| Turkey.....                     | 464                   | (3.5)   | 0.8   | (0.19)   | 5.6   | (0.63)   | 18.1 | (0.98)  | 32.2 | (1.16)  | 29.1 | (1.07)  | 12.4 | (1.11)  | 1.8  | (0.38)  | #     | (†)    |
| United Kingdom.....             | 494                   | (2.3)   | 1.0   | (0.20)   | 4.1   | (0.35)   | 13.4 | (0.64)  | 24.9 | (0.72)  | 28.8 | (0.84)  | 19.8 | (0.79)  | 7.0  | (0.47)  | 1.0   | (0.19) |
| United States.....              | 500                   | (3.7)   | 0.6   | (0.13)   | 4.0   | (0.45)   | 13.1 | (0.84)  | 24.4 | (0.86)  | 27.6 | (0.83)  | 20.6 | (0.90)  | 8.4  | (0.75)  | 1.5   | (0.42) |

See notes at end of table.

**Table 464. Average reading scores and percentage distribution of 15-year-old students scoring at each reading literacy proficiency level, by country: 2009—Continued**  
[Standard errors appear in parentheses]

| Country or other jurisdiction     | Average reading score | Percentage distribution at levels of reading proficiency <sup>1</sup> |              |             |             |             |              |              |              |
|-----------------------------------|-----------------------|---|--------------|-------------|-------------|-------------|--------------|--------------|--------------|
|                                   |                       | Below level 1b  | Level 1b     | Level 1a    | Level 2     | Level 3     | Level 4      | Level 5      | Level 6      |
| 1                                 | 2                     | 3   | 4            | 5           | 6           | 7           | 8            | 9            | 10           |
| <b>Non-OECD education systems</b> |                       |   |              |             |             |             |              |              |              |
| Albania.....                      | 385 (4.0)             | 11.3 (0.92)   | 18.7 (1.32)  | 26.6 (1.18) | 25.6 (1.33) | 14.4 (1.18) | 3.1 (0.48)   | ‡ (†)        | ‡ (†)        |
| Argentina.....                    | 398 (4.6)             | 10.8 (1.10)   | 15.8 (1.25)  | 25.0 (1.30) | 25.4 (1.22) | 16.0 (1.04) | 6.0 (0.83)   | 0.9 (0.23)   | ‡ (†)        |
| Azerbaijan.....                   | 362 (3.3)             | 9.7 (1.05)  | 26.1 (1.14)  | 36.9 (1.21) | 21.5 (1.17) | 5.3 (0.77)  | 0.5 ! (0.15) | # (†)        | ‡ (†)        |
| Brazil.....                       | 412 (2.7)             | 5.0 (0.38)  | 16.0 (0.67)  | 28.6 (0.81) | 27.1 (0.78) | 15.9 (0.86) | 6.1 (0.53)   | 1.2 (0.21)   | ‡ (†)        |
| Bulgaria.....                     | 429 (6.7)             | 8.0 (1.09)  | 12.9 (1.36)  | 20.1 (1.35) | 23.4 (1.15) | 21.8 (1.43) | 11.0 (1.14)  | 2.6 (0.50)   | 0.2 ! (0.08) |
| Colombia.....                     | 413 (3.7)             | 4.2 (0.71)  | 13.9 (0.99)  | 29.0 (1.22) | 30.6 (1.11) | 17.1 (1.03) | 4.6 (0.48)   | 0.5 ! (0.16) | # (†)        |
| Croatia.....                      | 476 (2.9)             | 1.0 (0.21)  | 5.0 (0.45)   | 16.5 (0.97) | 27.4 (1.02) | 30.6 (1.21) | 16.4 (0.97)  | 3.1 (0.40)   | ‡ (†)        |
| Dubai (United Arab Emirates)..... | 459 (1.1)             | 3.7 (0.23)  | 9.4 (0.45)   | 17.9 (0.50) | 25.4 (0.71) | 23.5 (0.77) | 14.8 (0.71)  | 4.8 (0.49)   | 0.5 ! (0.18) |
| Hong Kong-China.....              | 533 (2.1)             | 0.2 ! (0.08)  | 1.5 (0.30)   | 6.6 (0.59)  | 16.1 (0.75) | 31.4 (0.90) | 31.8 (0.89)  | 11.2 (0.70)  | 1.2 (0.26)   |
| Indonesia.....                    | 402 (3.7)             | 1.7 (0.38)  | 14.1 (1.31)  | 37.6 (1.64) | 34.3 (1.38) | 11.2 (1.35) | 1.0 ! (0.34) | ‡ (†)        | ‡ (†)        |
| Jordan.....                       | 405 (3.3)             | 6.9 (0.62)  | 13.6 (0.78)  | 27.6 (0.96) | 31.8 (0.98) | 16.5 (0.99) | 3.4 (0.44)   | 0.2 ! (0.09) | ‡ (†)        |
| Kazakhstan.....                   | 390 (3.1)             | 7.5 (0.65)  | 20.4 (0.99)  | 30.7 (0.88) | 24.1 (0.93) | 13.1 (0.87) | 3.7 (0.49)   | 0.4 ! (0.12) | ‡ (†)        |
| Kyrgyzstan.....                   | 314 (3.2)             | 29.8 (1.25)   | 29.7 (0.91)  | 23.8 (0.94) | 11.5 (0.83) | 4.2 (0.57)  | 1.0 (0.28)   | ‡ (†)        | ‡ (†)        |
| Latvia.....                       | 484 (3.0)             | 0.4 ! (0.15)  | 3.3 (0.57)   | 13.9 (1.00) | 28.8 (1.45) | 33.5 (1.21) | 17.2 (1.01)  | 2.9 (0.44)   | ‡ (†)        |
| Liechtenstein.....                | 499 (2.8)             | ‡ (†)   | 2.8 ! (1.15) | 12.8 (1.83) | 24.0 (2.85) | 31.1 (2.76) | 24.6 (2.34)  | 4.2 ! (1.39) | ‡ (†)        |
| Lithuania.....                    | 468 (2.4)             | 0.9 (0.26)  | 5.5 (0.56)   | 17.9 (0.87) | 30.0 (1.03) | 28.6 (0.94) | 14.1 (0.80)  | 2.8 (0.38)   | 0.1 ! (0.06) |
| Macao-China.....                  | 487 (0.9)             | 0.3 ! (0.09)  | 2.6 (0.25)   | 12.0 (0.43) | 30.6 (0.63) | 34.8 (0.67) | 16.9 (0.50)  | 2.8 (0.25)   | ‡ (†)        |
| Montenegro.....                   | 408 (1.7)             | 5.9 (0.53)  | 15.8 (0.80)  | 27.8 (0.81) | 28.0 (0.88) | 16.8 (0.85) | 5.0 (0.46)   | 0.6 (0.17)   | ‡ (†)        |
| Panama.....                       | 371 (6.5)             | 13.3 (1.83)   | 23.1 (1.78)  | 28.9 (1.79) | 20.7 (1.43) | 10.1 (1.36) | 3.4 (0.68)   | 0.5 ! (0.23) | ‡ (†)        |
| Peru.....                         | 370 (4.0)             | 14.1 (0.93)   | 22.0 (1.01)  | 28.7 (1.10) | 22.1 (0.94) | 10.1 (0.86) | 2.6 (0.51)   | 0.4 ! (0.21) | # (†)        |
| Qatar.....                        | 372 (0.8)             | 17.8 (0.33)   | 22.4 (0.48)  | 23.2 (0.63) | 18.3 (0.44) | 11.1 (0.48) | 5.4 (0.27)   | 1.5 (0.16)   | 0.2 ! (0.07) |
| Romania.....                      | 424 (4.1)             | 4.1 (0.69)  | 12.7 (1.08)  | 23.6 (1.25) | 31.6 (1.31) | 21.2 (1.31) | 6.1 (0.71)   | 0.7 (0.17)   | ‡ (†)        |
| Russian Federation.....           | 459 (3.3)             | 1.6 (0.35)  | 6.8 (0.58)   | 19.0 (0.79) | 31.6 (0.97) | 26.8 (0.88) | 11.1 (0.66)  | 2.8 (0.43)   | 0.3 ! (0.11) |
| Serbia.....                       | 442 (2.4)             | 2.0 (0.36)  | 8.8 (0.67)   | 22.1 (0.87) | 33.2 (1.02) | 25.3 (0.96) | 7.9 (0.56)   | 0.8 (0.16)   | # (†)        |
| Shanghai-China.....               | 556 (2.4)             | 0.1 ! (0.04)  | 0.6 (0.14)   | 3.4 (0.47)  | 13.3 (0.86) | 28.5 (1.16) | 34.7 (1.04)  | 17.0 (0.99)  | 2.4 (0.45)   |
| Singapore.....                    | 526 (1.1)             | 0.4 (0.11)  | 2.7 (0.26)   | 9.3 (0.50)  | 18.5 (0.60) | 27.6 (0.81) | 25.7 (0.73)  | 13.1 (0.54)  | 2.6 (0.34)   |
| Chinese Taipei.....               | 495 (2.6)             | 0.7 (0.18)  | 3.5 (0.35)   | 11.4 (0.63) | 24.6 (0.80) | 33.5 (1.09) | 21.0 (0.97)  | 4.8 (0.76)   | 0.4 ! (0.20) |
| Thailand.....                     | 421 (2.6)             | 1.2 (0.29)  | 9.9 (0.82)   | 31.7 (1.12) | 36.8 (1.15) | 16.7 (0.82) | 3.3 (0.52)   | ‡ (†)        | ‡ (†)        |
| Trinidad and Tobago.....          | 416 (1.2)             | 9.6 (0.51)  | 14.2 (0.61)  | 21.0 (0.81) | 25.0 (0.94) | 19.0 (0.86) | 8.9 (0.51)   | 2.1 (0.27)   | 0.2 ! (0.07) |
| Tunisia.....                      | 404 (2.9)             | 5.5 (0.52)  | 15.0 (0.78)  | 29.6 (1.10) | 31.5 (1.22) | 15.1 (1.04) | 3.1 (0.52)   | ‡ (†)        | ‡ (†)        |
| Uruguay.....                      | 426 (2.6)             | 5.5 (0.58)  | 12.5 (0.68)  | 23.9 (0.70) | 28.0 (0.73) | 20.3 (0.73) | 8.1 (0.51)   | 1.7 (0.26)   | ‡ (†)        |

†Not applicable.

#Rounds to zero.

!Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡Reporting standards not met. Either there are too few cases for a reliable estimate or the coefficient of variation (CV) is 50 percent or greater.

<sup>1</sup>Level 1b: Able to locate a single piece of explicitly stated information in a prominent position in a short, syntactically simple text and make simple connections between adjacent pieces of information. Level 1a: Able to locate explicitly stated information, recognize the main theme in a text about a familiar topic, and make a simple connection between information in the text and common, everyday knowledge. Level 2: Able to locate information which may need to be inferred and may need to meet several conditions, recognize the main idea in a text, understand relationships, construe meaning within part of the text when the information is not prominent, and make comparisons or connections between the text and outside knowledge by drawing on personal experience and attitudes. Level 3: Able to recognize the relationship between several pieces of information that must meet multiple conditions; integrate parts of a text in order to identify a main idea, understand a relationship, or construe the meaning of a word or phrase; compare, contrast or categorize where the required information is not prominent or there is much competing information or other obstacles in the text; make connections, comparisons, and explanations; evaluate a feature of the text; and demonstrate an understanding of the text by relating it to everyday knowledge or by drawing on less common knowledge. Level 4: Able to locate and organize embedded information, interpret the meaning of language by taking into account the text as a whole, understand and apply categories in an unfamiliar con-

text, use formal knowledge to hypothesize about or critically evaluate a text, and demonstrate an understanding of long or complex texts with unfamiliar form or content. Level 5: Able to locate and organize deeply embedded information, infer relevant information in the text, perform critical evaluation or form a hypothesis by drawing on specialized knowledge, and fully understand texts with unfamiliar form or content. Level 6: Able to make multiple inferences, comparisons, and contrasts that are both detailed and precise; demonstrate full understanding of texts and integrate information from more than one text; deal with unfamiliar ideas in the presence of prominent competing information; generate abstract categories for interpretation; hypothesize about or critically evaluate a complex text on an unfamiliar topic, taking into account multiple criteria or perspectives; and apply sophisticated understandings from beyond the text.

<sup>2</sup>Illustrates how a country compares with the OECD area as a whole. Computed by taking the OECD countries as a single entity to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools.

<sup>3</sup>Refers to the mean of the data values for all OECD countries, to which each country contributes equally, regardless of the absolute size of the student population of each country.

NOTE: PISA scores are reported on a scale from 0 to 1,000. Detail may not sum to totals because of rounding.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009, *PISA 2009 Results: What Students Know and Can Do—Student Performance in Reading, Mathematics, and Science (Volume I)*. (This table was prepared December 2010.)

**Table 465. Average mathematics scores and percentage distribution of 15-year-old students scoring at each mathematics literacy proficiency level, by country: 2009**

[Standard errors appear in parentheses]

| Country or other jurisdiction   | Average mathematics score | Percentage distribution at levels of mathematics proficiency <sup>1</sup> |             |             |             |             |             |              |  |         |  |         |  |         |  |  |
|---------------------------------|---------------------------|---|-------------|-------------|-------------|-------------|-------------|--------------|--|---------|--|---------|--|---------|--|--|
|                                 |                           | Below level 1   |             | Level 1     |             | Level 2     |             | Level 3      |  | Level 4 |  | Level 5 |  | Level 6 |  |  |
| 1                               | 2                         | 3   | 4           | 5           | 6           | 7           | 8           | 9            |  |         |  |         |  |         |  |  |
| OECD total <sup>2</sup> .....   | 488 (1.2)                 | 9.3 (0.25)  | 15.5 (0.33) | 22.7 (0.31) | 23.5 (0.24) | 17.3 (0.30) | 8.9 (0.24)  | 2.8 (0.16)   |  |         |  |         |  |         |  |  |
| OECD average <sup>3</sup> ..... | 496 (0.5)                 | 8.0 (0.12)  | 14.0 (0.13) | 22.0 (0.15) | 24.3 (0.17) | 18.9 (0.15) | 9.6 (0.12)  | 3.1 (0.08)   |  |         |  |         |  |         |  |  |
| Australia.....                  | 514 (2.5)                 | 5.1 (0.33)  | 10.8 (0.53) | 20.3 (0.61) | 25.8 (0.54) | 21.7 (0.56) | 11.9 (0.54) | 4.5 (0.56)   |  |         |  |         |  |         |  |  |
| Austria.....                    | 496 (2.7)                 | 7.8 (0.75)  | 15.4 (0.90) | 21.2 (0.88) | 23.0 (0.89) | 19.6 (0.93) | 9.9 (0.70)  | 3.0 (0.35)   |  |         |  |         |  |         |  |  |
| Belgium.....                    | 515 (2.3)                 | 7.7 (0.63)  | 11.3 (0.54) | 17.5 (0.69) | 21.8 (0.73) | 21.3 (0.76) | 14.6 (0.56) | 5.8 (0.44)   |  |         |  |         |  |         |  |  |
| Canada.....                     | 527 (1.6)                 | 3.1 (0.25)  | 8.3 (0.42)  | 18.8 (0.48) | 26.5 (0.86) | 25.0 (0.68) | 13.9 (0.45) | 4.4 (0.27)   |  |         |  |         |  |         |  |  |
| Chile.....                      | 421 (3.1)                 | 21.7 (1.19)   | 29.4 (1.09) | 27.3 (0.98) | 14.8 (0.96) | 5.6 (0.59)  | 1.2 (0.29)  | † (†)        |  |         |  |         |  |         |  |  |
| Czech Republic.....             | 493 (2.8)                 | 7.0 (0.83)  | 15.3 (0.82) | 24.2 (1.00) | 24.4 (1.09) | 17.4 (0.81) | 8.5 (0.64)  | 3.2 (0.39)   |  |         |  |         |  |         |  |  |
| Denmark.....                    | 503 (2.6)                 | 4.9 (0.49)  | 12.1 (0.80) | 23.0 (0.91) | 27.4 (1.06) | 21.0 (0.89) | 9.1 (0.83)  | 2.5 (0.47)   |  |         |  |         |  |         |  |  |
| Estonia.....                    | 512 (2.6)                 | 3.0 (0.42)  | 9.6 (0.68)  | 22.7 (0.86) | 29.9 (0.94) | 22.7 (0.81) | 9.8 (0.79)  | 2.2 (0.43)   |  |         |  |         |  |         |  |  |
| Finland.....                    | 541 (2.2)                 | 1.7 (0.25)  | 6.1 (0.45)  | 15.6 (0.83) | 27.1 (0.95) | 27.8 (0.87) | 16.7 (0.79) | 4.9 (0.53)   |  |         |  |         |  |         |  |  |
| France.....                     | 497 (3.1)                 | 9.5 (0.88)  | 13.1 (1.07) | 19.9 (0.94) | 23.8 (1.12) | 20.1 (1.01) | 10.4 (0.72) | 3.3 (0.48)   |  |         |  |         |  |         |  |  |
| Germany.....                    | 513 (2.9)                 | 6.4 (0.63)  | 12.2 (0.72) | 18.8 (0.88) | 23.1 (0.87) | 21.7 (0.92) | 13.2 (0.87) | 4.6 (0.46)   |  |         |  |         |  |         |  |  |
| Greece.....                     | 466 (3.9)                 | 11.3 (1.22)   | 19.1 (1.01) | 26.4 (1.25) | 24.0 (1.05) | 13.6 (0.78) | 4.9 (0.56)  | 0.8 (0.16)   |  |         |  |         |  |         |  |  |
| Hungary.....                    | 490 (3.5)                 | 8.1 (0.99)  | 14.2 (0.95) | 23.2 (1.18) | 26.0 (1.24) | 18.4 (1.02) | 8.1 (0.79)  | 2.0 (0.45)   |  |         |  |         |  |         |  |  |
| Iceland.....                    | 507 (1.4)                 | 5.7 (0.43)  | 11.3 (0.52) | 21.3 (0.88) | 27.3 (0.90) | 20.9 (0.90) | 10.5 (0.67) | 3.1 (0.40)   |  |         |  |         |  |         |  |  |
| Ireland.....                    | 487 (2.5)                 | 7.3 (0.63)  | 13.6 (0.74) | 24.5 (1.09) | 28.6 (1.20) | 19.4 (0.92) | 5.8 (0.59)  | 0.9 (0.20)   |  |         |  |         |  |         |  |  |
| Israel.....                     | 447 (3.3)                 | 20.5 (1.17)   | 18.9 (0.90) | 22.5 (0.92) | 20.1 (0.87) | 12.0 (0.71) | 4.7 (0.51)  | 1.2 (0.28)   |  |         |  |         |  |         |  |  |
| Italy.....                      | 483 (1.9)                 | 9.1 (0.44)  | 15.9 (0.48) | 24.2 (0.59) | 24.6 (0.48) | 17.3 (0.57) | 7.4 (0.40)  | 1.6 (0.15)   |  |         |  |         |  |         |  |  |
| Japan.....                      | 529 (3.3)                 | 4.0 (0.57)  | 8.5 (0.65)  | 17.4 (0.90) | 25.7 (1.08) | 23.5 (1.04) | 14.7 (0.88) | 6.2 (0.78)   |  |         |  |         |  |         |  |  |
| Korea, Republic of.....         | 546 (4.0)                 | 1.9 (0.49)  | 6.2 (0.72)  | 15.6 (0.99) | 24.4 (1.21) | 26.3 (1.30) | 17.7 (0.97) | 7.8 (0.96)   |  |         |  |         |  |         |  |  |
| Luxembourg.....                 | 489 (1.2)                 | 9.6 (0.53)  | 14.4 (0.57) | 22.7 (0.72) | 23.1 (0.98) | 19.0 (0.82) | 9.0 (0.61)  | 2.3 (0.36)   |  |         |  |         |  |         |  |  |
| Mexico.....                     | 419 (1.8)                 | 21.9 (0.79)   | 28.9 (0.59) | 28.3 (0.61) | 15.6 (0.56) | 4.7 (0.36)  | 0.7 (0.11)  | # (†)        |  |         |  |         |  |         |  |  |
| Netherlands.....                | 526 (4.7)                 | 2.8 (0.59)  | 10.6 (1.33) | 19.0 (1.37) | 23.9 (0.98) | 23.9 (1.25) | 15.4 (1.18) | 4.4 (0.52)   |  |         |  |         |  |         |  |  |
| New Zealand.....                | 519 (2.3)                 | 5.3 (0.53)  | 10.2 (0.54) | 19.1 (0.84) | 24.4 (0.88) | 22.2 (0.98) | 13.6 (0.74) | 5.3 (0.45)   |  |         |  |         |  |         |  |  |
| Norway.....                     | 498 (2.4)                 | 5.5 (0.50)  | 12.7 (0.83) | 24.3 (0.93) | 27.5 (1.02) | 19.7 (0.86) | 8.4 (0.58)  | 1.8 (0.34)   |  |         |  |         |  |         |  |  |
| Poland.....                     | 495 (2.8)                 | 6.1 (0.54)  | 14.4 (0.75) | 24.0 (0.88) | 26.1 (0.77) | 19.0 (0.85) | 8.2 (0.61)  | 2.2 (0.41)   |  |         |  |         |  |         |  |  |
| Portugal.....                   | 487 (2.9)                 | 8.4 (0.62)  | 15.3 (0.83) | 23.9 (0.93) | 25.0 (1.03) | 17.7 (0.79) | 7.7 (0.63)  | 1.9 (0.35)   |  |         |  |         |  |         |  |  |
| Slovak Republic.....            | 497 (3.1)                 | 7.0 (0.68)  | 14.0 (0.79) | 23.2 (1.08) | 25.0 (1.54) | 18.1 (1.24) | 9.1 (0.69)  | 3.6 (0.63)   |  |         |  |         |  |         |  |  |
| Slovenia.....                   | 501 (1.2)                 | 6.5 (0.40)  | 13.8 (0.60) | 22.5 (0.67) | 23.9 (0.69) | 19.0 (0.79) | 10.3 (0.57) | 3.9 (0.36)   |  |         |  |         |  |         |  |  |
| Spain.....                      | 483 (2.1)                 | 9.1 (0.48)  | 14.6 (0.58) | 23.9 (0.58) | 26.6 (0.63) | 17.7 (0.62) | 6.7 (0.39)  | 1.3 (0.16)   |  |         |  |         |  |         |  |  |
| Sweden.....                     | 494 (2.9)                 | 7.5 (0.65)  | 13.6 (0.72) | 23.4 (0.81) | 25.2 (0.75) | 19.0 (0.88) | 8.9 (0.64)  | 2.5 (0.35)   |  |         |  |         |  |         |  |  |
| Switzerland.....                | 534 (3.3)                 | 4.5 (0.40)  | 9.0 (0.65)  | 15.9 (0.63) | 23.0 (0.92) | 23.5 (0.80) | 16.3 (0.78) | 7.8 ! (0.75) |  |         |  |         |  |         |  |  |
| Turkey.....                     | 445 (4.4)                 | 17.7 (1.35)   | 24.5 (1.11) | 25.2 (1.18) | 17.4 (1.07) | 9.6 (0.90)  | 4.4 (0.91)  | 1.3 (0.46)   |  |         |  |         |  |         |  |  |
| United Kingdom.....             | 492 (2.4)                 | 6.2 (0.46)  | 14.0 (0.71) | 24.9 (0.88) | 27.2 (1.10) | 17.9 (0.96) | 8.1 (0.63)  | 1.8 (0.27)   |  |         |  |         |  |         |  |  |
| United States.....              | 487 (3.6)                 | 8.1 (0.72)  | 15.3 (0.98) | 24.4 (0.97) | 25.2 (0.95) | 17.1 (0.93) | 8.0 (0.85)  | 1.9 (0.46)   |  |         |  |         |  |         |  |  |

See notes at end of table.

**Table 465. Average mathematics scores and percentage distribution of 15-year-old students scoring at each mathematics literacy proficiency level, by country: 2009—Continued**  
[Standard errors appear in parentheses]

| Country or other jurisdiction      | Average mathematics score | Percentage distribution at levels of mathematics proficiency <sup>1</sup> |             |             |             |              |              |              |  |         |  |         |  |         |  |
|------------------------------------|---------------------------|---|-------------|-------------|-------------|--------------|--------------|--------------|--|---------|--|---------|--|---------|--|
|                                    |                           | Below level 1   |             | Level 1     |             | Level 2      |              | Level 3      |  | Level 4 |  | Level 5 |  | Level 6 |  |
| 1                                  | 2                         | 3   |             | 4           |             | 5            |              | 6            |  | 7       |  | 8       |  | 9       |  |
| <b>Non-OECD education systems</b>  |                           |   |             |             |             |              |              |              |  |         |  |         |  |         |  |
| Albania .....                      | 377 (4.0)                 | 40.5 (1.76)   | 27.2 (1.22) | 20.2 (1.25) | 9.1 (0.85)  | 2.6 (0.58)   | 0.4 (0.16)   | # (†)        |  |         |  |         |  |         |  |
| Argentina .....                    | 388 (4.1)                 | 37.2 (1.75)   | 26.4 (1.11) | 20.8 (1.09) | 10.9 (0.95) | 3.9 (0.66)   | 0.8 (0.26)   | ‡ (†)        |  |         |  |         |  |         |  |
| Azerbaijan .....                   | 431 (2.8)                 | 11.5 (0.96)   | 33.8 (1.24) | 35.3 (1.29) | 14.8 (1.04) | 3.6 (0.51)   | 0.9 (0.34)   | ‡ (†)        |  |         |  |         |  |         |  |
| Brazil .....                       | 386 (2.4)                 | 38.1 (1.25)   | 31.0 (0.91) | 19.0 (0.75) | 8.1 (0.64)  | 3.0 (0.32)   | 0.7 (0.19)   | ‡ (†)        |  |         |  |         |  |         |  |
| Bulgaria.....                      | 428 (5.9)                 | 24.5 (1.91)   | 22.7 (1.08) | 23.4 (1.11) | 17.5 (1.36) | 8.2 (0.90)   | 3.0 (0.70)   | 0.8 † (0.36) |  |         |  |         |  |         |  |
| Colombia.....                      | 381 (3.2)                 | 38.8 (2.02)   | 31.6 (1.30) | 20.3 (1.28) | 7.5 (0.66)  | 1.6 (0.33)   | ‡ (†)        | # (†)        |  |         |  |         |  |         |  |
| Croatia .....                      | 460 (3.1)                 | 12.4 (0.85)   | 20.8 (0.94) | 26.7 (0.83) | 22.7 (0.97) | 12.5 (0.84)  | 4.3 (0.51)   | 0.6 † (0.22) |  |         |  |         |  |         |  |
| Dubai (United Arab Emirates) ..... | 453 (1.1)                 | 17.6 (0.49)   | 21.2 (0.59) | 23.0 (0.79) | 19.6 (0.63) | 12.1 (0.55)  | 5.3 (0.39)   | 1.2 (0.19)   |  |         |  |         |  |         |  |
| Hong Kong-China .....              | 555 (2.7)                 | 2.6 (0.40)  | 6.2 (0.53)  | 13.2 (0.67) | 21.9 (0.84) | 25.4 (0.91)  | 19.9 (0.82)  | 10.8 (0.78)  |  |         |  |         |  |         |  |
| Indonesia .....                    | 371 (3.7)                 | 43.5 (2.21)   | 33.1 (1.54) | 16.9 (1.14) | 5.4 (0.91)  | 0.9 † (0.32) | ‡ (†)        | ‡ (†)        |  |         |  |         |  |         |  |
| Jordan .....                       | 387 (3.7)                 | 35.4 (1.67)   | 29.9 (1.20) | 22.9 (1.03) | 9.5 (0.94)  | 2.1 (0.44)   | ‡ (†)        | # (†)        |  |         |  |         |  |         |  |
| Kazakhstan .....                   | 405 (3.0)                 | 29.6 (1.31)   | 29.6 (0.94) | 23.5 (0.88) | 12.0 (0.80) | 4.2 (0.48)   | 0.9 † (0.29) | ‡ (†)        |  |         |  |         |  |         |  |
| Kyrgyzstan .....                   | 331 (2.9)                 | 64.8 (1.43)   | 21.8 (0.98) | 9.3 (0.76)  | 3.3 (0.51)  | 0.7 † (0.24) | # (†)        | ‡ (†)        |  |         |  |         |  |         |  |
| Latvia .....                       | 482 (3.1)                 | 5.8 (0.69)  | 16.7 (1.15) | 27.2 (1.04) | 28.2 (1.08) | 16.4 (1.01)  | 5.1 (0.50)   | 0.6 (0.15)   |  |         |  |         |  |         |  |
| Liechtenstein.....                 | 536 (4.1)                 | 3.0 † (0.99)  | 6.5 (1.61)  | 15.0 (2.18) | 26.2 (2.26) | 31.2 (3.25)  | 13.0 (2.45)  | 5.0 (1.42)   |  |         |  |         |  |         |  |
| Lithuania .....                    | 477 (2.6)                 | 9.0 (0.79)  | 17.3 (0.85) | 26.1 (1.10) | 25.3 (0.98) | 15.4 (0.77)  | 5.7 (0.56)   | 1.3 (0.26)   |  |         |  |         |  |         |  |
| Macao-China .....                  | 525 (0.9)                 | 2.8 (0.25)  | 8.2 (0.46)  | 19.6 (0.58) | 27.8 (0.90) | 24.5 (0.78)  | 12.8 (0.43)  | 4.3 (0.28)   |  |         |  |         |  |         |  |
| Montenegro.....                    | 403 (2.0)                 | 29.6 (1.07)   | 28.8 (1.00) | 24.6 (1.04) | 12.2 (0.68) | 3.8 (0.35)   | 0.9 (0.20)   | ‡ (†)        |  |         |  |         |  |         |  |
| Panama.....                        | 360 (5.2)                 | 51.5 (2.90)   | 27.3 (1.72) | 13.9 (1.51) | 5.6 (0.92)  | 1.4 (0.36)   | ‡ (†)        | # (†)        |  |         |  |         |  |         |  |
| Peru.....                          | 365 (4.0)                 | 47.6 (1.81)   | 25.9 (1.16) | 16.9 (1.26) | 6.8 (0.70)  | 2.1 (0.43)   | 0.5 † (0.18) | ‡ (†)        |  |         |  |         |  |         |  |
| Qatar .....                        | 368 (0.7)                 | 51.1 (0.56)   | 22.7 (0.64) | 13.1 (0.48) | 7.2 (0.35)  | 4.2 (0.25)   | 1.5 (0.17)   | 0.3 (0.08)   |  |         |  |         |  |         |  |
| Romania .....                      | 427 (3.4)                 | 19.5 (1.42)   | 27.5 (1.15) | 28.6 (1.39) | 17.3 (1.02) | 5.9 (0.77)   | 1.2 (0.33)   | ‡ (†)        |  |         |  |         |  |         |  |
| Russian Federation .....           | 468 (3.3)                 | 9.5 (0.92)  | 19.0 (1.16) | 28.5 (1.03) | 25.0 (1.00) | 12.7 (0.87)  | 4.3 (0.57)   | 1.0 (0.27)   |  |         |  |         |  |         |  |
| Serbia .....                       | 442 (2.9)                 | 17.6 (1.04)   | 22.9 (0.84) | 26.5 (1.07) | 19.9 (0.97) | 9.5 (0.62)   | 2.9 (0.41)   | 0.6 (0.18)   |  |         |  |         |  |         |  |
| Shanghai-China .....               | 600 (2.8)                 | 1.4 (0.26)  | 3.4 (0.38)  | 8.7 (0.63)  | 15.2 (0.79) | 20.8 (0.79)  | 23.8 (0.80)  | 26.6 (1.19)  |  |         |  |         |  |         |  |
| Singapore .....                    | 562 (1.4)                 | 3.0 (0.26)  | 6.8 (0.57)  | 13.1 (0.56) | 18.7 (0.80) | 22.8 (0.62)  | 20.0 (0.87)  | 15.6 (0.63)  |  |         |  |         |  |         |  |
| Chinese Taipei .....               | 543 (3.4)                 | 4.2 (0.48)  | 8.6 (0.65)  | 15.5 (0.68) | 20.9 (0.88) | 22.2 (0.86)  | 17.2 (0.92)  | 11.3 (1.16)  |  |         |  |         |  |         |  |
| Thailand .....                     | 419 (3.2)                 | 22.1 (1.37)   | 30.4 (0.92) | 27.3 (1.09) | 14.0 (0.85) | 4.9 (0.57)   | 1.0 (0.27)   | ‡ (†)        |  |         |  |         |  |         |  |
| Trinidad and Tobago.....           | 414 (1.3)                 | 30.1 (0.79)   | 23.1 (0.97) | 21.2 (0.89) | 15.4 (0.63) | 7.7 (0.44)   | 2.1 (0.25)   | 0.3 † (0.15) |  |         |  |         |  |         |  |
| Tunisia .....                      | 371 (3.0)                 | 43.4 (1.66)   | 30.2 (1.46) | 18.7 (0.90) | 6.1 (0.69)  | 1.3 † (0.44) | ‡ (†)        | # (†)        |  |         |  |         |  |         |  |
| Uruguay .....                      | 427 (2.6)                 | 22.9 (1.16)   | 24.6 (1.08) | 25.1 (0.99) | 17.0 (0.73) | 7.9 (0.55)   | 2.1 (0.34)   | 0.3 † (0.12) |  |         |  |         |  |         |  |

†Not applicable.

#Rounds to zero.

!Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡Reporting standards not met. Either there are too few cases for a reliable estimate or the coefficient of variation (CV) is 50 percent or greater.

<sup>1</sup>Level 1: Able to answer questions involving familiar contexts where all relevant information is present and the questions are clearly defined. Level 2: Able to interpret and recognize situations in contexts that require no more than direct inference; extract relevant information from a single source; employ basic algorithms, formulae, procedures, or conventions; and employ direct reasoning for literal interpretations of results. Level 3: Able to execute clearly described procedures; select and apply simple problem-solving strategies; interpret and use representations based on different information sources; and develop short communications reporting one's interpretations, results, and reasoning. Level 4: Able to work effectively with explicit models for complex concrete situations that may involve constraints or call for making assumptions, select and integrate different representations, reason with some insight, and construct and communicate explanations and arguments based on one's interpretations and actions. Level 5: Able to develop

and work with models for complex situations; select and evaluate appropriate problem-solving strategies; work strategically using broad, well-developed thinking and reasoning skills; and communicate one's interpretations and reasoning. Level 6: Able to conceptualize, generalize, and utilize information; link different information sources and representations; perform advanced mathematical thinking and reasoning; develop new approaches and strategies for attacking novel situations; and formulate and precisely communicate actions and reflections regarding findings and interpretations.

<sup>2</sup>Illustrates how a country compares with the OECD area as a whole. Computed by taking the OECD countries as a single entity to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools.

<sup>3</sup>Refers to the mean of the data values for all OECD countries, to which each country contributes equally, regardless of the absolute size of the student population of each country.

NOTE: PISA scores are reported on a scale from 0 to 1,000. Detail may not sum to totals because of rounding.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009, *PISA 2009 Results: What Students Know and Can Do—Student Performance in Reading, Mathematics and Science (Volume I)*. (This table was prepared December 2010.)



**Table 466. Average science scores and percentage distribution of 15-year-old students scoring at each science literacy proficiency level, by country: 2009**

[Standard errors appear in parentheses]

| Country or other jurisdiction | Average science score | Percentage distribution at levels of science proficiency <sup>1</sup> |             |             |             |             |             |              |  |         |  |         |  |         |  |
|-------------------------------|-----------------------|---|-------------|-------------|-------------|-------------|-------------|--------------|--|---------|--|---------|--|---------|--|
|                               |                       | Below Level 1   |             | Level 1     |             | Level 2     |             | Level 3      |  | Level 4 |  | Level 5 |  | Level 6 |  |
| 1                             | 2                     | 3   |             | 4           |             | 5           |             | 6            |  | 7       |  | 8       |  | 9       |  |
| OECD total <sup>2</sup>       | 496 (1.2)             | 5.4 (0.19)  | 14.6 (0.32) | 24.8 (0.28) | 27.1 (0.25) | 19.6 (0.32) | 7.3 (0.25)  | 1.1 (0.10)   |  |         |  |         |  |         |  |
| OECD average <sup>3</sup>     | 501 (0.5)             | 5.0 (0.10)  | 13.0 (0.14) | 24.4 (0.16) | 28.6 (0.17) | 20.6 (0.16) | 7.4 (0.10)  | 1.1 (0.04)   |  |         |  |         |  |         |  |
| Australia                     | 527 (2.5)             | 3.4 (0.27)  | 9.2 (0.48)  | 20.0 (0.59) | 28.4 (0.65) | 24.5 (0.66) | 11.5 (0.58) | 3.1 (0.50)   |  |         |  |         |  |         |  |
| Austria                       | 494 (3.2)             | 6.7 (0.83)  | 14.3 (0.99) | 23.8 (1.00) | 26.6 (1.04) | 20.6 (1.03) | 7.1 (0.61)  | 1.0 (0.19)   |  |         |  |         |  |         |  |
| Belgium                       | 507 (2.5)             | 6.4 (0.57)  | 11.7 (0.61) | 20.7 (0.65) | 27.2 (0.76) | 24.0 (0.82) | 9.0 (0.59)  | 1.1 (0.19)   |  |         |  |         |  |         |  |
| Canada                        | 529 (1.6)             | 2.0 (0.21)  | 7.5 (0.37)  | 20.9 (0.49) | 31.2 (0.62) | 26.2 (0.65) | 10.5 (0.45) | 1.6 (0.15)   |  |         |  |         |  |         |  |
| Chile                         | 447 (2.9)             | 8.4 (0.83)  | 23.9 (1.07) | 35.2 (0.94) | 23.6 (1.07) | 7.9 (0.69)  | 1.1 (0.22)  | # (†)        |  |         |  |         |  |         |  |
| Czech Republic                | 500 (3.0)             | 4.7 (0.57)  | 12.6 (0.90) | 25.6 (0.97) | 28.8 (1.25) | 19.9 (0.87) | 7.2 (0.58)  | 1.2 (0.22)   |  |         |  |         |  |         |  |
| Denmark                       | 499 (2.5)             | 4.1 (0.42)  | 12.5 (0.65) | 26.0 (0.77) | 30.6 (1.07) | 20.1 (0.85) | 5.9 (0.55)  | 0.9 (0.23)   |  |         |  |         |  |         |  |
| Estonia                       | 528 (2.7)             | 1.3 (0.31)  | 7.0 (0.72)  | 21.3 (1.07) | 34.3 (1.10) | 25.7 (1.07) | 9.0 (0.63)  | 1.4 (0.26)   |  |         |  |         |  |         |  |
| Finland                       | 554 (2.3)             | 1.1 (0.19)  | 4.9 (0.41)  | 15.3 (0.73) | 28.8 (0.95) | 31.2 (1.08) | 15.4 (0.74) | 3.3 (0.34)   |  |         |  |         |  |         |  |
| France                        | 498 (3.6)             | 7.1 (0.82)  | 12.2 (0.83) | 22.1 (1.25) | 28.8 (1.32) | 21.7 (1.02) | 7.3 (0.70)  | 0.8 (0.22)   |  |         |  |         |  |         |  |
| Germany                       | 520 (2.8)             | 4.1 (0.51)  | 10.7 (0.81) | 20.1 (0.86) | 27.3 (1.08) | 25.0 (1.18) | 10.9 (0.68) | 1.9 (0.29)   |  |         |  |         |  |         |  |
| Greece                        | 470 (4.0)             | 7.2 (1.07)  | 18.1 (1.04) | 29.8 (0.96) | 27.9 (1.20) | 14.0 (0.95) | 2.8 (0.31)  | 0.3 ! (0.11) |  |         |  |         |  |         |  |
| Hungary                       | 503 (3.1)             | 3.8 (0.93)  | 10.4 (0.86) | 25.5 (1.13) | 33.2 (1.32) | 21.8 (1.19) | 5.1 (0.55)  | 0.3 ! (0.13) |  |         |  |         |  |         |  |
| Iceland                       | 496 (1.4)             | 5.5 (0.48)  | 12.5 (0.63) | 25.8 (0.75) | 30.4 (0.94) | 18.8 (0.84) | 6.1 (0.43)  | 0.8 (0.19)   |  |         |  |         |  |         |  |
| Ireland                       | 508 (3.3)             | 4.4 (0.69)  | 10.7 (1.01) | 23.3 (1.17) | 29.9 (0.99) | 22.9 (0.95) | 7.5 (0.68)  | 1.2 (0.23)   |  |         |  |         |  |         |  |
| Israel                        | 455 (3.1)             | 13.9 (1.06)   | 19.2 (0.72) | 26.0 (1.04) | 24.1 (0.76) | 12.8 (0.72) | 3.5 (0.36)  | 0.5 (0.13)   |  |         |  |         |  |         |  |
| Italy                         | 489 (1.8)             | 6.1 (0.39)  | 14.5 (0.50) | 25.5 (0.63) | 29.5 (0.54) | 18.6 (0.53) | 5.3 (0.29)  | 0.5 (0.07)   |  |         |  |         |  |         |  |
| Japan                         | 539 (3.4)             | 3.2 (0.52)  | 7.5 (0.68)  | 16.3 (0.87) | 26.6 (0.83) | 29.5 (0.98) | 14.4 (0.73) | 2.6 (0.39)   |  |         |  |         |  |         |  |
| Korea, Republic of            | 538 (3.4)             | 1.1 (0.32)  | 5.2 (0.68)  | 18.5 (1.15) | 33.1 (1.13) | 30.4 (1.14) | 10.5 (0.90) | 1.1 (0.31)   |  |         |  |         |  |         |  |
| Luxembourg                    | 484 (1.2)             | 8.4 (0.52)  | 15.3 (0.88) | 24.3 (0.69) | 27.1 (0.87) | 18.2 (0.91) | 6.0 (0.49)  | 0.7 (0.12)   |  |         |  |         |  |         |  |
| Mexico                        | 416 (1.8)             | 14.5 (0.60)   | 32.8 (0.64) | 33.6 (0.60) | 15.8 (0.61) | 3.1 (0.27)  | 0.2 (0.05)  | # (†)        |  |         |  |         |  |         |  |
| Netherlands                   | 522 (5.4)             | 2.6 (0.53)  | 10.6 (1.33) | 21.8 (1.53) | 26.9 (1.07) | 25.3 (1.69) | 11.2 (1.10) | 1.5 (0.30)   |  |         |  |         |  |         |  |
| New Zealand                   | 532 (2.6)             | 4.0 (0.53)  | 9.4 (0.52)  | 18.1 (1.01) | 25.8 (0.88) | 25.1 (0.74) | 14.0 (0.72) | 3.6 (0.36)   |  |         |  |         |  |         |  |
| Norway                        | 500 (2.6)             | 3.8 (0.48)  | 11.9 (0.92) | 26.6 (0.95) | 31.1 (0.71) | 20.1 (0.82) | 5.9 (0.65)  | 0.5 ! (0.16) |  |         |  |         |  |         |  |
| Poland                        | 508 (2.4)             | 2.3 (0.33)  | 10.9 (0.69) | 26.1 (0.80) | 32.1 (0.81) | 21.2 (0.97) | 6.8 (0.49)  | 0.8 (0.19)   |  |         |  |         |  |         |  |
| Portugal                      | 493 (2.9)             | 3.0 (0.35)  | 13.5 (0.92) | 28.9 (1.08) | 32.3 (1.08) | 18.1 (1.00) | 3.9 (0.51)  | 0.3 ! (0.13) |  |         |  |         |  |         |  |
| Slovak Republic               | 490 (3.0)             | 5.0 (0.58)  | 14.2 (0.89) | 27.6 (1.03) | 29.2 (0.95) | 17.7 (0.85) | 5.6 (0.53)  | 0.7 (0.20)   |  |         |  |         |  |         |  |
| Slovenia                      | 512 (1.1)             | 3.1 (0.22)  | 11.7 (0.45) | 23.7 (0.66) | 28.7 (1.05) | 23.0 (0.72) | 8.7 (0.61)  | 1.2 (0.27)   |  |         |  |         |  |         |  |
| Spain                         | 488 (2.1)             | 4.6 (0.37)  | 13.6 (0.75) | 27.9 (0.67) | 32.3 (0.69) | 17.6 (0.57) | 3.7 (0.26)  | 0.2 (0.05)   |  |         |  |         |  |         |  |
| Sweden                        | 495 (2.7)             | 5.8 (0.51)  | 13.4 (0.75) | 25.6 (0.80) | 28.4 (0.84) | 18.7 (0.86) | 7.1 (0.56)  | 1.0 (0.22)   |  |         |  |         |  |         |  |
| Switzerland                   | 517 (2.8)             | 3.5 (0.31)  | 10.6 (0.58) | 21.3 (1.09) | 29.8 (1.02) | 24.1 (1.03) | 9.2 (0.73)  | 1.5 (0.23)   |  |         |  |         |  |         |  |
| Turkey                        | 454 (3.6)             | 6.9 (0.81)  | 23.0 (1.13) | 34.5 (1.16) | 25.2 (1.24) | 9.1 (1.13)  | 1.1 (0.29)  | # (†)        |  |         |  |         |  |         |  |
| United Kingdom                | 514 (2.5)             | 3.8 (0.34)  | 11.2 (0.68) | 22.7 (0.73) | 28.8 (0.97) | 22.2 (0.83) | 9.5 (0.61)  | 1.9 (0.25)   |  |         |  |         |  |         |  |
| United States                 | 502 (3.6)             | 4.2 (0.54)  | 13.9 (0.93) | 25.0 (0.87) | 27.5 (0.80) | 20.1 (0.94) | 7.9 (0.78)  | 1.3 (0.28)   |  |         |  |         |  |         |  |

See notes at end of table.

**Table 466. Average science scores and percentage distribution of 15-year-old students scoring at each science literacy proficiency level, by country: 2009—Continued**  
[Standard errors appear in parentheses]

|                                   |                       | Percentage distribution at levels of science proficiency <sup>1</sup> |             |             |             |              |              |              |  |         |  |         |  |         |  |
|-----------------------------------|-----------------------|---|-------------|-------------|-------------|--------------|--------------|--------------|--|---------|--|---------|--|---------|--|
| Country or other jurisdiction     | Average science score | Below Level 1   |             | Level 1     |             | Level 2      |              | Level 3      |  | Level 4 |  | Level 5 |  | Level 6 |  |
| 1                                 | 2                     | 3   |             | 4           |             | 5            |              | 6            |  | 7       |  | 8       |  | 9       |  |
| Non-OECD education systems        |                       |   |             |             |             |              |              |              |  |         |  |         |  |         |  |
| Albania.....                      | 391 (3.9)             | 26.3 (1.55)   | 31.0 (1.28) | 27.7 (1.24) | 12.9 (1.34) | 2.0 (0.38)   | ‡ (†)        | ‡ (†)        |  |         |  |         |  |         |  |
| Argentina.....                    | 401 (4.6)             | 25.2 (1.70)   | 27.2 (1.37) | 26.7 (1.20) | 15.4 (1.12) | 4.8 (0.69)   | 0.6 (0.18)   | # (†)        |  |         |  |         |  |         |  |
| Azerbaijan.....                   | 373 (3.1)             | 31.5 (1.68)   | 38.5 (1.13) | 22.4 (1.07) | 6.7 (0.76)  | 0.8 (0.22)   | # (†)        | # (†)        |  |         |  |         |  |         |  |
| Brazil.....                       | 405 (2.4)             | 19.7 (0.90)   | 34.5 (0.99) | 28.8 (0.90) | 12.6 (0.81) | 3.9 (0.38)   | 0.6 (0.11)   | # (†)        |  |         |  |         |  |         |  |
| Bulgaria.....                     | 439 (5.9)             | 16.5 (1.63)   | 22.3 (1.55) | 26.6 (1.31) | 21.0 (1.36) | 10.9 (1.01)  | 2.4 (0.48)   | ‡ (†)        |  |         |  |         |  |         |  |
| Colombia.....                     | 402 (3.6)             | 20.4 (1.81)   | 33.7 (1.23) | 30.2 (1.40) | 13.1 (1.04) | 2.5 (0.34)   | 0.1 † (0.05) | # (†)        |  |         |  |         |  |         |  |
| Croatia.....                      | 486 (2.8)             | 3.6 (0.47)  | 14.9 (0.99) | 30.0 (1.07) | 31.1 (1.03) | 16.7 (0.98)  | 3.5 (0.57)   | ‡ (†)        |  |         |  |         |  |         |  |
| Dubai (United Arab Emirates)..... | 466 (1.2)             | 11.0 (0.47)   | 19.5 (0.57) | 26.0 (0.78) | 22.9 (0.73) | 14.9 (0.59)  | 4.8 (0.35)   | 0.8 (0.21)   |  |         |  |         |  |         |  |
| Hong Kong-China.....              | 549 (2.8)             | 1.4 (0.31)  | 5.2 (0.61)  | 15.1 (0.73) | 29.4 (0.99) | 32.7 (0.99)  | 14.2 (0.94)  | 2.0 (0.30)   |  |         |  |         |  |         |  |
| Indonesia.....                    | 383 (3.8)             | 24.6 (1.77)   | 41.0 (1.54) | 27.0 (1.55) | 6.9 (1.01)  | 0.5 † (0.22) | # (†)        | ‡ (†)        |  |         |  |         |  |         |  |
| Jordan.....                       | 415 (3.5)             | 18.0 (1.20)   | 27.6 (1.13) | 32.2 (1.21) | 17.6 (1.12) | 4.1 (0.51)   | 0.5 † (0.18) | # (†)        |  |         |  |         |  |         |  |
| Kazakhstan.....                   | 400 (3.1)             | 22.4 (1.31)   | 33.0 (1.08) | 27.9 (1.14) | 12.8 (0.82) | 3.6 (0.62)   | 0.3 † (0.16) | # (†)        |  |         |  |         |  |         |  |
| Kyrgyzstan.....                   | 330 (2.9)             | 52.9 (1.32)   | 29.0 (0.94) | 13.3 (0.76) | 4.0 (0.54)  | 0.7 (0.20)   | # (†)        | ‡ (†)        |  |         |  |         |  |         |  |
| Latvia.....                       | 494 (3.1)             | 2.3 (0.56)  | 12.5 (1.00) | 29.1 (1.07) | 35.5 (1.16) | 17.6 (1.06)  | 3.0 (0.47)   | ‡ (†)        |  |         |  |         |  |         |  |
| Liechtenstein.....                | 520 (3.4)             | ‡ (†)   | 9.9 (1.94)  | 23.8 (3.07) | 29.8 (3.67) | 25.4 (2.67)  | 9.0 (1.74)   | ‡ (†)        |  |         |  |         |  |         |  |
| Lithuania.....                    | 491 (2.9)             | 3.5 (0.65)  | 13.5 (0.77) | 28.9 (1.02) | 32.4 (1.18) | 17.0 (0.84)  | 4.3 (0.41)   | 0.4 † (0.13) |  |         |  |         |  |         |  |
| Macao-China.....                  | 511 (1.0)             | 1.5 (0.21)  | 8.1 (0.36)  | 25.2 (0.77) | 37.8 (0.74) | 22.7 (0.98)  | 4.5 (0.47)   | 0.2 † (0.08) |  |         |  |         |  |         |  |
| Montenegro.....                   | 401 (2.0)             | 22.2 (1.01)   | 31.4 (0.98) | 29.4 (1.04) | 13.6 (0.79) | 3.1 (0.39)   | ‡ (†)        | ‡ (†)        |  |         |  |         |  |         |  |
| Panama.....                       | 376 (5.7)             | 32.8 (2.74)   | 32.4 (1.96) | 23.2 (1.93) | 9.3 (1.19)  | 2.2 (0.46)   | ‡ (†)        | ‡ (†)        |  |         |  |         |  |         |  |
| Peru.....                         | 369 (3.5)             | 35.3 (1.50)   | 33.0 (1.29) | 21.7 (1.21) | 8.0 (0.79)  | 1.8 (0.37)   | ‡ (†)        | # (†)        |  |         |  |         |  |         |  |
| Qatar.....                        | 379 (0.9)             | 36.4 (0.58)   | 28.8 (0.54) | 18.8 (0.56) | 9.8 (0.30)  | 4.8 (0.23)   | 1.3 (0.14)   | 0.1 † (0.05) |  |         |  |         |  |         |  |
| Romania.....                      | 428 (3.4)             | 11.9 (1.13)   | 29.5 (1.57) | 34.1 (1.73) | 19.7 (1.18) | 4.4 (0.59)   | 0.4 † (0.12) | # (†)        |  |         |  |         |  |         |  |
| Russian Federation.....           | 478 (3.3)             | 5.5 (0.67)  | 16.5 (1.06) | 30.7 (1.14) | 29.0 (1.15) | 13.9 (0.91)  | 3.9 (0.50)   | 0.4 † (0.17) |  |         |  |         |  |         |  |
| Serbia.....                       | 443 (2.4)             | 10.1 (0.82)   | 24.3 (0.96) | 33.9 (1.17) | 23.6 (0.75) | 7.1 (0.57)   | 1.0 (0.18)   | # (†)        |  |         |  |         |  |         |  |
| Shanghai-China.....               | 575 (2.3)             | 0.4 (0.11)  | 2.8 (0.36)  | 10.5 (0.66) | 26.0 (0.99) | 36.1 (1.12)  | 20.4 (0.96)  | 3.9 (0.45)   |  |         |  |         |  |         |  |
| Singapore.....                    | 542 (1.4)             | 2.8 (0.24)  | 8.7 (0.52)  | 17.5 (0.58) | 25.4 (0.83) | 25.7 (0.70)  | 15.3 (0.67)  | 4.6 (0.50)   |  |         |  |         |  |         |  |
| Chinese Taipei.....               | 520 (2.6)             | 2.2 (0.34)  | 8.9 (0.60)  | 21.1 (0.91) | 33.3 (1.04) | 25.8 (1.10)  | 8.0 (0.74)   | 0.8 (0.22)   |  |         |  |         |  |         |  |
| Thailand.....                     | 425 (3.0)             | 12.2 (1.10)   | 30.6 (1.01) | 34.7 (1.34) | 17.5 (0.95) | 4.4 (0.51)   | 0.6 † (0.27) | # (†)        |  |         |  |         |  |         |  |
| Trinidad and Tobago.....          | 410 (1.2)             | 25.1 (0.87)   | 24.9 (0.92) | 25.2 (0.88) | 16.0 (0.79) | 7.1 (0.40)   | 1.8 (0.23)   | ‡ (†)        |  |         |  |         |  |         |  |
| Tunisia.....                      | 401 (2.7)             | 21.3 (1.17)   | 32.4 (1.08) | 30.9 (1.00) | 13.0 (0.85) | 2.2 (0.43)   | ‡ (†)        | # (†)        |  |         |  |         |  |         |  |
| Uruguay.....                      | 427 (2.6)             | 17.0 (0.94)   | 25.6 (0.86) | 29.3 (1.01) | 19.5 (1.02) | 7.1 (0.51)   | 1.4 (0.22)   | 0.1 † (0.04) |  |         |  |         |  |         |  |

†Not applicable.

#Rounds to zero.

!Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡Reporting standards not met. Either there are too few cases for a reliable estimate or the coefficient of variation (CV) is 50 percent or greater.

<sup>1</sup>Level 1: Able to present scientific explanations that are obvious and that follow explicitly from given evidence. Level 2: Able to provide possible explanations in familiar contexts, draw conclusions based on simple investigations, and make literal interpretations of the results of scientific inquiry or technological problem solving. Level 3: Able to select facts to explain phenomena and apply simple models or inquiry strategies, develop short statements using facts, and make decisions based on scientific knowledge. Level 4: Able to select and integrate explanations from different disciplines of science or technology, link those explanations directly to aspects of life situations, and communicate decisions using scientific knowledge and evidence. Level 5: Able to apply scientific concepts and knowledge to many complex life situations, select and evaluate appropriate scientific evidence, bring critical insights to situations, and

construct explanations based on evidence and arguments based on critical analysis. Level 6: Able to consistently explain and apply scientific knowledge in a variety of complex life situations; use evidence from different sources to justify decisions; clearly and consistently demonstrate advanced scientific thinking and reasoning; and develop arguments in support of recommendations and decisions that center on personal, social, or global situations.

<sup>2</sup>Illustrates how a country compares with the OECD area as a whole. Computed by taking the OECD countries as a single entity to which each country contributes in proportion to the number of 15-year-olds enrolled in its schools.

<sup>3</sup>Refers to the mean of the data values for all OECD countries, to which each country contributes equally, regardless of the absolute size of the student population of each country.

NOTE: PISA scores are reported on a scale from 0 to 1,000. Detail may not sum to totals because of rounding.

SOURCE: Organization for Economic Cooperation and Development (OECD), Program for International Student Assessment (PISA), 2009, *PISA 2009 Results: What Students Know and Can Do—Student Performance in Reading, Mathematics and Science (Volume I)*. (This table was prepared December 2010.)

**Table 467. Percentage of the population 25 to 64 years old who completed high school, by age group and country: Selected years, 2001 through 2010**  
 [Standard errors appear in parentheses]

| Country                               | 2001                      |                    | 2005                      |                    | 2009                      |                    | 2010                      |                    |                    |                    |                    |  |
|---------------------------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|--|
|                                       | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | 35 to 44 years old | 45 to 54 years old | 55 to 64 years old |  |
| 1                                     | 2                         | 3                  | 4                         | 5                  | 6                         | 7                  | 8                         | 9                  | 10                 | 11                 | 12                 |  |
| OECD average <sup>1</sup> .....       | 64.2                      | 74.0               | 72.8                      | 82.6               | 73.3 (0.03)               | 81.5 (0.06)        | 74.0 (0.03)               | 81.9 (0.06)        | 77.8 (0.06)        | 71.6 (0.07)        | 62.3 (0.08)        |  |
| Australia.....                        | 58.9                      | 70.7               | 65.0                      | 78.6               | 71.0 (0.29)               | 82.9 (0.49)        | 73.2 (0.41)               | 84.8 (0.62)        | 76.6 (0.74)        | 69.2 (0.86)        | 58.4 (1.12)        |  |
| Austria <sup>2,3</sup> .....          | 75.7                      | 83.3               | 80.6                      | 87.5               | 81.9 (0.12)               | 88.4 (0.22)        | 82.5 (0.12)               | 88.0 (0.23)        | 85.8 (0.21)        | 81.6 (0.22)        | 73.0 (0.30)        |  |
| Belgium <sup>2</sup> .....            | 58.5                      | 75.3               | 66.1                      | 80.9               | 70.6 (0.19)               | 83.1 (0.33)        | 70.5 (0.19)               | 82.1 (0.34)        | 78.4 (0.33)        | 66.2 (0.37)        | 54.5 (0.42)        |  |
| Canada.....                           | 81.9                      | 89.3               | 85.2                      | 90.8               | 87.6 (0.12)               | 92.0 (0.20)        | 88.4 (0.12)               | 92.2 (0.20)        | 91.2 (0.20)        | 87.6 (0.22)        | 82.1 (0.30)        |  |
| Chile <sup>4</sup> .....              | —                         | —                  | 50.0                      | 64.3               | 69.0 (0.19)               | 85.6 (0.24)        | 71.4 (0.19)               | 86.6 (0.24)        | 75.8 (0.28)        | 66.7 (0.32)        | 53.3 (0.41)        |  |
| Czech Republic.....                   | 86.2                      | 92.5               | 89.9                      | 93.9               | 91.4 (0.08)               | 94.2 (0.14)        | 91.9 (0.08)               | 94.2 (0.14)        | 95.1 (0.12)        | 91.6 (0.16)        | 86.3 (0.18)        |  |
| Denmark.....                          | 80.2                      | 86.3               | 81.0                      | 87.4               | 76.3 (0.17)               | 85.7 (0.43)        | 75.7 (0.17)               | 79.8 (0.42)        | 80.9 (0.34)        | 73.8 (0.32)        | 68.5 (0.31)        |  |
| Estonia.....                          | —                         | —                  | 89.1                      | 87.4               | 88.9 (0.31)               | 86.3 (0.73)        | 89.1 (0.30)               | 86.4 (0.73)        | 90.8 (0.53)        | 93.7 (0.44)        | 85.0 (0.71)        |  |
| Finland.....                          | 73.8                      | 86.8               | 78.8                      | 89.4               | 82.0 (0.12)               | 90.4 (0.21)        | 83.0 (0.12)               | 90.8 (0.20)        | 89.0 (0.21)        | 84.6 (0.23)        | 69.6 (0.28)        |  |
| France <sup>5</sup> .....             | 63.9                      | 78.4               | 66.3                      | 81.1               | 70.0 (0.10)               | 83.9 (0.17)        | 70.8 (0.09)               | 83.8 (0.16)        | 77.1 (0.16)        | 66.8 (0.18)        | 55.6 (0.19)        |  |
| Germany.....                          | 82.6                      | 85.5               | 83.1                      | 84.1               | 85.5 (0.06)               | 86.0 (0.13)        | 85.8 (0.06)               | 86.5 (0.12)        | 86.8 (0.11)        | 86.5 (0.10)        | 83.1 (0.13)        |  |
| Greece.....                           | 51.4                      | 72.6               | 57.1                      | 73.6               | 61.2 (0.12)               | 74.9 (0.23)        | 65.2 (0.12)               | 78.9 (0.21)        | 72.4 (0.22)        | 61.8 (0.23)        | 43.8 (0.25)        |  |
| Hungary.....                          | 70.2                      | 80.9               | 76.4                      | 85.0               | 80.6 (0.10)               | 86.0 (0.18)        | 81.3 (0.10)               | 86.3 (0.19)        | 83.2 (0.19)        | 80.5 (0.20)        | 74.5 (0.21)        |  |
| Iceland.....                          | 56.9                      | 61.2               | 62.9                      | 69.0               | 65.9 (0.50)               | 70.0 (0.93)        | 66.5 (0.50)               | 72.4 (0.92)        | 71.8 (1.00)        | 64.4 (0.96)        | 55.0 (1.10)        |  |
| Ireland.....                          | 57.6                      | 73.4               | 64.5                      | 81.1               | 71.5 (0.12)               | 85.8 (0.18)        | 73.5 (0.12)               | 86.9 (0.18)        | 79.5 (0.21)        | 67.3 (0.27)        | 50.5 (0.32)        |  |
| Israel.....                           | —                         | —                  | 79.2                      | 85.7               | 81.8 (0.15)               | 87.4 (0.25)        | 82.1 (0.15)               | 88.1 (0.24)        | 84.1 (0.29)        | 78.2 (0.34)        | 73.9 (0.38)        |  |
| Italy.....                            | 43.3                      | 57.5               | 50.1                      | 65.9               | 54.3 (0.08)               | 70.3 (0.17)        | 55.2 (0.08)               | 71.0 (0.18)        | 59.2 (0.16)        | 51.1 (0.16)        | 38.2 (0.16)        |  |
| Japan.....                            | 83.1                      | 93.6               | —                         | —                  | (†)                       | (†)                | (†)                       | (†)                | (†)                | (†)                | (†)                |  |
| Korea, Republic of.....               | 68.0                      | 94.6               | 75.5                      | 97.3               | 79.9 (0.20)               | 97.5 (0.15)        | 80.4 (0.20)               | 97.8 (0.14)        | 94.9 (0.20)        | 73.4 (0.43)        | 42.9 (0.63)        |  |
| Luxembourg.....                       | 52.7                      | 59.4               | 65.9                      | 76.5               | 77.3 (0.41)               | 83.8 (0.80)        | 77.7 (0.40)               | 84.0 (0.80)        | 80.5 (0.71)        | 74.7 (0.78)        | 69.1 (0.96)        |  |
| Mexico.....                           | 21.6                      | 25.4               | 21.3                      | 24.0               | 35.2 (0.06)               | 41.9 (0.12)        | 36.2 (0.06)               | 43.6 (0.12)        | 37.3 (0.12)        | 33.4 (0.13)        | 22.7 (0.15)        |  |
| Netherlands <sup>2,5</sup> .....      | 65.0                      | 74.0               | 71.8                      | 81.3               | 73.4 (0.09)               | 82.4 (0.17)        | 73.0 (0.09)               | 82.7 (0.18)        | 77.9 (0.17)        | 71.0 (0.17)        | 60.8 (0.21)        |  |
| New Zealand.....                      | 75.7                      | 81.8               | 78.7                      | 85.2               | 72.2 (0.43)               | 79.3 (0.84)        | 73.0 (0.37)               | 79.4 (0.73)        | 76.6 (0.67)        | 72.0 (0.71)        | 62.5 (0.83)        |  |
| Norway <sup>2</sup> .....             | 85.2                      | 93.4               | 77.2                      | 83.5               | 80.7 (0.16)               | 83.6 (0.33)        | 80.6 (0.16)               | 83.0 (0.34)        | 83.2 (0.29)        | 77.7 (0.34)        | 78.6 (0.34)        |  |
| Poland.....                           | 45.9                      | 51.7               | 51.4                      | 62.5               | 88.0 (0.10)               | 93.5 (0.15)        | 88.7 (0.07)               | 93.7 (0.10)        | 91.8 (0.12)        | 88.8 (0.13)        | 79.2 (0.16)        |  |
| Portugal.....                         | 19.9                      | 32.5               | 26.5                      | 42.8               | 29.9 (0.16)               | 48.2 (0.38)        | 31.9 (0.16)               | 52.1 (0.39)        | 33.9 (0.32)        | 22.3 (0.26)        | 15.7 (0.24)        |  |
| Slovak Republic.....                  | 85.1                      | 93.7               | 85.7                      | 93.0               | 90.9 (0.12)               | 94.8 (0.19)        | 91.0 (0.12)               | 94.1 (0.20)        | 94.1 (0.20)        | 90.6 (0.24)        | 83.3 (0.29)        |  |
| Slovenia.....                         | —                         | —                  | 80.3                      | 91.2               | 83.3 (0.19)               | 93.5 (0.27)        | 83.3 (0.19)               | 93.5 (0.27)        | 85.6 (0.39)        | 80.8 (0.37)        | 72.2 (0.46)        |  |
| Spain.....                            | 40.0                      | 57.1               | 48.8                      | 63.9               | 51.8 (0.08)               | 64.1 (0.16)        | 52.9 (0.08)               | 64.7 (0.16)        | 59.5 (0.15)        | 47.7 (0.16)        | 32.3 (0.16)        |  |
| Sweden.....                           | 80.6                      | 90.7               | 83.6                      | 90.6               | 85.8 (0.09)               | 91.2 (0.16)        | 86.5 (0.08)               | 91.1 (0.13)        | 91.3 (0.12)        | 86.7 (0.15)        | 76.9 (0.18)        |  |
| Switzerland.....                      | 87.4                      | 91.8               | 83.0                      | 87.9               | 86.9 (0.19)               | 90.0 (0.36)        | 86.1 (0.12)               | 90.2 (0.24)        | 87.5 (0.21)        | 85.3 (0.23)        | 81.0 (0.27)        |  |
| Turkey.....                           | 24.3                      | 30.2               | 27.2                      | 35.7               | 31.1 (0.09)               | 41.6 (0.18)        | 31.2 (0.09)               | 42.2 (0.18)        | 28.3 (0.17)        | 24.3 (0.17)        | 18.8 (0.19)        |  |
| United Kingdom <sup>3,5</sup> .....   | 63.0                      | 68.0               | 66.7                      | 72.9               | 73.7 (0.09)               | 81.6 (0.17)        | 75.1 (0.18)               | 82.9 (0.35)        | 77.6 (0.35)        | 73.7 (0.36)        | 64.9 (0.41)        |  |
| United States.....                    | 87.7                      | 88.1               | 87.8                      | 86.7               | 88.6 (0.12)               | 88.3 (0.19)        | 89.0 (0.14)               | 88.4 (0.24)        | 88.3 (0.24)        | 89.6 (0.23)        | 89.6 (0.25)        |  |
| Other reporting countries             |                           |                    |                           |                    |                           |                    |                           |                    |                    |                    |                    |  |
| Brazil <sup>4</sup> .....             | —                         | —                  | 29.5                      | 38.0               | 40.7 (0.11)               | 52.5 (0.19)        | — (†)                     | — (†)              | — (†)              | — (†)              | — (†)              |  |
| Russian Federation <sup>6</sup> ..... | 88.0                      | 91.0               | —                         | —                  | — (†)                     | — (†)              | — (†)                     | — (†)              | — (†)              | — (†)              | — (†)              |  |

—Not available.

†Not applicable.

<sup>1</sup>Refers to the mean of the data values for all reporting Organization for Economic Cooperation and Development (OECD) countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year.

<sup>2</sup>Data from 2000 reported for 2001.

<sup>3</sup>Data in 2005 columns include some International Standard Classification of Education (ISCED) 3C short programs.

<sup>4</sup>Data from 2004 reported for 2005.

<sup>5</sup>Data in 2001 columns include some ISCED 3C short programs.

<sup>6</sup>Data from 2002 reported for 2001.

NOTE: Data in this table refer to degrees classified as International Standard Classification of Education (ISCED) level 3. ISCED level 3 corresponds to high school completion in the United States. ISCED 3C short programs do not correspond to high school completion; these short programs are excluded from this table except where otherwise noted. Standard errors are not available for 2001 and 2005.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2002, 2007, 2011, and 2012. (This table was prepared June 2012.)

Table 468. Percentage of the population 25 to 64 years old who attained selected levels of postsecondary education, by age group and country: 2001 and 2010

[Standard errors appear in parentheses]

| Country                               | Total, any postsecondary degree |                    |                           |                    | 2010                           |                    |                    |                    |                    |                           |  |                    |                    |                    |  |
|---------------------------------------|---------------------------------|--------------------|---------------------------|--------------------|--------------------------------|--------------------|--------------------|--------------------|--------------------|---------------------------|--|--------------------|--------------------|--------------------|--|
|                                       | 2001                            |                    | 2010                      |                    | Vocational degree <sup>1</sup> |                    |                    |                    |                    |                           | Bachelor's or higher degree <sup>2</sup> |                    |                    |                    |  |
|                                       | Total, 25 to 64 years old       | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old      | 25 to 34 years old | 35 to 44 years old | 45 to 54 years old | 55 to 64 years old | Total, 25 to 64 years old | 25 to 34 years old                       | 35 to 44 years old | 45 to 54 years old | 55 to 64 years old |  |
|                                       |                                 |                    |                           |                    |                                |                    |                    |                    |                    |                           |  |                    |                    |                    |  |
| 1                                     | 2                               | 3                  | 4                         | 5                  | 6                              | 7                  | 8                  | 9                  | 10                 | 11                        | 12                                       | 13                 | 14                 | 15                 |  |
| OECD average <sup>3</sup> .....       | 22.6                            | 27.3               | 30.7 (0.05)               | 37.8 (0.10)        | 10.2 (0.03)                    | 10.9 (0.07)        | 11.7 (0.07)        | 10.1 (0.07)        | 8.5 (0.07)         | 22.0 (0.04)               | 28.5 (0.09)                              | 23.6 (0.08)        | 18.9 (0.08)        | 15.9 (0.08)        |  |
| Australia.....                        | 29.0                            | 33.5               | 37.6 (0.45)               | 44.4 (0.85)        | 10.7 (0.29)                    | 10.2 (0.52)        | 11.2 (0.55)        | 11.0 (0.58)        | 10.1 (0.69)        | 26.9 (0.41)               | 34.2 (0.81)                              | 28.4 (0.79)        | 23.8 (0.79)        | 19.5 (0.90)        |  |
| Austria.....                          | 14.1                            | 14.3               | 19.3 (0.26)               | 20.8 (0.54)        | 7.3 (0.19)                     | 5.4 (0.29)         | 7.4 (0.32)         | 8.2 (0.28)         | 8.1 (0.44)         | 12.0 (0.25)               | 15.4 (0.49)                              | 13.4 (0.39)        | 10.4 (0.40)        | 8.4 (0.43)         |  |
| Belgium.....                          | 27.6                            | 37.5               | 35.0 (0.20)               | 43.8 (0.44)        | 17.8 (0.16)                    | 20.5 (0.36)        | 19.9 (0.32)        | 16.4 (0.29)        | 14.1 (0.29)        | 17.2 (0.16)               | 23.3 (0.37)                              | 19.5 (0.32)        | 14.5 (0.28)        | 11.5 (0.27)        |  |
| Canada.....                           | 41.6                            | 50.5               | 50.6 (0.23)               | 56.5 (0.43)        | 24.2 (0.17)                    | 25.8 (0.38)        | 26.1 (0.30)        | 24.1 (0.26)        | 20.4 (0.28)        | 26.4 (0.22)               | 30.7 (0.42)                              | 30.7 (0.38)        | 22.7 (0.32)        | 21.8 (0.34)        |  |
| Chile <sup>4</sup> .....              | 10.1                            | 12.3               | 26.8 (0.18)               | 38.5 (0.34)        | 10.3 (0.13)                    | 13.1 (0.23)        | 12.8 (0.22)        | 9.3 (0.20)         | 4.9 (0.18)         | 16.5 (0.15)               | 25.4 (0.30)                              | 14.7 (0.23)        | 12.1 (0.22)        | 14.0 (0.28)        |  |
| Czech Republic <sup>5</sup> .....     | 11.1                            | 11.3               | 16.8 (0.10)               | 22.6 (0.25)        | [5] (†)                        | [5] (†)            | [5] (†)            | [5] (†)            | [5] (†)            | 16.8 (0.10)               | 22.6 (0.25)                              | 16.3 (0.21)        | 15.9 (0.21)        | 11.5 (0.16)        |  |
| Denmark.....                          | 26.8                            | 27.5               | 33.3 (0.19)               | 37.6 (0.50)        | 6.3 (0.10)                     | 6.2 (0.25)         | 7.1 (0.22)         | 6.5 (0.18)         | 5.2 (0.15)         | 27.0 (0.17)               | 31.4 (0.48)                              | 29.7 (0.39)        | 24.7 (0.31)        | 22.7 (0.28)        |  |
| Estonia.....                          | —                               | —                  | 35.3 (0.79)               | 37.8 (1.73)        | 13.3 (0.55)                    | 14.0 (1.24)        | 12.2 (0.91)        | 15.1 (1.07)        | 11.7 (1.02)        | 21.9 (0.71)               | 23.8 (1.59)                              | 21.0 (1.34)        | 23.4 (1.30)        | 18.9 (1.29)        |  |
| Finland.....                          | 32.3                            | 38.2               | 38.1 (0.24)               | 39.2 (0.52)        | 14.7 (0.18)                    | 2.5 (0.17)         | 18.4 (0.42)        | 20.7 (0.40)        | 16.2 (0.35)        | 23.5 (0.21)               | 36.7 (0.52)                              | 27.3 (0.48)        | 18.3 (0.39)        | 13.8 (0.32)        |  |
| France.....                           | 23.0                            | 34.2               | 29.0 (0.09)               | 42.9 (0.21)        | 11.5 (0.06)                    | 16.9 (0.16)        | 13.7 (0.13)        | 9.1 (0.11)         | 6.4 (0.09)         | 17.5 (0.08)               | 26.0 (0.19)                              | 20.0 (0.16)        | 12.6 (0.13)        | 11.9 (0.12)        |  |
| Germany.....                          | 23.2                            | 21.8               | 26.6 (0.08)               | 26.1 (0.19)        | 9.6 (0.05)                     | 7.2 (0.10)         | 9.9 (0.11)         | 10.9 (0.11)        | 9.9 (0.12)         | 17.0 (0.07)               | 18.9 (0.16)                              | 18.2 (0.14)        | 15.7 (0.13)        | 15.5 (0.14)        |  |
| Greece.....                           | 17.8                            | 24.0               | 24.6 (0.33)               | 30.9 (0.59)        | 7.2 (0.16)                     | 10.9 (0.34)        | 8.1 (0.31)         | 5.8 (0.28)         | 3.2 (0.22)         | 17.5 (0.29)               | 20.0 (0.51)                              | 18.4 (0.49)        | 17.4 (0.49)        | 13.3 (0.43)        |  |
| Hungary.....                          | 14.1                            | 14.7               | 20.1 (0.10)               | 26.0 (0.24)        | 0.6 (0.02)                     | 1.4 (0.06)         | — (†)              | — (†)              | — (†)              | 19.6 (0.10)               | 24.7 (0.24)                              | 18.6 (0.20)        | 18.1 (0.19)        | 16.4 (0.18)        |  |
| Iceland.....                          | 24.8                            | 26.6               | 32.5 (0.50)               | 36.2 (0.99)        | 3.8 (0.20)                     | 2.2 (0.30)         | 5.6 (0.51)         | 4.2 (0.40)         | 3.2 (0.39)         | 28.7 (0.48)               | 34.0 (0.98)                              | 33.2 (1.04)        | 26.3 (0.89)        | 19.3 (0.87)        |  |
| Ireland.....                          | 35.6                            | 47.8               | 37.3 (0.13)               | 48.2 (0.26)        | 15.6 (0.10)                    | 18.4 (0.20)        | 18.4 (0.20)        | 13.0 (0.19)        | 9.9 (0.19)         | 21.8 (0.11)               | 29.7 (0.24)                              | 23.9 (0.22)        | 16.8 (0.21)        | 11.6 (0.20)        |  |
| Israel.....                           | —                               | —                  | 45.6 (0.20)               | 44.2 (0.38)        | 15.0 (0.14)                    | 12.4 (0.25)        | 15.9 (0.29)        | 16.1 (0.30)        | 17.0 (0.32)        | 30.5 (0.18)               | 31.8 (0.35)                              | 33.0 (0.37)        | 28.3 (0.37)        | 27.6 (0.38)        |  |
| Italy.....                            | 10.0                            | 11.8               | 14.8 (0.07)               | 20.7 (0.19)        | # (†)                          | # (†)              | # (†)              | 0.5 (†)            | # (†)              | 14.4 (0.07)               | 20.5 (0.19)                              | 15.3 (0.15)        | 11.5 (0.14)        | 10.3 (0.14)        |  |
| Japan.....                            | 33.8                            | 47.7               | 44.8 (0.20)               | 56.7 (0.40)        | 19.5 (0.16)                    | 23.7 (0.34)        | 23.6 (0.32)        | 19.6 (0.32)        | 11.6 (0.30)        | 25.3 (0.18)               | 33.0 (0.38)                              | 26.0 (0.33)        | 26.2 (0.36)        | 17.4 (0.35)        |  |
| Korea, Republic of.....               | 24.2                            | 39.5               | 39.7 (0.25)               | 65.0 (0.46)        | 12.2 (0.17)                    | 26.0 (0.43)        | 13.0 (0.31)        | 5.7 (0.22)         | 1.5 (0.16)         | 27.5 (0.23)               | 39.0 (0.47)                              | 33.8 (0.44)        | 21.0 (0.40)        | 11.2 (0.40)        |  |
| Luxembourg.....                       | 18.1                            | 23.4               | 35.5 (0.46)               | 44.2 (1.08)        | 14.7 (0.34)                    | 18.1 (0.84)        | 16.8 (0.67)        | 12.2 (0.58)        | 10.7 (0.64)        | 20.8 (0.39)               | 26.1 (0.96)                              | 24.7 (0.77)        | 15.8 (0.65)        | 14.6 (0.73)        |  |
| Mexico <sup>5</sup> .....             | 15.0                            | 17.9               | 17.4 (0.00)               | 21.8 (0.00)        | 1.1 (0.00)                     | 1.3 (0.00)         | 1.1 (0.00)         | 1.3 (0.00)         | 0.7 (0.00)         | 16.2 (0.00)               | 20.6 (0.00)                              | 15.1 (0.00)        | 15.0 (0.00)        | 11.3 (0.00)        |  |
| Netherlands.....                      | 23.2                            | 26.5               | 32.4 (0.10)               | 40.8 (0.23)        | 2.5 (0.03)                     | 2.4 (0.07)         | 2.9 (0.07)         | 2.7 (0.06)         | 2.1 (0.06)         | 29.8 (0.10)               | 38.4 (0.23)                              | 30.7 (0.19)        | 27.4 (0.17)        | 23.9 (0.18)        |  |
| New Zealand.....                      | 29.2                            | 28.5               | 40.7 (0.41)               | 46.4 (0.89)        | 16.4 (0.31)                    | 14.9 (0.64)        | 15.5 (0.58)        | 17.9 (0.60)        | 17.2 (0.65)        | 24.3 (0.36)               | 31.5 (0.83)                              | 27.0 (0.71)        | 21.1 (0.64)        | 16.6 (0.64)        |  |
| Norway.....                           | 30.2                            | 37.9               | 37.3 (0.20)               | 47.3 (0.45)        | 2.1 (0.06)                     | 1.0 (0.09)         | 2.0 (0.11)         | 2.7 (0.13)         | 2.7 (0.14)         | 35.2 (0.20)               | 46.2 (0.45)                              | 39.0 (0.38)        | 30.7 (0.38)        | 24.6 (0.36)        |  |
| Poland <sup>5</sup> .....             | 11.9                            | 15.2               | 22.9 (0.09)               | 37.4 (0.21)        | [5] (†)                        | [5] (†)            | [5] (†)            | [5] (†)            | [5] (†)            | 22.9 (0.09)               | 37.4 (0.21)                              | 23.4 (0.19)        | 15.1 (0.15)        | 12.9 (0.14)        |  |
| Portugal <sup>5</sup> .....           | 9.0                             | 13.7               | 15.4 (0.51)               | 24.8 (1.02)        | [5] (†)                        | [5] (†)            | [5] (†)            | [5] (†)            | [5] (†)            | 15.4 (0.51)               | 24.8 (1.02)                              | 16.2 (0.80)        | 10.4 (0.69)        | 8.9 (0.56)         |  |
| Slovak Republic.....                  | 10.9                            | 11.9               | 17.3 (0.16)               | 24.0 (0.29)        | 0.7 (0.04)                     | 0.6 (0.05)         | 0.6 (0.07)         | 0.8 (0.08)         | 0.9 (0.10)         | 16.6 (0.16)               | 23.5 (0.28)                              | 15.3 (0.32)        | 13.9 (0.32)        | 11.8 (0.35)        |  |
| Slovenia.....                         | —                               | —                  | 23.7 (0.22)               | 31.3 (0.51)        | 10.6 (0.16)                    | 12.2 (0.36)        | 11.5 (0.35)        | 10.1 (0.28)        | 8.6 (0.29)         | 13.1 (0.17)               | 19.2 (0.43)                              | 15.3 (0.40)        | 9.9 (0.28)         | 7.7 (0.27)         |  |
| Spain.....                            | 23.6                            | 35.5               | 30.7 (0.08)               | 39.2 (0.17)        | 9.2 (0.05)                     | 12.2 (0.11)        | 11.6 (0.10)        | 7.0 (0.08)         | 4.0 (0.07)         | 21.5 (0.07)               | 26.9 (0.15)                              | 23.8 (0.13)        | 18.6 (0.12)        | 13.7 (0.12)        |  |
| Sweden.....                           | 31.6                            | 36.9               | 34.2 (0.11)               | 42.2 (0.23)        | 8.8 (0.06)                     | 8.2 (0.13)         | 8.3 (0.12)         | 9.4 (0.13)         | 9.1 (0.12)         | 25.4 (0.10)               | 34.0 (0.22)                              | 28.8 (0.20)        | 20.6 (0.18)        | 18.4 (0.17)        |  |
| Switzerland.....                      | 25.4                            | 25.6               | 35.2 (0.16)               | 40.5 (0.39)        | 10.8 (0.11)                    | 9.9 (0.24)         | 12.4 (0.21)        | 11.2 (0.21)        | 9.2 (0.20)         | 24.3 (0.15)               | 30.6 (0.37)                              | 25.8 (0.28)        | 22.1 (0.28)        | 18.5 (0.27)        |  |
| Turkey <sup>5</sup> .....             | 8.9                             | 10.2               | 13.1 (0.07)               | 17.4 (0.13)        | [5] (†)                        | [5] (†)            | [5] (†)            | [5] (†)            | [5] (†)            | 13.1 (0.07)               | 17.4 (0.13)                              | 12.2 (0.12)        | 9.4 (0.12)         | 9.5 (0.14)         |  |
| United Kingdom.....                   | 26.0                            | 30.0               | 38.2 (0.21)               | 46.0 (0.46)        | 10.2 (0.13)                    | 8.1 (0.25)         | 11.1 (0.26)        | 11.7 (0.26)        | 9.6 (0.25)         | 28.0 (0.19)               | 37.9 (0.45)                              | 29.5 (0.38)        | 23.5 (0.35)        | 20.4 (0.35)        |  |
| United States.....                    | 37.3                            | 39.1               | 41.7 (0.24)               | 42.3 (0.38)        | 10.0 (0.1)                     | 9.5 (0.22)         | 10.3 (0.20)        | 10.6 (0.22)        | 9.2 (0.23)         | 31.7 (0.22)               | 32.8 (0.36)                              | 33.1 (0.38)        | 29.4 (0.41)        | 31.7 (0.42)        |  |
| Other reporting countries             |                                 |                    |                           |                    |                                |                    |                    |                    |                    |                           |  |                    |                    |                    |  |
| Brazil <sup>1,5,6</sup> .....         | 7.7                             | 6.7                | 10.9 (0.07)               | 11.6 (0.12)        | [5] (†)                        | [5] (†)            | [5] (†)            | [5] (†)            | [5] (†)            | 10.9 (0.07)               | 11.6 (0.12)                              | 11.3 (0.13)        | 10.7 (0.14)        | 8.9 (0.16)         |  |
| China <sup>4</sup> .....              | 4.6                             | 6.1                | — (†)                     | — (†)              | — (†)                          | — (†)              | — (†)              | — (†)              | — (†)              | — (†)                     | — (†)                                    | — (†)              | — (†)              | — (†)              |  |
| Russian Federation <sup>7</sup> ..... | 54.0                            | 55.5               | — (†)                     | — (†)              | — (†)                          | — (†)              | — (†)              | — (†)              | — (†)              | — (†)                     | — (†)                                    | — (†)              | — (†)              | — (†)              |  |

—Not available.

†Not applicable.

#Rounds to zero.

<sup>1</sup>The vocational degree data in this table refer to degrees classified as International Standard Classification of Education (ISCED) level 5B. ISCED level 5B corresponds to the associate's degree in the United States.<sup>2</sup>ISCED 5A, first award, corresponds to the bachelor's degree in the United States; ISCED 5A, second award, corresponds to master's and first-professional degrees in the United States; and ISCED 6 corresponds to doctor's degrees.<sup>3</sup>Refers to the mean of the data values for all reporting Organization for Economic Cooperation and Development (OECD) countries, to which each country reporting data contributes equally. The average includes all current OECD countries for

which a given year's data are available, even if they were not members of OECD in that year.

<sup>4</sup>Data from 2000 reported for 2001.<sup>5</sup>Columns for bachelor's or higher degree include vocational degree data.<sup>6</sup>Data from 2009 reported for 2010.<sup>7</sup>Data from 2002 reported for 2001.

NOTE: Standard errors are not available for 2001.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2002 and 2012. (This table was prepared June 2012.)

**Table 469. Percentage of the population 25 to 64 years old who attained a bachelor's or higher level degree, by age group and country: Selected years, 1999 through 2010**

[Standard errors appear in parentheses]

| Country                               | 1999                      |                    | 2001                      |                    | 2003                      |                    | 2005                      |                    | 2006                      |                    | 2007                      |                    | 2008                      |                    | 2009                      |                    | 2010                      |                    |
|---------------------------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|
|                                       | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old |
| 1                                     | 2                         | 3                  | 4                         | 5                  | 6                         | 7                  | 8                         | 9                  | 10                        | 11                 | 12                        | 13                 | 14                        | 15                 | 16                        | 17                 | 18                        | 19                 |
| <b>OECD average<sup>1</sup></b> ..... | <b>14.0</b>               | <b>16.5</b>        | <b>15.1</b>               | <b>18.2</b>        | <b>16.9</b>               | <b>21.0</b>        | <b>18.8</b>               | <b>23.9</b>        | <b>19.5</b>               | <b>24.6</b>        | <b>20.0</b>               | <b>25.4</b>        | <b>20.8</b>               | <b>26.6</b>        | <b>21.4 (0.03)</b>        | <b>27.7 (0.08)</b> | <b>22.0 (0.04)</b>        | <b>28.5 (0.09)</b> |
| Australia.....                        | 17.7                      | 20.1               | 19.2                      | 23.9               | 20.5                      | 24.9               | 22.7                      | 29.2               | 23.8                      | 29.2               | 24.1                      | 30.6               | 25.5                      | 31.9               | 26.8 (0.29)               | 34.6 (0.62)        | 26.9 (0.41)               | 34.2 (0.81)        |
| Austria <sup>2</sup> .....            | 6.1                       | 6.8                | 6.8                       | 6.9                | 7.3                       | 8.4                | 9.1                       | 11.6               | 10.1                      | 12.9               | 10.4                      | 13.3               | 10.7                      | 13.5               | 11.4 (0.10)               | 15.3 (0.25)        | 12.0 (0.25)               | 15.4 (0.49)        |
| Belgium.....                          | 12.0                      | 16.0               | 12.7                      | 17.8               | 13.0                      | 18.2               | 13.8                      | 19.1               | 14.1                      | 19.4               | 14.0                      | 18.2               | 16.4                      | 22.8               | 17.5 (0.16)               | 24.2 (0.38)        | 17.2 (0.16)               | 23.3 (0.37)        |
| Canada.....                           | 19.1                      | 23.1               | 20.4                      | 25.1               | 22.0                      | 27.5               | 23.3                      | 28.2               | 24.0                      | 29.3               | 24.6                      | 29.5               | 25.2                      | 29.8               | 25.4 (0.16)               | 30.1 (0.34)        | 26.4 (0.22)               | 30.7 (0.42)        |
| Chile <sup>2,3</sup> .....            | 8.2                       | 9.6                | 9.0                       | 10.7               | 11.9                      | 15.5               | —                         | —                  | —                         | —                  | —                         | —                  | 15.7                      | 22.3               | 16.4 (0.15)               | 24.0 (0.30)        | 16.5 (0.15)               | 25.4 (0.30)        |
| Czech Republic <sup>4</sup> .....     | 10.8                      | 10.9               | 11.1                      | 11.3               | 11.7                      | 11.7               | 13.1                      | 14.2               | 13.5                      | 15.2               | 13.7                      | 15.5               | 14.5                      | 17.7               | 15.5 (0.10)               | 20.2 (0.23)        | 16.8 (0.10)               | 22.6 (0.25)        |
| Denmark.....                          | —                         | —                  | 21.5                      | 21.7               | 25.0                      | 27.2               | 26.0                      | 30.7               | 27.1                      | 31.7               | 25.5                      | 32.0               | 27.5                      | 34.9               | 27.1 (0.18)               | 36.2 (0.60)        | 27.0 (0.17)               | 31.4 (0.48)        |
| Estonia.....                          | —                         | —                  | —                         | —                  | —                         | —                  | 22.2                      | 24.1               | 22.2                      | 24.1               | 22.2                      | 25.2               | 22.3                      | 23.5               | 22.7 (0.41)               | 21.7 (0.87)        | 21.9 (0.71)               | 23.8 (1.59)        |
| Finland.....                          | 13.9                      | 15.6               | 14.8                      | 18.0               | 16.4                      | 23.1               | 18.1                      | 26.6               | 19.2                      | 29.4               | 20.9                      | 31.8               | 21.5                      | 32.9               | 22.6 (0.13)               | 36.0 (0.34)        | 23.5 (0.21)               | 36.7 (0.52)        |
| France.....                           | 11.0                      | 15.3               | 11.9                      | 17.5               | 14.2                      | 21.9               | 14.8                      | 22.3               | 15.6                      | 23.7               | 15.9                      | 23.8               | 16.4                      | 23.7               | 17.3 (0.08)               | 25.7 (0.20)        | 17.5 (0.08)               | 26.0 (0.19)        |
| Germany.....                          | 13.0                      | 12.9               | 13.5                      | 13.5               | 14.1                      | 14.0               | 14.8                      | 15.1               | 15.1                      | 15.6               | 16.1                      | 16.4               | 17.5                      | 17.1 (0.06)        | 18.9 (0.14)               | 17.0 (0.07)        | 18.9 (0.16)               |                    |
| Greece.....                           | 12.2                      | 16.6               | 12.4                      | 16.6               | 12.6                      | 16.5               | 14.5                      | 17.0               | 15.1                      | 17.7               | 15.4                      | 18.7               | 16.8                      | 18.6               | 16.9 (0.09)               | 19.3 (0.21)        | 17.5 (0.29)               | 20.0 (0.51)        |
| Hungary <sup>5</sup> .....            | 13.5                      | 13.7               | 14.1                      | 14.7               | 15.3                      | 16.6               | 16.9                      | 19.1               | 17.4                      | 20.1               | 17.7                      | 21.1               | 18.7                      | 22.9               | 19.4 (0.10)               | 24.1 (0.23)        | 19.6 (0.10)               | 24.7 (0.24)        |
| Iceland.....                          | 17.8                      | 22.3               | 18.8                      | 21.1               | —                         | —                  | 25.9                      | 32.5               | 25.6                      | 28.5               | 26.1                      | 27.9               | 27.9                      | 30.6               | 28.8 (0.48)               | 33.4 (0.96)        | 28.7 (0.48)               | 34.0 (0.98)        |
| Ireland <sup>2</sup> .....            | 10.6                      | 16.1               | 14.0                      | 19.8               | 16.3                      | 23.0               | 18.4                      | 26.2               | 19.9                      | 28.2               | 21.1                      | 29.9               | 22.2                      | 30.6               | 20.9 (0.11)               | 28.8 (0.23)        | 21.8 (0.11)               | 29.7 (0.24)        |
| Israel.....                           | —                         | —                  | —                         | —                  | 27.0                      | 27.2               | 29.8                      | 34.8               | 29.8                      | 34.8               | 28.3                      | 28.1               | 28.8                      | 28.9               | 29.4 (0.18)               | 29.5 (0.35)        | 30.5 (0.18)               | 31.8 (0.35)        |
| Italy <sup>5</sup> .....              | 9.3                       | 10.0               | 10.0                      | 11.8               | —                         | —                  | 11.7                      | 15.5               | 12.4                      | 16.7               | 13.0                      | 18.3               | 14.0                      | 19.6               | 14.1 (0.06)               | 19.9 (0.15)        | 14.4 (0.07)               | 20.5 (0.19)        |
| Japan.....                            | 18.3                      | 23.0               | 19.2                      | 24.3               | 20.9                      | 26.4               | 22.3                      | 27.9               | 23.0                      | 29.7               | 23.1                      | 29.0               | 24.3                      | 30.9               | 24.6 (0.11)               | 31.8 (0.27)        | 25.3 (0.18)               | 33.0 (0.38)        |
| Korea, Republic of.....               | 16.9                      | 23.2               | 17.5                      | 25.0               | 21.7                      | 29.9               | 22.7                      | 31.7               | 23.5                      | 32.9               | 24.4                      | 33.9               | 25.6                      | 34.5               | 27.1 (0.23)               | 37.6 (0.47)        | 27.5 (0.23)               | 39.0 (0.47)        |
| Luxembourg.....                       | 11.7                      | 13.1               | 11.4                      | 15.1               | —                         | —                  | 17.0                      | 23.8               | 16.4                      | 22.7               | 17.7                      | 23.8               | 20.0                      | 27.9               | 20.2 (0.39)               | 24.1 (0.93)        | 20.8 (0.39)               | 26.1 (0.96)        |
| Mexico.....                           | 11.9                      | 14.1               | 13.3                      | 15.3               | 13.6                      | 16.0               | 13.8                      | 17.0               | 14.4                      | 17.5               | 14.9                      | 18.4               | 14.9                      | 18.5               | 15.9 (0.05)               | 20.2 (0.10)        | 16.2 (0.00)               | 20.6 (0.00)        |
| Netherlands.....                      | 20.1                      | 22.7               | 20.9                      | 24.1               | —                         | —                  | 28.3                      | 33.8               | 28.4                      | 34.3               | 29.1                      | 35.1               | 29.8                      | 37.5               | 30.0 (0.09)               | 37.6 (0.22)        | 29.8 (0.10)               | 38.4 (0.23)        |
| New Zealand.....                      | 13.1                      | 15.6               | 13.9                      | 16.9               | 16.1                      | 20.7               | 19.7                      | 26.2               | 23.0                      | 29.8               | 25.3                      | 33.0               | 25.1                      | 33.6               | 23.2 (0.41)               | 30.8 (0.96)        | 24.3 (0.36)               | 31.5 (0.83)        |
| Norway <sup>2</sup> .....             | 25.3                      | 30.6               | 27.6                      | 35.4               | 28.5                      | 37.4               | 30.3                      | 38.9               | 30.5                      | 39.8               | 31.9                      | 40.8               | 33.6                      | 43.8               | 34.5 (0.20)               | 45.5 (0.45)        | 35.2 (0.20)               | 46.2 (0.45)        |
| Poland <sup>2,4</sup> .....           | 11.3                      | 12.3               | 11.9                      | 15.2               | 14.2                      | 20.4               | 16.9                      | 25.5               | 17.9                      | 28.0               | 18.7                      | 30.0               | 19.6                      | 32.1               | 21.2 (0.12)               | 35.4 (0.29)        | 22.9 (0.09)               | 37.4 (0.21)        |
| Portugal <sup>6</sup> .....           | 7.1                       | 9.3                | 6.6                       | 10.6               | 8.4                       | 13.2               | 12.8                      | 19.1               | 13.5                      | 20.0               | 13.7                      | 21.4               | 14.3                      | 23.2               | 14.7 (0.12)               | 23.3 (0.32)        | 15.4 (0.51)               | 24.8 (1.02)        |
| Slovak Republic.....                  | —                         | —                  | 10.3                      | 11.2               | 11.2                      | 12.6               | 12.8                      | 15.4               | 13.3                      | 15.7               | 13.3                      | 16.8               | 14.0                      | 17.8               | 15.0 (0.15)               | 19.7 (0.34)        | 16.6 (0.16)               | 23.5 (0.28)        |
| Slovenia.....                         | —                         | —                  | —                         | —                  | —                         | —                  | 10.6                      | 15.2               | 10.6                      | 15.2               | 11.7                      | 17.6               | 11.8                      | 18.4               | 12.6 (0.17)               | 18.7 (0.42)        | 13.1 (0.17)               | 19.2 (0.43)        |
| Spain.....                            | 14.8                      | 22.1               | 16.9                      | 23.9               | 17.9                      | 25.8               | 19.9                      | 27.0               | 19.8                      | 26.0               | 20.0                      | 26.0               | 20.0                      | 25.7               | 20.1 (0.07)               | 25.0 (0.15)        | 21.5 (0.07)               | 26.9 (0.15)        |
| Sweden.....                           | 13.1                      | 11.1               | 16.9                      | 19.7               | 18.5                      | 23.8               | 20.6                      | 28.4               | 21.7                      | 30.6               | 22.6                      | 31.5               | 23.4                      | 32.4               | 24.3 (0.11)               | 33.9 (0.26)        | 25.4 (0.10)               | 34.0 (0.22)        |
| Switzerland.....                      | 14.5                      | 16.6               | 15.8                      | 15.9               | 17.5                      | 19.6               | 19.0                      | 21.9               | 19.9                      | 23.2               | 21.3                      | 25.6               | 23.3                      | 28.8               | 24.7 (0.24)               | 30.5 (0.56)        | 24.3 (0.15)               | 30.6 (0.37)        |
| Turkey <sup>4</sup> .....             | 7.1                       | 7.6                | 8.9                       | 10.2               | 9.7                       | 11.4               | 9.7                       | 11.8               | 10.4                      | 12.8               | 10.8                      | 13.6               | 12.0                      | 15.5               | 12.7 (0.07)               | 16.6 (0.13)        | 13.1 (0.07)               | 17.4 (0.13)        |
| United Kingdom.....                   | 16.6                      | 18.8               | 18.0                      | 21.0               | 19.3                      | 24.2               | 20.8                      | 26.9               | 21.7                      | 28.6               | 22.7                      | 29.4               | 23.6                      | 30.7               | 26.9 (0.09)               | 36.3 (0.21)        | 28.0 (0.19)               | 37.9 (0.45)        |
| United States.....                    | 27.5                      | 28.7               | 28.3                      | 29.9               | 29.4                      | 30.0               | 29.6                      | 30.3               | 29.9                      | 29.9               | 30.9                      | 31.0               | 31.5                      | 32.3               | 31.4 (0.16)               | 32.1 (0.32)        | 31.7 (0.22)               | 32.8 (0.36)        |
| <b>Other reporting countries</b>      |                           |                    |                           |                    |                           |                    |                           |                    |                           |                    |                           |                    |                           |                    |                           |                    |                           |                    |
| Brazil <sup>2,4</sup> .....           | 7.5                       | 6.5                | 7.6                       | 6.6                | —                         | —                  | —                         | —                  | —                         | —                  | 9.6                       | 10.0               | 10.8                      | 11.0               | 10.9 (0.07)               | 11.6 (0.12)        | — (†)                     | — (†)              |

—Not available.

†Not applicable.

<sup>1</sup>Refers to the mean of the data values for all reporting Organization for Economic Cooperation and Development (OECD) countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year.

<sup>2</sup>Data from 1998 reported for 1999.

<sup>3</sup>Data from 2000 reported for 2001.

<sup>4</sup>Data include vocational degrees.

<sup>5</sup>Data for 1999 to 2003 include vocational degrees.

<sup>6</sup>Data for 2005 to 2010 include vocational degrees.

NOTE: Data in this table refer to degrees classified as International Standard Classification of Education (ISCED) level 5A (first and second award) and as level 6. ISCED 5A, first award, corresponds to the bachelor's degree in the United States; ISCED 5A, second award, corresponds to master's and first-professional degrees in the United States; and ISCED 6 corresponds to doctor's degrees. Standard errors are not available for years prior to 2009.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2001 through 2012. (This table was prepared June 2012.)

**Table 470. Percentage of the population 25 to 64 years old who attained a postsecondary vocational degree, by age group and country: Selected years, 1999 through 2010**  
 [Standard errors appear in parentheses]

| Country                         | 1999                      |                    | 2001                      |                    | 2003                      |                    | 2005                      |                    | 2006                      |                    | 2007                      |                    | 2008                      |                    | 2009                      |                    |                           |                    | 2010                      |                    |
|---------------------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|---------------------------|--------------------|
|                                 | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old | Total, 25 to 64 years old | 25 to 34 years old |
| 1                               | 2                         | 3                  | 4                         | 5                  | 6                         | 7                  | 8                         | 9                  | 10                        | 11                 | 12                        | 13                 | 14                        | 15                 | 16                        | 17                 | 18                        | 19                 |                           |                    |
| <b>OECD average<sup>1</sup></b> | <b>8.4</b>                | <b>10.5</b>        | <b>8.9</b>                | <b>10.8</b>        | <b>9.5</b>                | <b>11.2</b>        | <b>8.8</b>                | <b>9.8</b>         | <b>9.0</b>                | <b>10.0</b>        | <b>9.4</b>                | <b>10.1</b>        | <b>9.7</b>                | <b>10.4</b>        | <b>10.4 (0.03)</b>        | <b>11.0 (0.07)</b> | <b>10.2 (0.03)</b>        | <b>10.9 (0.07)</b> |                           |                    |
| Australia                       | 9.0                       | 8.8                | 9.7                       | 9.7                | 10.8                      | 11.4               | 9.0                       | 8.9                | 9.2                       | 9.6                | 9.6                       | 10.2               | 10.1                      | 9.8                | 10.1 (0.20)               | 10.2 (0.39)        | 10.7 (0.29)               | 10.2 (0.52)        |                           |                    |
| Austria <sup>2</sup>            | 4.7                       | 5.8                | 7.3                       | 7.4                | 7.2                       | 7.0                | 8.7                       | 8.1                | 7.5                       | 6.3                | 7.2                       | 5.6                | 7.4                       | 5.9                | 7.6 (0.08)                | 5.8 (0.16)         | 7.3 (0.19)                | 5.4 (0.29)         |                           |                    |
| Belgium                         | 13.9                      | 17.9               | 14.9                      | 19.7               | 16.0                      | 20.7               | 17.3                      | 21.5               | 17.7                      | 22.5               | 18.1                      | 23.1               | 15.9                      | 19.5               | 15.9 (0.15)               | 18.3 (0.34)        | 17.8 (0.16)               | 20.5 (0.36)        |                           |                    |
| Canada                          | 20.2                      | 23.7               | 21.2                      | 25.4               | 22.0                      | 25.3               | 22.8                      | 25.6               | 22.9                      | 25.5               | 23.7                      | 26.3               | 23.6                      | 26.1               | 24.1 (0.16)               | 26.0 (0.32)        | 24.2 (0.17)               | 25.8 (0.38)        |                           |                    |
| Chile <sup>2,3</sup>            | 0.9                       | 1.4                | 1.0                       | 1.6                | 1.2                       | 1.7                | —                         | —                  | —                         | —                  | —                         | —                  | —                         | 8.5                | 8.0 (0.11)                | 11.0 (0.22)        | 10.3 (0.13)               | 13.1 (0.23)        |                           |                    |
| Denmark                         | —                         | —                  | 5.3                       | 5.8                | 6.9                       | 7.8                | 7.6                       | 9.1                | 7.6                       | 9.1                | 6.7                       | 8.1                | 7.0                       | 8.2                | 7.2 (0.11)                | 8.5 (0.35)         | 6.3 (0.10)                | 6.2 (0.25)         |                           |                    |
| Estonia                         | —                         | —                  | —                         | —                  | —                         | —                  | 11.1                      | 8.7                | 11.1                      | 8.7                | 11.1                      | 9.4                | 12.0                      | 12.3               | 13.2 (0.33)               | 14.8 (0.75)        | 13.3 (0.55)               | 14.0 (1.24)        |                           |                    |
| Finland                         | 17.4                      | 21.8               | 17.5                      | 20.2               | 16.9                      | 16.7               | 16.6                      | 11.0               | 15.9                      | 9.0                | 15.4                      | 7.5                | 15.0                      | 5.4                | 14.7 (0.11)               | 3.4 (0.13)         | 14.7 (0.18)               | 2.5 (0.17)         |                           |                    |
| France                          | 10.5                      | 15.6               | 11.2                      | 16.7               | 9.2                       | 15.5               | 10.0                      | 17.0               | 10.6                      | 17.7               | 10.9                      | 17.7               | 11.1                      | 16.9               | 11.6 (0.07)               | 17.5 (0.18)        | 11.5 (0.06)               | 16.9 (0.16)        |                           |                    |
| Germany                         | 9.9                       | 8.6                | 9.7                       | 8.2                | 9.9                       | 7.8                | 9.7                       | 7.4                | 8.9                       | 6.8                | 8.7                       | 6.5                | 9.0                       | 6.5                | 9.3 (0.05)                | 6.8 (0.09)         | 9.6 (0.05)                | 7.2 (0.10)         |                           |                    |
| Greece                          | 5.5                       | 8.6                | 5.4                       | 7.4                | 5.7                       | 7.1                | 6.7                       | 8.4                | 7.0                       | 9.0                | 7.4                       | 9.4                | 6.6                       | 9.6                | 6.7 (0.06)                | 10.1 (0.16)        | 7.2 (0.16)                | 10.9 (0.34)        |                           |                    |
| Hungary                         | —                         | —                  | —                         | —                  | —                         | —                  | 0.2                       | 0.5                | 0.3                       | 0.6                | #                         | 0.9                | #                         | 1.0                | # (†)                     | 1.0 (#)            | 0.6 (0.02)                | 1.4 (0.06)         |                           |                    |
| Iceland                         | 4.6                       | 5.3                | 6.0                       | 5.5                | —                         | —                  | 4.7                       | 3.3                | 3.9                       | 3.0                | 3.7                       | 3.2                | 3.4                       | 2.2                | 3.9 (0.21)                | 2.5 (0.31)         | 3.8 (0.20)                | 2.2 (0.30)         |                           |                    |
| Ireland <sup>2</sup>            | 10.5                      | 13.4               | 21.6                      | 28.1               | 10.0                      | 14.1               | 10.6                      | 14.4               | 10.9                      | 14.0               | 11.1                      | 14.0               | 11.7                      | 14.5               | 14.9 (0.10)               | 18.7 (0.20)        | 15.6 (0.10)               | 18.4 (0.20)        |                           |                    |
| Israel                          | —                         | —                  | —                         | —                  | 15.9                      | 14.8               | 16.0                      | 15.1               | 16.0                      | 15.1               | 15.2                      | 13.4               | 15.1                      | 13.4               | 15.5 (0.14)               | 13.4 (0.26)        | 15.0 (0.14)               | 12.4 (0.25)        |                           |                    |
| Italy                           | —                         | —                  | —                         | —                  | —                         | —                  | 0.5                       | 0.6                | 0.5                       | 0.6                | 0.5                       | 0.6                | #                         | #                  | # (†)                     | # (†)              | # (†)                     | # (†)              |                           |                    |
| Japan                           | 13.4                      | 22.1               | 14.6                      | 23.4               | 16.5                      | 25.2               | 17.7                      | 25.3               | 17.5                      | 24.4               | 17.9                      | 24.6               | 18.5                      | 24.1               | 19.1 (0.10)               | 23.9 (0.25)        | 19.5 (0.16)               | 23.7 (0.34)        |                           |                    |
| Korea, Republic of              | 5.8                       | 11.9               | 6.7                       | 14.5               | 7.8                       | 16.7               | 8.9                       | 19.3               | 9.5                       | 20.1               | 10.2                      | 21.6               | 10.9                      | 23.3               | 11.6 (0.16)               | 25.5 (0.42)        | 12.2 (0.17)               | 26.0 (0.43)        |                           |                    |
| Luxembourg                      | 6.6                       | 8.1                | 6.7                       | 8.3                | 8.9                       | 12.1               | 9.6                       | 13.2               | 7.6                       | 10.8               | 8.8                       | 11.9               | 7.7                       | 10.8               | 14.6 (0.34)               | 20.4 (0.87)        | 14.7 (0.34)               | 18.1 (0.84)        |                           |                    |
| Mexico                          | 1.3                       | 2.2                | 1.7                       | 2.7                | 1.8                       | 2.7                | 1.1                       | 1.2                | 1.0                       | 1.1                | 1.0                       | 1.1                | 1.1                       | 1.2                | 1.1 (0.01)                | 1.2 (0.03)         | 1.1 (0.00)                | 1.3 (0.00)         |                           |                    |
| Netherlands                     | 2.5                       | 2.4                | 2.3                       | 2.4                | —                         | —                  | 1.8                       | 1.6                | 1.8                       | 1.7                | 1.7                       | 1.6                | 2.4                       | 2.2                | 2.8 (0.03)                | 2.5 (0.07)         | 2.5 (0.03)                | 2.4 (0.07)         |                           |                    |
| New Zealand                     | 13.9                      | 10.4               | 15.3                      | 11.6               | 14.8                      | 11.7               | 7.4                       | 4.6                | 15.3                      | 13.8               | 15.7                      | 14.3               | 14.9                      | 13.9               | 16.9 (0.36)               | 15.9 (0.76)        | 16.4 (0.31)               | 14.9 (0.64)        |                           |                    |
| Norway <sup>2</sup>             | 2.0                       | 2.2                | 2.6                       | 2.6                | 2.5                       | 2.4                | 2.4                       | 1.9                | 2.4                       | 1.7                | 2.4                       | 1.9                | 2.4                       | 1.8                | 2.2 (0.06)                | 1.4 (0.11)         | 2.1 (0.06)                | 1.0 (0.09)         |                           |                    |
| Portugal                        | 2.7                       | 3.0                | 2.4                       | 3.1                | 2.4                       | 3.1                | —                         | —                  | —                         | —                  | —                         | —                  | —                         | —                  | — (†)                     | — (†)              | — (†)                     | — (†)              |                           |                    |
| Slovak Republic                 | —                         | —                  | 0.6                       | 0.6                | 0.6                       | 0.6                | 0.8                       | 0.9                | 0.9                       | 0.9                | 0.7                       | 0.7                | 0.8                       | 0.6                | 0.8 (0.04)                | 0.9 (0.08)         | 0.7 (0.04)                | 0.6 (0.05)         |                           |                    |
| Slovenia                        | —                         | —                  | —                         | —                  | —                         | —                  | 9.6                       | 9.5                | 9.6                       | 9.5                | 10.6                      | 12.4               | 10.8                      | 11.7               | 10.8 (0.16)               | 11.7 (0.35)        | 10.6 (0.16)               | 12.2 (0.36)        |                           |                    |
| Spain                           | 6.2                       | 11.4               | 6.7                       | 11.6               | 7.2                       | 11.7               | 8.3                       | 12.8               | 8.7                       | 13.2               | 9.0                       | 13.0               | 9.2                       | 13.0               | 9.5 (0.05)                | 13.2 (0.11)        | 9.2 (0.05)                | 12.2 (0.11)        |                           |                    |
| Sweden                          | 15.6                      | 20.7               | 14.7                      | 17.1               | 14.9                      | 16.7               | 9.1                       | 8.9                | 8.8                       | 8.5                | 8.7                       | 8.5                | 8.6                       | 8.4                | 8.7 (0.07)                | 8.5 (0.15)         | 8.8 (0.06)                | 8.2 (0.13)         |                           |                    |
| Switzerland                     | 9.1                       | 9.3                | 9.6                       | 9.7                | 9.4                       | 9.8                | 9.7                       | 9.1                | 9.9                       | 9.0                | 10.0                      | 9.5                | 10.4                      | 9.7                | 10.3 (0.17)               | 9.4 (0.36)         | 10.8 (0.11)               | 9.9 (0.24)         |                           |                    |
| United Kingdom                  | 8.2                       | 8.4                | 8.0                       | 9.0                | 8.7                       | 8.9                | 8.8                       | 8.1                | 8.7                       | 8.2                | 9.1                       | 7.7                | 9.0                       | 7.7                | 10.0 (0.06)               | 8.5 (0.12)         | 10.2 (0.13)               | 8.1 (0.25)         |                           |                    |
| United States                   | 8.3                       | 8.7                | 9.0                       | 9.2                | 9.0                       | 8.6                | 9.4                       | 9.0                | 9.6                       | 9.3                | 9.4                       | 9.3                | 9.6                       | 9.3                | 9.8 (0.08)                | 8.9 (0.15)         | 10.0 (0.12)               | 9.5 (0.22)         |                           |                    |

—Not available.

†Not applicable.

#Rounds to zero.

<sup>1</sup>Refers to the mean of the data values for all reporting Organization for Economic Cooperation and Development (OECD) countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year.

<sup>2</sup>Data from 1998 reported for 1999.

<sup>3</sup>Data from 2000 reported for 2001.

NOTE: Data in this table refer to degrees classified as International Standard Classification of Education (ISCED) level 5B. ISCED level 5B corresponds to the associate's degree in the United States. Standard errors are not available for years prior to 2009.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2001 through 2012. (This table was prepared June 2012.)

Table 471. Number of bachelor's degree recipients per 100 persons at the typical age of graduation, by sex and country: 2003 through 2009

| Country                          | Typical age of graduation, 2009 | Total |             |             |             |             |             |             | Male |             |             |             |             |             |             | Female |             |             |             |             |             |             |
|----------------------------------|---------------------------------|-------|-------------|-------------|-------------|-------------|-------------|-------------|------|-------------|-------------|-------------|-------------|-------------|-------------|--------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                  |                                 | 2003  | 2004        | 2005        | 2006        | 2007        | 2008        | 2009        | 2003 | 2004        | 2005        | 2006        | 2007        | 2008        | 2009        | 2003   | 2004        | 2005        | 2006        | 2007        | 2008        | 2009        |
| 1                                | 2                               | 3     | 4           | 5           | 6           | 7           | 8           | 9           | 10   | 11          | 12          | 13          | 14          | 15          | 16          | 17     | 18          | 19          | 20          | 21          | 22          | 23          |
| <b>OECD average<sup>1</sup></b>  | —                               | —     | <b>33.9</b> | <b>34.7</b> | <b>36.2</b> | <b>37.5</b> | <b>39.1</b> | <b>38.9</b> | —    | <b>27.6</b> | <b>27.5</b> | <b>28.7</b> | <b>30.0</b> | <b>31.0</b> | <b>31.0</b> | —      | <b>40.5</b> | <b>42.3</b> | <b>44.0</b> | <b>45.3</b> | <b>47.5</b> | <b>47.1</b> |
| Australia                        | 21-23                           | 54.8  | 46.9        | 59.9        | 59.6        | 60.7        | 58.9        | 58.5        | 46.7 | 37.4        | 47.9        | 47.4        | 48.6        | 47.0        | 46.9        | 63.4   | 57.0        | 72.5        | 72.5        | 73.4        | 71.4        | 70.8        |
| Austria                          | 22-26                           | 19.0  | 19.6        | 20.4        | 21.7        | 22.4        | 25.8        | 30.3        | 18.7 | 19.0        | 19.0        | 20.4        | 20.8        | 22.7        | 25.9        | 19.4   | 20.3        | 21.8        | 22.9        | 24.0        | 29.1        | 34.7        |
| Belgium (Flemish) <sup>2</sup>   | 22-24                           | —     | 18.3        | 18.4        | 19.0        | 35.4        | 27.0        | —           | —    | 17.5        | 17.0        | 17.9        | 32.6        | 24.4        | —           | —      | 19.0        | 19.8        | 20.2        | 38.2        | 29.6        | —           |
| Canada                           | 22-24                           | —     | 31.5        | 33.6        | 39.3        | 35.2        | 39.5        | 38.9        | —    | 24.3        | 25.2        | 29.5        | 26.5        | 29.1        | 29.3        | —      | 39.1        | 42.2        | 49.7        | 44.3        | 50.6        | 49.0        |
| Chile                            | 23-26                           | —     | 25.1        | 11.5        | 15.0        | 14.5        | 14.7        | 17.6        | —    | 22.9        | 9.7         | 13.0        | 11.9        | 11.7        | 13.2        | —      | 27.5        | 13.4        | 17.0        | 17.3        | 17.8        | 22.1        |
| Czech Republic                   | 23-25                           | 17.3  | 21.0        | 26.0        | 30.7        | 36.4        | 39.2        | 39.7        | 15.9 | 18.8        | 22.6        | 26.5        | 31.0        | 32.2        | 30.4        | 18.8   | 23.4        | 29.5        | 35.2        | 42.1        | 46.6        | 49.7        |
| Denmark                          | 24-26                           | 38.6  | 49.9        | 52.9        | 50.3        | 50.9        | 50.3        | 48.3        | 25.1 | 35.6        | 37.2        | 37.0        | 38.3        | 38.3        | 35.3        | 52.3   | 64.4        | 69.2        | 63.7        | 63.9        | 62.6        | 61.7        |
| Estonia                          | 21-23                           | —     | —           | 28.5        | 26.4        | 27.3        | 23.8        | 22.9        | —    | —           | 17.6        | 15.4        | 17.6        | 14.9        | 13.7        | —      | —           | 39.5        | 37.8        | 37.3        | 32.8        | 32.7        |
| Finland <sup>3</sup>             | 24-26                           | 55.8  | 54.7        | 53.8        | 57.3        | 58.8        | 79.8        | 42.3        | 40.4 | 39.5        | 38.8        | 40.6        | 41.3        | 55.3        | 28.7        | 72.2   | 70.5        | 69.7        | 74.5        | 77.4        | 105.6       | 56.6        |
| France                           | 20-25                           | 41.5  | 40.0        | —           | 34.2        | 33.8        | 33.9        | 33.0        | 34.9 | 33.4        | —           | 30.6        | 30.2        | 30.3        | 29.8        | 48.4   | 46.9        | —           | 37.9        | 37.5        | 37.6        | 36.3        |
| Germany                          | 24-27                           | 19.5  | 20.6        | 20.5        | 21.0        | 23.2        | 25.5        | 28.9        | 19.3 | 20.3        | 20.0        | 20.0        | 22.0        | 24.0        | 27.4        | 19.7   | 20.9        | 21.1        | 22.0        | 24.4        | 27.0        | 30.5        |
| Greece <sup>2</sup>              | 22-27                           | —     | 19.1        | 23.9        | 23.5        | 21.7        | 26.6        | —           | —    | 13.3        | 16.3        | 16.1        | 14.7        | 18.3        | —           | —      | 25.4        | 32.2        | 31.7        | 29.4        | 35.5        | —           |
| Hungary                          | 23-25                           | 33.6  | 37.3        | 41.5        | 38.2        | 38.8        | 37.6        | 39.0        | 24.6 | 26.6        | 29.0        | 26.1        | 26.2        | 25.2        | 27.1        | 43.2   | 48.4        | 54.5        | 51.0        | 51.8        | 50.4        | 51.2        |
| Iceland                          | 24-26                           | 44.2  | 50.5        | 56.3        | 62.8        | 62.8        | 55.9        | 50.7        | 29.4 | 31.4        | 33.6        | 37.7        | 38.0        | 34.1        | 30.7        | 59.1   | 70.3        | 80.5        | 89.6        | 88.0        | 78.9        | 72.2        |
| Ireland                          | 21-23                           | 36.8  | 38.6        | 40.7        | 42.8        | 44.8        | 46.0        | 47.1        | 29.7 | 31.9        | 33.3        | 33.4        | 36.4        | 36.9        | 38.5        | 44.0   | 45.3        | 48.0        | 52.5        | 53.4        | 55.2        | 55.4        |
| Israel                           | 26-29                           | —     | 32.3        | 32.9        | 33.4        | 36.1        | 36.3        | 36.4        | —    | 25.3        | 25.7        | 26.8        | 29.1        | 29.6        | 30.8        | —      | 39.6        | 40.2        | 40.3        | 43.1        | 43.1        | 42.0        |
| Italy                            | 23-25                           | 27.8  | 40.1        | 44.8        | 42.7        | 38.7        | 35.8        | 34.6        | 24.0 | 33.3        | 37.3        | 35.1        | 31.6        | 29.5        | 28.5        | 31.6   | 47.2        | 52.7        | 50.6        | 46.1        | 42.3        | 40.9        |
| Japan                            | 21-23                           | 34.4  | 36.3        | 36.9        | 38.7        | 38.8        | 40.6        | 41.5        | 40.1 | 41.4        | 41.3        | 42.8        | 42.9        | 44.9        | 46.1        | 28.5   | 31.0        | 32.2        | 34.3        | 34.4        | 36.0        | 36.7        |
| Korea, Republic of               | 22-24                           | 31.7  | 32.3        | 35.5        | 41.0        | 42.9        | 48.7        | 50.0        | 32.1 | 31.5        | 34.8        | 40.2        | 42.7        | 49.0        | 51.0        | 31.2   | 33.2        | 36.2        | 41.7        | 43.2        | 48.5        | 48.8        |
| Mexico                           | 23-26                           | 14.3  | 13.8        | 15.2        | 18.1        | 18.2        | 17.8        | 19.0        | 13.3 | 13.1        | 14.5        | 16.7        | 16.8        | 16.2        | 17.4        | 15.3   | 14.4        | 15.9        | 19.5        | 19.7        | 19.3        | 20.7        |
| Netherlands                      | 23                              | 42.5  | 42.9        | 47.2        | 49.2        | 47.8        | 46.0        | 45.6        | 36.4 | 37.2        | 40.2        | 42.9        | 41.7        | 39.8        | 39.4        | 48.7   | 48.6        | 54.3        | 55.7        | 54.1        | 52.3        | 51.9        |
| New Zealand                      | 21-23                           | 39.0  | 47.6        | 49.0        | 53.5        | 53.8        | 50.0        | 50.7        | 29.1 | 34.9        | 36.6        | 40.6        | 41.6        | 37.6        | 38.9        | 49.1   | 61.0        | 62.0        | 67.0        | 66.0        | 63.0        | 63.1        |
| Norway                           | 22-25                           | 42.0  | 43.3        | 42.1        | 45.1        | 45.0        | 46.1        | 44.3        | 30.0 | 31.5        | 28.8        | 31.9        | 31.8        | 33.9        | 32.0        | 54.2   | 55.3        | 55.8        | 58.8        | 58.7        | 58.8        | 57.3        |
| Poland                           | 23-25                           | —     | 44.4        | 45.0        | 44.8        | 46.6        | 48.2        | 49.4        | —    | 32.6        | 32.8        | 32.9        | 34.4        | 35.0        | 35.9        | —      | 56.6        | 57.6        | 57.1        | 59.2        | 61.9        | 63.3        |
| Portugal                         | 22-23                           | —     | 32.9        | 33.7        | 34.9        | 46.0        | 50.4        | 44.3        | —    | 20.4        | 21.7        | 22.7        | 35.0        | 40.3        | 35.9        | —      | 45.6        | 46.0        | 47.4        | 57.4        | 60.9        | 53.1        |
| Slovak Republic                  | 22-25                           | —     | 28.3        | 30.1        | 33.7        | 37.9        | 57.6        | 61.7        | —    | 24.4        | 25.6        | 26.0        | 26.8        | 38.7        | 42.8        | —      | 32.4        | 34.8        | 41.8        | 49.6        | 77.3        | 81.5        |
| Slovenia                         | 24-25                           | —     | —           | 21.6        | 21.6        | 21.1        | 22.6        | 27.9        | —    | —           | 14.3        | 14.2        | 13.9        | 14.4        | 17.2        | —      | —           | 29.4        | 29.3        | 29.0        | 31.7        | 39.6        |
| Spain                            | 20-23                           | 32.0  | 35.2        | 35.0        | 35.3        | 34.7        | 35.5        | 37.4        | 25.5 | 27.5        | 27.1        | 27.1        | 26.6        | 27.3        | 28.8        | 38.9   | 43.2        | 43.3        | 43.8        | 43.3        | 44.2        | 46.4        |
| Sweden                           | 25                              | 38.4  | 39.9        | 44.0        | 43.3        | 42.2        | 40.9        | 38.1        | 28.6 | 29.7        | 30.8        | 29.8        | 29.1        | 27.9        | 25.8        | 48.5   | 50.5        | 57.6        | 57.2        | 55.8        | 54.7        | 51.0        |
| Switzerland                      | 24-27                           | 20.9  | 22.4        | 25.0        | 27.0        | 28.9        | 30.6        | 29.2        | 23.5 | 24.0        | 26.1        | 26.8        | 28.7        | 29.2        | 27.0        | 18.4   | 20.9        | 23.9        | 27.1        | 29.2        | 32.0        | 31.5        |
| Turkey                           | 22-26                           | —     | 14.0        | 11.3        | 15.4        | 17.0        | 19.5        | 20.8        | —    | 15.2        | 11.8        | 16.3        | 17.9        | 20.6        | 22.4        | —      | 12.7        | 10.7        | 14.5        | 15.9        | 18.4        | 19.2        |
| United Kingdom                   | 20-24                           | —     | 39.2        | 39.8        | 39.0        | 39.0        | 40.2        | 39.9        | —    | 34.2        | 34.1        | 33.0        | 32.9        | 33.5        | 33.8        | —      | 44.3        | 45.7        | 45.2        | 45.4        | 47.2        | 46.3        |
| United States                    | 21-23                           | 33.4  | 33.2        | 34.2        | 35.5        | 36.5        | 37.3        | 37.8        | 27.6 | 27.5        | 28.1        | 29.1        | 30.1        | 31.0        | 31.4        | 39.4   | 39.2        | 40.7        | 42.4        | 43.4        | 43.9        | 44.5        |
| <b>Other reporting countries</b> |                                 |       |             |             |             |             |             |             |      |             |             |             |             |             |             |        |             |             |             |             |             |             |
| Brazil                           | 22-24                           | —     | 15.6        | 17.5        | 21.3        | 22.7        | 25.6        | 24.9        | —    | 11.8        | 13.3        | 16.2        | 18.4        | 19.9        | 17.9        | —      | 19.4        | 21.6        | 26.4        | 27.0        | 31.3        | 32.0        |
| Russian Federation               | 21-22                           | —     | —           | 45.9        | 43.7        | 48.6        | 52.7        | 51.8        | —    | —           | —           | —           | —           | —           | —           | —      | —           | —           | —           | —           | —           | —           |

—Not available.

<sup>1</sup>Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year. However, if data were reported for less than 75 percent of the countries that were members of OECD in a given year, the average for that year is omitted.

<sup>2</sup>Reference year for typical age of graduation is 2008.

<sup>3</sup>Structural changes in the Finnish higher education system accounted for much of the increase in Finnish degree recipients in 2008, as well as the decrease in 2009. Students had a strong incentive to complete their degrees in 2008. Students who did not complete their degrees in 2008 may have had to spend extra time or take additional courses in order to meet new requirements that went into effect in 2009.

NOTE: Data in this table refer to degrees classified by the Organization for Economic Cooperation and Development (OECD) as International Standard Classification of Education (ISCED) level 5A, first award. This level corresponds to the bachelor's

degree in the United States. The recipients-per-100-persons ratio relates the number of people of all ages earning bachelor's degrees in a particular year to the number of people in the population at the typical age of graduation. The typical age is based on full-time attendance and normal progression through the education system (without repeating coursework, taking time off, etc.); this age varies across countries because of differences in their education systems and differences in program duration. This age is presented for the most recent year of data and may differ from previous years; please see previously published volumes of the *Digest of Education Statistics* for the typical age of graduation in previous years. Data for Luxembourg are not shown because tertiary students study for only 1 year in Luxembourg. Some data have been revised from previously published figures.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2005 through 2012; and Online Education Database, retrieved April 20, 2012, from <http://stats.oecd.org/Index.aspx>. (This table was prepared April 2012.)

**Table 472. Percentage of bachelor's and higher level degrees awarded to women, by field of study and country: 2010**

| Country                          | All fields <sup>1</sup> | Education   | Humanities and arts | Health and welfare | Social sciences, business, and law | Personal, transport, environmental protection, and security services | Engineering, manufacturing, and construction | Sciences, mathematics, and computer science |               |                   |                            |                  | Agriculture |
|----------------------------------|-------------------------|-------------|---------------------|--------------------|------------------------------------|--|--|---|---------------|-------------------|----------------------------|------------------|-------------|
|                                  |                         |             |                     |                    |                                    |  |  | Total                                       | Life sciences | Physical sciences | Mathematics and statistics | Computer science |             |
| 1                                | 2                       | 3           | 4                   | 5                  | 6                                  | 7  | 8  | 9   | 10            | 11                | 12                         | 13               | 14          |
| <b>OECD average<sup>2</sup></b>  | <b>58.0</b>             | <b>77.4</b> | <b>66.6</b>         | <b>74.2</b>        | <b>57.6</b>                        | <b>52.4</b>  | <b>27.2</b>                                  | <b>41.6</b>                                 | <b>64.2</b>   | <b>43.8</b>       | <b>45.9</b>                | <b>19.7</b>      | <b>53.6</b> |
| Australia <sup>3</sup>           | 56.7                    | 74.6        | 63.8                | 75.3               | 53.9                               | 55.0   | 24.3   | 37.3  | 55.1          | 48.1              | 39.9                       | 19.6             | 55.4        |
| Austria                          | 53.1                    | 78.7        | 66.4                | 66.1               | 56.0                               | 44.5   | 24.7   | 35.0  | 66.8          | 34.9              | 37.0                       | 15.4             | 62.6        |
| Belgium                          | 54.6                    | 75.9        | 65.3                | 65.5               | 58.0                               | 39.2   | 25.4   | 35.5  | 51.4          | 33.2              | 44.4                       | 10.3             | 54.3        |
| Canada <sup>3</sup>              | 59.8                    | 76.7        | 64.6                | 83.4               | 57.8                               | 59.6   | 23.5   | 49.0  | 62.6          | 44.8              | 42.4                       | 17.9             | 57.5        |
| Chile                            | 56.6                    | 72.2        | 60.2                | 70.0               | 51.5                               | 52.4   | 26.1   | 33.0  | 52.4          | 41.8              | 47.7                       | 16.6             | 47.8        |
| Czech Republic                   | 59.3                    | 79.6        | 71.5                | 79.2               | 67.3                               | 42.7   | 23.9   | 38.6  | 70.4          | 46.6              | 51.7                       | 12.5             | 59.9        |
| Denmark                          | 59.7                    | 74.4        | 65.5                | 80.1               | 52.3                               | 23.0   | 32.0   | 37.3  | 67.4          | 38.4              | 36.2                       | 20.9             | 72.9        |
| Estonia                          | 68.8                    | 97.4        | 80.8                | 85.3               | 71.4                               | 68.3   | 37.8   | 49.5  | 72.1          | 51.2              | 82.5                       | 25.3             | 56.5        |
| Finland                          | 60.0                    | 81.7        | 74.3                | 86.4               | 66.4                               | 76.4   | 21.5   | 46.3  | 76.2          | 50.3              | 47.5                       | 28.4             | 55.3        |
| France <sup>3</sup>              | 54.5                    | 76.4        | 71.8                | 60.2               | 60.5                               | 42.5   | 30.1   | 37.6  | 62.7          | 38.7              | 36.1                       | 15.8             | 54.8        |
| Germany                          | 55.3                    | 73.7        | 73.1                | 69.4               | 53.5                               | 55.1   | 22.0   | 44.3  | 67.4          | 42.7              | 61.4                       | 15.3             | 54.1        |
| Greece                           | 61.8                    | 76.1        | 78.2                | 59.4               | 64.5                               | #  | 40.7   | 47.6  | 69.1          | 49.3              | 47.9                       | 38.5             | 47.6        |
| Hungary                          | 63.5                    | 80.2        | 73.4                | 78.1               | 67.9                               | 60.6   | 22.6   | 39.4  | 70.2          | 47.8              | 54.7                       | 17.7             | 48.9        |
| Iceland                          | 67.0                    | 83.8        | 68.8                | 87.6               | 59.0                               | 69.8   | 40.3   | 47.9  | 73.5          | 43.4              | 23.1                       | 18.8             | 63.2        |
| Ireland                          | 57.4                    | 76.1        | 61.6                | 80.3               | 54.4                               | 52.2   | 20.7   | 42.0  | 59.8          | 44.4              | 30.8                       | 21.9             | 52.8        |
| Israel                           | 57.4                    | 81.1        | 59.5                | 76.9               | 56.2                               | 72.7   | 26.3   | 44.1  | 62.8          | 40.2              | 37.4                       | 25.1             | 54.2        |
| Italy                            | 59.4                    | 91.5        | 74.3                | 67.9               | 58.0                               | 50.3   | 32.7   | 52.4  | 70.9          | 40.7              | 53.4                       | 15.0             | 33.0        |
| Japan                            | 41.6                    | 59.4        | 68.8                | 56.4               | 35.3                               | 90.2   | 11.1   | 25.6  | —             | —                 | —                          | —                | 38.4        |
| Korea, Republic of               | 47.2                    | 71.1        | 66.6                | 65.0               | 43.5                               | 34.3   | 23.3   | 39.2  | 48.4          | 46.9              | 54.8                       | 20.9             | 39.4        |
| Mexico                           | 55.0                    | 72.9        | 58.3                | 65.7               | 59.2                               | 25.0   | 28.5   | 48.0  | 59.2          | 40.3              | 44.2                       | 41.7             | 35.4        |
| Netherlands                      | 56.7                    | 79.7        | 57.3                | 74.7               | 53.3                               | 53.2   | 19.5   | 22.7  | 62.3          | 24.2              | 32.0                       | 10.9             | 55.2        |
| New Zealand                      | 60.6                    | 80.7        | 63.9                | 79.2               | 56.7                               | 53.0   | 30.2   | 44.3  | 58.9          | 45.8              | 47.8                       | 23.6             | 55.1        |
| Norway                           | 60.9                    | 74.9        | 58.7                | 82.5               | 55.7                               | 46.0   | 26.7   | 36.2  | 74.7          | 38.5              | 31.1                       | 19.7             | 57.8        |
| Poland                           | 65.7                    | 80.2        | 76.1                | 74.9               | 68.6                               | 55.6   | 33.3   | 45.4  | 73.1          | 65.3              | 66.3                       | 16.0             | 56.2        |
| Portugal                         | 60.1                    | 84.7        | 61.1                | 78.3               | 62.6                               | 45.6   | 30.9   | 54.2  | 69.6          | 49.2              | 60.2                       | 23.7             | 58.0        |
| Slovak Republic                  | 64.2                    | 78.2        | 69.2                | 83.7               | 68.8                               | 44.3   | 31.4   | 42.9  | 69.8          | 53.0              | 54.9                       | 11.7             | 47.1        |
| Slovenia                         | 65.1                    | 84.0        | 77.5                | 77.0               | 69.0                               | 58.6   | 32.8   | 49.7  | 72.9          | 44.7              | 52.9                       | 13.4             | 63.6        |
| Spain                            | 59.4                    | 75.6        | 64.6                | 76.3               | 60.2                               | 55.9   | 33.9   | 41.0  | 66.9          | 51.3              | 51.1                       | 19.0             | 48.8        |
| Sweden                           | 63.7                    | 79.7        | 62.3                | 82.7               | 60.9                               | 51.5   | 29.4   | 47.0  | 66.1          | 48.3              | 36.2                       | 24.4             | 63.6        |
| Switzerland                      | 50.7                    | 71.8        | 62.2                | 68.4               | 46.9                               | 51.6   | 19.5   | 34.4  | 52.9          | 32.3              | 31.8                       | 8.2              | 71.0        |
| Turkey                           | 46.1                    | 57.0        | 58.0                | 60.6               | 42.5                               | 31.7   | 28.1   | 44.8  | 60.9          | 43.3              | 49.1                       | 23.3             | 33.3        |
| United Kingdom                   | 55.2                    | 75.9        | 62.2                | 74.0               | 54.3                               | 61.2   | 22.6   | 37.5  | 50.8          | 42.6              | 40.3                       | 18.7             | 65.8        |
| United States                    | 57.7                    | 77.8        | 58.9                | 79.3               | 54.4                               | 55.0   | 21.7   | 43.5  | 57.9          | 39.4              | 41.6                       | 21.1             | 50.6        |
| <b>Other reporting countries</b> |                         |             |                     |                    |                                    |  |  |   |               |                   |                            |                  |             |
| Argentina <sup>3</sup>           | 59.7                    | 80.0        | 71.4                | 67.7               | 60.7                               | 46.8   | 31.8   | 50.3  | 71.1          | 60.2              | 69.2                       | 27.2             | 38.3        |
| Brazil                           | 62.8                    | 76.8        | 52.4                | 77.2               | 57.0                               | 71.4   | 28.3   | 37.8  | 72.0          | 45.1              | 45.7                       | 18.4             | 40.7        |
| China                            | 46.8                    | —           | —                   | —                  | —                                  | —  | —  | —   | —             | —                 | —                          | —                | —           |
| Indonesia                        | 53.1                    | 55.5        | 52.3                | 53.3               | 55.2                               | #  | 50.7   | 52.8  | #             | 53.0              | 52.3                       | 53.0             | 52.4        |
| Saudi Arabia                     | 65.0                    | 70.1        | 71.8                | 50.2               | 58.1                               | —  | 3.6  | 73.4  | 81.3          | 75.3              | 79.0                       | 59.4             | 24.0        |
| South Africa <sup>3</sup>        | 58.1                    | 73.3        | 63.1                | 73.3               | 57.9                               | 70.4   | 27.0   | 46.5  | 64.9          | 48.8              | 37.6                       | 34.3             | 45.9        |

—Not available.

#Rounds to zero.

<sup>1</sup>May contain fields not shown in this table.

<sup>2</sup>Refers to the mean of the data values for all reporting Organization for Economic Cooperation and Development (OECD) countries, to which each country reporting data contributes equally.

<sup>3</sup>Data are for 2009 instead of 2010.

NOTE: Data in this table refer to degrees classified by OECD as International Standard Classification of Education (ISCED) level 5A (first and second award) or level 6. ISCED 5A, first award, corresponds to the bachelor's degree in the United States; ISCED 5A, second award, corresponds to master's and first-professional degrees in the United States; and ISCED 6 corresponds to doctor's degrees. Data for Luxembourg are not shown because tertiary students study for only 1 year in Luxembourg.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance, 2012*. (This table was prepared June 2012.)



Table 473. Percentage of bachelor's degrees awarded in mathematics, science, and engineering, by field of study and country: Selected years, 1990 through 2009

|                                 | All mathematics, science, and engineering degrees <sup>1</sup> |      |      |      |      |      |      | Natural sciences <sup>2</sup> |      |      |      |      |      |      | Mathematics and computer science <sup>3</sup> |      |      |      |      |      |      | Engineering      |      |      |      |      |      |      |
|---------------------------------|--|------|------|------|------|------|------|-------------------------------|------|------|------|------|------|------|---|------|------|------|------|------|------|------------------|------|------|------|------|------|------|
| Country                         | 1990   | 1995 | 2000 | 2005 | 2007 | 2008 | 2009 | 1990                          | 1995 | 2000 | 2005 | 2007 | 2008 | 2009 | 1990  | 1995 | 2000 | 2005 | 2007 | 2008 | 2009 | 1990             | 1995 | 2000 | 2005 | 2007 | 2008 | 2009 |
| 1                               | 2  | 3    | 4    | 5    | 6    | 7    | 8    | 9                             | 10   | 11   | 12   | 13   | 14   | 15   | 16  | 17   | 18   | 19   | 20   | 21   | 22   | 23               | 24   | 25   | 26   | 27   | 28   | 29   |
| OECD average <sup>4</sup> ..... | —  | —    | 22.7 | 22.7 | 22.2 | 21.9 | 21.0 | —                             | —    | 5.7  | 4.8  | 4.6  | 4.7  | 4.6  | —   | —    | 4.1  | 5.3  | 5.0  | 4.8  | 4.2  | —                | —    | 13.6 | 12.8 | 12.6 | 12.4 | 12.3 |
| Australia.....                  | —  | 19.3 | 21.1 | 21.1 | 20.3 | 19.2 | 18.2 | —                             | 9.9  | 7.6  | 5.9  | 6.5  | 6.4  | 6.3  | —   | 3.8  | 5.1  | 8.2  | 6.6  | 5.7  | 4.8  | —                | 5.6  | 8.5  | 7.0  | 7.2  | 7.0  | 7.1  |
| Austria.....                    | 19.6   | 21.1 | 25.7 | 26.8 | 28.6 | 25.6 | 24.9 | 5.3                           | 6.0  | 5.0  | 5.4  | 4.7  | 4.7  | 5.0  | 5.2   | 5.3  | 3.4  | 7.2  | 8.7  | 6.9  | 6.8  | 9.0              | 9.9  | 17.3 | 14.2 | 15.2 | 13.9 | 13.1 |
| Belgium.....                    | —  | —    | 23.6 | 24.7 | 24.2 | 21.3 | 19.3 | —                             | —    | 6.4  | 5.7  | 5.4  | 3.8  | 4.3  | —   | —    | 2.3  | 5.2  | 3.7  | 2.5  | 1.7  | —                | —    | 14.9 | 13.8 | 15.1 | 15.0 | 13.3 |
| Canada.....                     | 16.4   | 16.7 | 20.0 | 20.7 | 21.1 | 20.5 | 20.3 | 6.0                           | 6.5  | 8.1  | 6.5  | 8.9  | 9.4  | 9.3  | 4.2   | 3.8  | 4.3  | 5.9  | 4.6  | 3.6  | 3.4  | 6.2              | 6.4  | 7.6  | 8.2  | 7.7  | 7.5  | 7.6  |
| Chile.....                      | —  | —    | —    | 22.9 | 19.9 | 20.0 | 18.9 | —                             | —    | —    | 3.2  | 1.8  | 2.0  | 1.5  | —   | —    | —    | 2.6  | 2.1  | 2.3  | 2.6  | —                | —    | —    | 17.2 | 16.0 | 15.6 | 14.8 |
| Czech Republic.....             | ( <sup>5</sup> )   | —    | 29.5 | 26.7 | 27.5 | 29.1 | 24.0 | ( <sup>5</sup> )              | —    | 4.2  | 3.9  | 3.4  | 4.6  | 4.1  | ( <sup>5</sup> )                              | —    | 8.4  | 3.8  | 4.9  | 5.5  | 5.5  | ( <sup>5</sup> ) | —    | 16.9 | 19.0 | 19.2 | 18.9 | 14.4 |
| Denmark.....                    | —  | —    | 10.5 | 16.3 | 19.0 | 18.7 | 17.5 | 4.4                           | 2.5  | 6.8  | 2.4  | 2.7  | 2.7  | 3.0  | —   | —    | 3.1  | 3.1  | 2.3  | 2.7  | 2.8  | 21.7             | 17.0 | —    | 10.8 | 13.9 | 13.3 | 11.7 |
| Estonia.....                    | ( <sup>5</sup> )   | —    | —    | 23.8 | 21.9 | 21.8 | 20.1 | ( <sup>5</sup> )              | —    | —    | 6.3  | 5.4  | 5.6  | 4.6  | ( <sup>5</sup> )                              | —    | —    | 6.2  | 6.2  | 6.0  | 5.1  | ( <sup>5</sup> ) | —    | —    | 11.3 | 10.3 | 10.2 | 10.4 |
| Finland.....                    | 33.5   | 37.2 | 32.2 | 30.0 | 28.4 | 26.6 | 25.3 | 4.1                           | 4.0  | 3.9  | 2.7  | 2.9  | 5.0  | 2.5  | 5.9   | 6.9  | 3.3  | 5.6  | 5.2  | 6.4  | 4.1  | 23.4             | 26.3 | 24.9 | 21.7 | 20.2 | 15.1 | 18.7 |
| France.....                     | —  | —    | 30.1 | 26.0 | 26.3 | 26.1 | 26.1 | —                             | —    | 12.2 | 6.5  | 6.6  | 6.3  | 6.0  | —   | —    | 5.5  | 5.5  | 5.6  | 5.5  | 5.8  | —                | —    | 12.5 | 14.0 | 14.1 | 14.3 | 14.4 |
| Germany.....                    | 31.3   | 31.6 | 31.7 | 31.3 | 27.4 | 28.2 | 28.2 | 7.2                           | 6.7  | 6.4  | 6.3  | 6.7  | 7.6  | 7.8  | 3.5   | 5.2  | 4.9  | 8.1  | 8.3  | 8.2  | 8.0  | 20.5             | 19.7 | 20.3 | 16.9 | 12.4 | 12.4 | 12.4 |
| Greece.....                     | —  | —    | —    | 25.9 | 22.1 | 23.8 | —    | —                             | —    | —    | 8.3  | 4.8  | 5.3  | —    | —   | —    | —    | 8.4  | 6.7  | 7.4  | —    | —                | —    | —    | 9.2  | 10.6 | 11.2 | —    |
| Hungary.....                    | —  | —    | 12.6 | 11.0 | 15.3 | 15.1 | 17.1 | —                             | —    | 1.1  | 1.2  | 1.3  | 1.4  | 2.8  | —   | —    | 1.2  | 2.4  | 5.9  | 5.3  | 4.5  | —                | —    | 10.4 | 7.4  | 8.1  | 8.4  | 9.7  |
| Iceland.....                    | —  | —    | 16.5 | 14.1 | 13.5 | 14.9 | 15.2 | —                             | —    | 6.0  | 5.0  | 3.9  | 3.2  | 3.4  | —   | —    | 4.0  | 3.5  | 2.9  | 3.2  | 3.2  | —                | —    | 6.5  | 5.5  | 6.7  | 8.5  | 8.7  |
| Ireland.....                    | 34.1   | 32.3 | 29.3 | 17.7 | 22.7 | 22.8 | 19.4 | 14.1                          | 16.9 | 11.5 | 3.5  | —    | —    | 5.9  | 6.3   | 4.7  | 7.2  | 4.4  | —    | —    | 3.5  | 13.7             | 10.7 | 10.6 | 9.9  | 6.9  | 9.5  | 9.9  |
| Israel.....                     | —  | —    | 19.0 | 26.7 | 21.7 | 21.0 | 21.3 | —                             | —    | 3.1  | 5.1  | 5.5  | 5.2  | 5.0  | —   | —    | 6.8  | 7.5  | 4.1  | 4.1  | 4.2  | —                | —    | 9.1  | 14.1 | 12.1 | 11.7 | 12.1 |
| Italy.....                      | 19.7   | 19.5 | 27.5 | 23.9 | 22.3 | 22.0 | 22.6 | 7.6                           | 6.8  | 5.9  | 4.8  | 4.6  | 4.8  | 5.0  | 3.9   | 3.8  | 3.2  | 2.2  | 2.1  | 2.1  | 2.2  | 8.3              | 8.9  | 18.4 | 16.9 | 15.6 | 15.1 | 15.4 |
| Japan.....                      | —  | —    | 22.3 | 20.8 | 20.1 | 20.0 | 19.5 | 2.4                           | 3.4  | —    | —    | —    | —    | —    | —   | —    | —    | —    | —    | —    | —    | 21.0             | 19.3 | 18.9 | 17.4 | 16.7 | 16.6 | 16.3 |
| Korea, Republic of.....         | —  | —    | 36.9 | 37.0 | 35.6 | 35.1 | 34.7 | —                             | —    | 6.3  | 5.2  | 5.2  | 4.8  | 5.0  | —   | —    | 4.3  | 5.4  | 5.9  | 5.9  | 5.7  | —                | —    | 26.3 | 26.3 | 24.5 | 24.5 | 24.0 |
| Mexico.....                     | —  | —    | 23.0 | 27.3 | 26.5 | 26.8 | 25.9 | —                             | —    | 2.2  | 2.6  | 2.7  | 2.8  | 2.8  | —   | —    | 6.7  | 9.3  | 8.5  | 8.3  | 7.4  | —                | —    | 14.1 | 15.3 | 15.4 | 15.7 | 15.6 |
| Netherlands.....                | 21.1   | —    | 16.2 | 14.9 | 14.0 | 13.7 | 13.5 | 7.1                           | —    | 3.2  | 2.5  | 1.3  | 1.2  | 1.2  | 1.6   | 1.6  | 1.9  | 4.6  | 4.9  | 4.8  | 4.6  | 12.4             | —    | 11.1 | 7.7  | 7.7  | 7.7  | 7.7  |
| New Zealand.....                | 19.5   | —    | 17.8 | 19.9 | 17.6 | 20.7 | 21.1 | 8.2                           | —    | 11.2 | 6.7  | 6.2  | 7.7  | 8.0  | 5.5   | —    | 1.9  | 7.6  | 5.5  | 5.7  | 6.0  | 5.8              | 3.2  | 4.7  | 5.6  | 5.9  | 7.3  | 7.0  |
| Norway.....                     | 12.9   | 16.8 | 11.6 | 13.7 | 12.8 | 13.4 | 14.2 | 2.1                           | 3.1  | 0.7  | 0.8  | 1.6  | 1.7  | 1.9  | 0.6   | 0.5  | 3.4  | 4.7  | 3.0  | 3.2  | 3.0  | 10.2             | 13.2 | 7.5  | 8.2  | 8.2  | 8.5  | 9.3  |
| Poland.....                     | —  | —    | 16.7 | 17.7 | 21.4 | 19.9 | 19.0 | —                             | —    | 2.7  | 2.3  | 3.9  | 3.8  | 3.7  | —   | —    | 2.0  | 5.3  | 5.6  | 5.0  | 4.7  | —                | —    | 12.0 | 10.1 | 12.0 | 11.1 | 10.7 |
| Portugal.....                   | —  | 15.0 | 17.5 | 25.6 | 32.7 | 34.2 | 24.8 | 6.7                           | 2.2  | 1.7  | 6.0  | 4.9  | 5.5  | 3.8  | —   | 2.8  | 3.6  | 6.2  | 7.6  | 8.0  | 2.4  | 10.5             | 9.9  | 12.2 | 13.4 | 20.3 | 20.7 | 18.6 |
| Slovak Republic.....            | ( <sup>5</sup> )   | —    | 21.9 | 24.6 | 21.1 | 19.0 | 18.9 | ( <sup>5</sup> )              | —    | 2.0  | 3.7  | 3.4  | 3.3  | 3.3  | ( <sup>5</sup> )                              | —    | 4.6  | 4.4  | 5.1  | 4.0  | 3.8  | ( <sup>5</sup> ) | —    | 15.3 | 16.5 | 12.7 | 11.7 | 11.8 |
| Slovenia.....                   | ( <sup>5</sup> )   | —    | —    | 17.7 | 17.4 | 16.9 | 15.8 | ( <sup>5</sup> )              | —    | —    | 4.1  | 3.8  | 3.0  | 3.2  | ( <sup>5</sup> )                              | —    | —    | 2.0  | 2.2  | 2.5  | 2.1  | ( <sup>5</sup> ) | —    | —    | 11.7 | 11.4 | 11.4 | 10.6 |
| Spain.....                      | 15.0   | 18.2 | 22.7 | 24.1 | 24.8 | 24.1 | 24.3 | 5.7                           | 4.3  | 5.3  | 4.2  | 3.8  | 3.6  | 3.3  | 2.6   | 4.5  | 4.3  | 5.2  | 5.6  | 5.5  | 5.3  | 6.7              | 9.4  | 13.1 | 14.7 | 15.3 | 15.0 | 15.7 |
| Sweden.....                     | 24.0   | 26.4 | 27.7 | 26.9 | 24.4 | 22.9 | 22.9 | 4.1                           | 3.9  | 3.7  | 3.6  | 3.5  | 3.5  | 3.7  | 4.7   | 5.5  | 3.7  | 4.0  | 3.3  | 2.6  | 2.6  | 15.2             | 17.0 | 20.3 | 19.2 | 17.6 | 16.9 | 16.6 |
| Switzerland.....                | 23.0   | 22.3 | 25.1 | 24.2 | 23.0 | 20.8 | 20.4 | 11.2                          | 10.4 | 6.0  | 6.9  | 6.3  | 6.2  | 5.7  | 3.7   | 3.7  | 1.8  | 4.7  | 4.2  | 3.9  | 3.0  | 8.1              | 8.3  | 17.3 | 12.7 | 12.5 | 10.7 | 11.6 |
| Turkey.....                     | 20.6   | 20.9 | 24.1 | 22.3 | 17.4 | 18.0 | 18.1 | 4.6                           | 5.1  | 7.4  | 6.1  | 5.2  | 5.3  | 5.3  | 2.1   | 2.7  | 3.6  | 4.1  | 3.3  | 3.5  | 3.6  | 13.8             | 13.1 | 13.1 | 12.0 | 8.9  | 9.2  | 9.2  |
| United Kingdom.....             | —  | —    | 28.5 | 26.0 | 24.6 | 24.0 | 24.3 | —                             | —    | 12.5 | 9.2  | 9.1  | 9.2  | 9.5  | —   | —    | 5.8  | 8.3  | 6.9  | 6.2  | 6.0  | —                | —    | 10.2 | 8.4  | 8.5  | 8.6  | 8.8  |
| United States.....              | 16.9   | —    | 17.1 | 16.7 | 16.1 | 15.8 | 15.7 | 5.1                           | —    | 6.6  | 5.8  | 6.3  | 6.4  | 6.4  | 4.0   | 3.3  | 3.9  | 4.8  | 3.7  | 3.4  | 3.3  | 7.8              | 6.7  | 6.6  | 6.2  | 6.0  | 6.0  | 5.9  |
| Other reporting countries       |  |      |      |      |      |      |      |                               |      |      |      |      |      |      |   |      |      |      |      |      |      |                  |      |      |      |      |      |      |
| Brazil.....                     | —  | —    | —    | 11.4 | 11.6 | 11.1 | 11.0 | —                             | —    | —    | 3.2  | 3.2  | 3.3  | 2.9  | —   | —    | —    | 3.5  | 3.1  | 2.9  | 2.9  | —                | —    | —    | —    | 5.3  | 4.9  | 5.2  |
| Russian Federation.....         | ( <sup>5</sup> )   | —    | —    | —    | —    | —    | 24.3 | ( <sup>5</sup> )              | —    | —    | —    | —    | —    | 1.5  | ( <sup>5</sup> )                              | —    | —    | —    | —    | —    | 5.2  | ( <sup>5</sup> ) | —    | —    | —    | —    | —    | 17.6 |

—Not available.

<sup>1</sup>Includes life sciences, physical sciences, mathematics/statistics, computer science, and engineering.<sup>2</sup>Includes life sciences and physical sciences.<sup>3</sup>Includes mathematics/statistics and computer science.<sup>4</sup>Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year. However, if data were reported for less than 75 percent of the countries that were members of OECD in a given year, the average for that year is omitted.<sup>5</sup>Country did not exist in its current form in the given year.

NOTE: Data in this table refer to degrees classified by OECD as International Standard Classification of Education (ISCED) level 5A, first award. This level corresponds to the bachelor's degree in the United States. Data for Luxembourg are not shown because tertiary students study for only 1 year in Luxembourg. Some data have been revised from previously published figures. Detail may not sum to totals because of rounding.

SOURCE: Organization for Economic Cooperation and Development (OECD), Online Education Database, retrieved March 23, 2012, from <http://stats.oecd.org/Index.aspx>; and unpublished tabulations. (This table was prepared March 2012.)

Table 474. Percentage of graduate degrees awarded in mathematics, science, and engineering, by field of study and country: Selected years, 1990 through 2009

| Country                         | All mathematics, science, and engineering degrees <sup>1</sup> |      |                   |                   |      |      | Natural sciences <sup>2</sup> |      |                   |                   |      |      | Mathematics and computer science <sup>3</sup> |      |                  |                  |      |      | Engineering    |      |                   |                  |      |      |
|---------------------------------|--|------|-------------------|-------------------|------|------|-------------------------------|------|-------------------|-------------------|------|------|---|------|------------------|------------------|------|------|----------------|------|-------------------|------------------|------|------|
|                                 | 1990   | 1996 | 2000              | 2005              | 2008 | 2009 | 1990                          | 1996 | 2000              | 2005              | 2008 | 2009 | 1990  | 1996 | 2000             | 2005             | 2008 | 2009 | 1990           | 1996 | 2000              | 2005             | 2008 | 2009 |
| 1                               | 2  | 3    | 4                 | 5                 | 6    | 7    | 8                             | 9    | 10                | 11                | 12   | 13   | 14  | 15   | 16               | 17               | 18   | 19   | 20             | 21   | 22                | 23               | 24   | 25   |
| OECD average <sup>4</sup> ..... | —  | —    | 28.5              | 24.7              | 23.3 | 22.6 | —                             | —    | 11.1              | 8.9               | 7.4  | 6.9  | —   | —    | 5.4              | 4.9              | 5.0  | 4.2  | —              | —    | 12.7              | 11.4             | 11.2 | 11.7 |
| Australia .....                 | —  | 14.0 | 15.2              | 20.0              | 18.8 | 18.9 | —                             | 5.4  | 4.0               | 3.1               | 3.1  | 3.0  | —   | 3.8  | 4.9              | 8.7              | 8.3  | 7.6  | —              | 4.7  | 6.3               | 8.1              | 7.5  | 8.3  |
| Austria .....                   | 37.7   | 38.8 | 39.2              | 38.6              | 31.8 | 33.4 | 12.3                          | 17.5 | 16.7              | 15.0              | 7.5  | 7.6  | 4.6   | 4.7  | 4.7              | 6.6              | 11.3 | 10.8 | 20.8           | 16.6 | 17.7              | 16.9             | 13.0 | 14.9 |
| Belgium .....                   | —  | —    | 19.7              | 18.7              | 18.0 | 21.2 | —                             | —    | —                 | 9.3               | 5.4  | 5.7  | —   | —    | —                | 3.3              | 3.7  | 3.2  | —              | —    | 7.0               | 6.2              | 8.9  | 12.3 |
| Canada .....                    | 20.0   | 22.3 | 22.4              | 18.8              | 26.3 | 26.0 | 7.8                           | 7.7  | 7.4               | 5.0               | 9.9  | 10.1 | 3.4   | 3.5  | 4.1              | 4.0              | 4.3  | 4.1  | 8.8            | 11.2 | 10.9              | 9.8              | 12.1 | 11.9 |
| Chile .....                     | —  | —    | —                 | 8.5               | 11.4 | 7.9  | —                             | —    | —                 | 2.2               | 2.8  | 2.1  | —   | —    | —                | 1.6              | 2.3  | 2.2  | —              | —    | —                 | 4.6              | 6.3  | 3.6  |
| Czech Republic .....            | <sup>(5)</sup>   | —    | 21.0              | 26.1              | 22.2 | 26.9 | <sup>(5)</sup>                | —    | 5.3               | 8.3               | 5.7  | 6.5  | <sup>(5)</sup>                                | —    | 7.9              | 5.6              | 3.8  | 3.9  | <sup>(5)</sup> | —    | 7.7               | 12.3             | 12.7 | 16.5 |
| Denmark .....                   | 22.2   | 12.3 | 27.8              | 23.4              | 21.3 | 23.3 | 5.8                           | 3.1  | 9.8               | 7.5               | 5.9  | 5.7  | 4.8   | 1.5  | 2.5              | 9.2              | 7.6  | 7.9  | 11.6           | 7.8  | 15.4              | 6.7              | 7.8  | 9.7  |
| Estonia .....                   | <sup>(5)</sup>   | —    | —                 | 23.9              | 28.6 | 27.3 | <sup>(5)</sup>                | —    | —                 | 10.0              | 8.2  | 8.3  | <sup>(5)</sup>                                | —    | —                | 5.0              | 7.7  | 5.7  | <sup>(5)</sup> | —    | —                 | 8.9              | 12.6 | 13.3 |
| Finland .....                   | 30.6   | 28.3 | 28.7              | 30.5              | 31.7 | 34.3 | 14.7                          | 11.6 | 11.3              | 11.6              | 12.5 | 5.8  | 5.4   | 4.0  | 2.4              | 4.1              | 4.0  | 3.7  | 10.5           | 12.7 | 14.9              | 14.8             | 15.2 | 24.8 |
| France .....                    | —  | —    | 26.4              | 28.4              | 28.8 | 28.0 | —                             | —    | 13.5              | 12.5              | 10.8 | 11.0 | —   | —    | 5.6              | 7.0              | 6.8  | 6.7  | —              | —    | 7.3               | 8.9              | 11.2 | 10.3 |
| Germany .....                   | 33.2   | 38.6 | 38.1              | 30.9              | 33.7 | 32.2 | 23.5                          | 25.5 | 24.9              | 14.8              | 15.1 | 14.7 | 2.3   | 3.5  | 3.7              | 4.8              | 6.3  | 6.1  | 7.4            | 9.5  | 9.5               | 11.3             | 12.3 | 11.4 |
| Greece .....                    | —  | —    | —                 | 42.8              | 33.0 | —    | —                             | —    | —                 | 22.3              | 6.2  | —    | —   | —    | —                | 5.3              | 11.0 | —    | —              | —    | —                 | 15.2             | 15.7 | —    |
| Hungary .....                   | —  | —    | 9.9               | 6.4               | 8.3  | 10.0 | —                             | —    | 1.7               | 1.8               | 2.6  | 2.8  | —   | —    | 0.7              | 1.7              | 1.4  | 1.2  | —              | —    | 7.5               | 2.9              | 4.4  | 6.0  |
| Iceland .....                   | —  | —    | 35.9              | 23.0              | 10.6 | 12.7 | —                             | —    | 19.4              | 9.5               | 5.8  | 4.6  | —   | —    | #                | 3.0              | 1.1  | 0.9  | —              | —    | 16.5              | 10.5             | 3.7  | 7.2  |
| Ireland .....                   | 34.5   | 23.1 | 28.1              | 16.8              | 19.0 | 16.3 | 19.5                          | 10.9 | 6.9               | 4.1               | —    | 5.1  | 5.8   | 3.0  | 15.2             | 6.3              | —    | 6.2  | 9.3            | 9.2  | 6.0               | 6.4              | 6.1  | 5.1  |
| Israel .....                    | —  | —    | 18.1              | 17.9              | 18.6 | 18.4 | —                             | —    | 9.2               | 8.9               | 9.2  | 8.8  | —   | —    | 2.8              | 3.2              | 3.3  | 3.2  | —              | —    | 6.1               | 5.9              | 6.0  | 6.3  |
| Italy .....                     | —  | —    | 11.7              | 15.9              | —    | —    | —                             | —    | 0.3               | 3.5               | —    | —    | —   | —    | 5.8              | 3.5              | —    | —    | —              | —    | 5.7               | 8.9              | —    | —    |
| Japan .....                     | —  | —    | 54.4              | 50.9              | 47.1 | 46.8 | 9.5                           | 10.2 | —                 | —                 | —    | —    | —   | —    | —                | —                | —    | —    | 45.1           | 44.4 | 41.9              | 38.0             | 34.7 | 34.7 |
| Korea, Republic of .....        | —  | —    | 48.4              | 43.9              | 24.1 | 24.2 | —                             | —    | 8.5               | 9.5               | 4.4  | 4.7  | —   | —    | 5.7              | 2.0              | 1.2  | 1.4  | —              | —    | 34.3              | 32.4             | 18.4 | 18.1 |
| Mexico .....                    | —  | —    | 31.4 <sup>6</sup> | 14.7              | 12.1 | 12.1 | —                             | —    | 18.9 <sup>6</sup> | 3.3               | 2.9  | 2.9  | —   | —    | 4.1 <sup>6</sup> | 3.2              | 3.3  | 2.3  | —              | —    | 8.4 <sup>6</sup>  | 8.2              | 5.9  | 6.9  |
| Netherlands .....               | 28.9   | 18.6 | —                 | 21.3              | 14.6 | 15.1 | 17.7                          | 4.4  | —                 | —                 | —    | —    | 1.5   | 3.7  | —                | —                | —    | —    | 9.7            | 10.6 | —                 | 11.9             | 7.6  | 7.9  |
| New Zealand .....               | 22.6   | 16.7 | 20.5              | 16.6              | 18.5 | 20.1 | 13.8                          | 12.7 | 11.6              | 7.2               | 9.1  | 9.6  | 4.7   | 1.1  | 1.4              | 5.2              | 4.1  | 4.6  | 4.0            | 3.0  | 7.5               | 4.2              | 5.3  | 5.9  |
| Norway .....                    | 33.4   | 38.3 | 22.0              | 25.8              | 22.2 | 19.1 | 8.0                           | 8.7  | 14.9              | 7.8               | 6.1  | —    | 2.1   | 1.9  | 4.6              | 11.9             | 10.8 | —    | 23.3           | 27.7 | 2.5               | 6.1              | 5.3  | 4.3  |
| Poland .....                    | —  | —    | —                 | 9.1               | 11.1 | 11.5 | —                             | —    | —                 | —                 | —    | —    | —   | —    | —                | —                | —    | —    | —              | —    | —                 | 3.5              | 5.0  | 6.5  |
| Portugal .....                  | —  | —    | 39.3 <sup>6</sup> | 33.8              | 49.2 | 32.7 | —                             | —    | 11.7 <sup>6</sup> | 12.0              | 12.2 | 7.2  | —   | —    | 9.4 <sup>6</sup> | 10.0             | 11.2 | 2.3  | —              | —    | 18.2 <sup>6</sup> | 11.9             | 25.8 | 23.2 |
| Slovak Republic .....           | <sup>(5)</sup>   | —    | 38.1              | 36.8              | 28.0 | 25.4 | <sup>(5)</sup>                | —    | 12.6              | 10.8              | 6.3  | 5.3  | <sup>(5)</sup>                                | —    | 4.7              | 4.2              | 2.2  | 3.7  | <sup>(5)</sup> | —    | 20.9              | 21.8             | 19.6 | 16.5 |
| Slovenia .....                  | <sup>(5)</sup>   | —    | —                 | 24.2              | 19.9 | 18.2 | <sup>(5)</sup>                | —    | —                 | 6.4               | 7.2  | 6.1  | <sup>(5)</sup>                                | —    | —                | 4.2              | 2.7  | 2.4  | <sup>(5)</sup> | —    | —                 | 13.6             | 10.1 | 9.7  |
| Spain .....                     | 26.9   | 36.0 | —                 | 37.5 <sup>6</sup> | 26.6 | 24.5 | 19.7                          | 24.8 | 23.9 <sup>6</sup> | 23.8 <sup>6</sup> | 14.0 | 12.3 | 1.4   | 4.1  | 5.4 <sup>6</sup> | 4.6 <sup>6</sup> | 3.9  | 3.5  | 5.7            | 7.1  | 6.8 <sup>6</sup>  | 9.1 <sup>6</sup> | 8.7  | 8.7  |
| Sweden .....                    | 48.5   | 32.3 | 40.5              | 23.7              | 28.1 | 32.0 | 19.4                          | 9.2  | 14.3              | 8.0               | 8.5  | 8.3  | 9.2   | 5.9  | 4.0              | 2.8              | 4.0  | 5.2  | 19.9           | 17.1 | 22.2              | 12.9             | 15.6 | 18.5 |
| Switzerland .....               | 30.2   | 40.1 | 42.7              | 32.0              | 28.9 | 29.5 | 22.0                          | 25.8 | 11.7              | 11.7              | 12.4 | 12.5 | 1.7   | 4.1  | 19.5             | 3.4              | 3.1  | 3.9  | 6.5            | 10.1 | 11.6              | 16.9             | 13.3 | 13.1 |
| Turkey .....                    | 24.0   | —    | 25.7              | 21.4              | 18.8 | 18.3 | 7.6                           | —    | 7.6               | 6.7               | 5.4  | 5.3  | 3.3   | —    | 3.0              | 3.4              | 3.1  | 3.0  | 13.2           | —    | 15.2              | 11.2             | 10.4 | 9.9  |
| United Kingdom .....            | —  | —    | 21.7              | 20.3              | 20.3 | 20.4 | —                             | —    | 7.4               | 5.5               | 5.5  | 5.8  | —   | —    | 5.0              | 5.7              | 5.2  | 4.8  | —              | —    | 9.2               | 9.0              | 9.7  | 9.8  |
| United States .....             | 14.5   | 13.8 | 13.0              | 13.5              | 13.0 | 13.1 | 4.2                           | 4.0  | 3.4               | 3.3               | 3.5  | 3.4  | 3.4   | 3.2  | 3.4              | 3.5              | 3.2  | 3.2  | 6.9            | 6.7  | 6.2               | 6.7              | 6.3  | 6.5  |

—Not available.

#Rounds to zero.

<sup>1</sup>Includes life sciences, physical sciences, mathematics/statistics, computer science, and engineering.

<sup>2</sup>Includes life sciences and physical sciences.

<sup>3</sup>Includes mathematics/statistics and computer science.

<sup>4</sup>Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year. However, if data were reported for less than 75 percent of the countries that were members of OECD in a given year, the average for that year is omitted.

<sup>5</sup>Country did not exist in its current form in the given year.

<sup>6</sup>Only includes doctor's (Ph.D.) degrees.

NOTE: Data in this table refer to degrees classified by OECD as International Standard Classification of Education (ISCED) level 5A, second award, and as ISCED 6. ISCED 5A, second award, corresponds to master's and first-professional degrees in the United States, and ISCED 6 corresponds to doctor's degrees. Data for Luxembourg are not shown because tertiary students study for only 1 year in Luxembourg. Some data have been revised from previously published figures. Detail may not sum to totals because of rounding.

SOURCE: Organization for Economic Cooperation and Development (OECD), Online Education Database, retrieved March 21, 2012, from <http://stats.oecd.org/Index.aspx>; and unpublished tabulations. (This table was prepared March 2012.)

**Table 475. Employment to population ratios of 25- to 64-year-olds, by sex, highest level of educational attainment, and country: 2010**

| Country                          | Total population, 25 to 64 years old |                                  |                        |                              | Male                    |                                  |                        |                              | Female                  |                                  |                        |                              |
|----------------------------------|--------------------------------------|----------------------------------|------------------------|------------------------------|-------------------------|----------------------------------|------------------------|------------------------------|-------------------------|----------------------------------|------------------------|------------------------------|
|                                  | All levels of education              | Less than high school completion | High school completion | Associate's or higher degree | All levels of education | Less than high school completion | High school completion | Associate's or higher degree | All levels of education | Less than high school completion | High school completion | Associate's or higher degree |
| 1                                | 2                                    | 3                                | 4                      | 5                            | 6                       | 7                                | 8                      | 9                            | 10                      | 11                               | 12                     | 13                           |
| <b>OECD average<sup>1</sup></b>  | <b>72.4</b>                          | <b>55.5</b>                      | <b>73.7</b>            | <b>83.1</b>                  | <b>80.0</b>             | <b>66.1</b>                      | <b>80.9</b>            | <b>87.6</b>                  | <b>65.0</b>             | <b>45.7</b>                      | <b>65.8</b>            | <b>78.7</b>                  |
| Australia                        | 77.7                                 | 65.1                             | 80.5                   | 84.0                         | 85.9                    | 77.3                             | 87.8                   | 89.7                         | 69.6                    | 55.0                             | 70.6                   | 79.3                         |
| Austria                          | 75.6                                 | 56.1                             | 77.9                   | 85.7                         | 81.2                    | 64.7                             | 81.8                   | 89.3                         | 70.0                    | 51.4                             | 73.7                   | 81.4                         |
| Belgium                          | 70.3                                 | 48.9                             | 74.5                   | 84.0                         | 76.5                    | 59.2                             | 81.6                   | 86.7                         | 64.0                    | 38.2                             | 66.7                   | 81.6                         |
| Canada                           | 75.5                                 | 55.1                             | 74.0                   | 81.3                         | 79.4                    | 63.0                             | 78.5                   | 84.7                         | 71.7                    | 45.4                             | 68.6                   | 78.5                         |
| Chile                            | 70.9                                 | 61.8                             | 71.8                   | 79.1                         | 86.3                    | 82.6                             | 88.2                   | 87.2                         | 56.2                    | 42.3                             | 56.3                   | 71.2                         |
| Czech Republic                   | 73.5                                 | 43.2                             | 74.5                   | 83.3                         | 83.0                    | 53.1                             | 83.3                   | 91.0                         | 63.7                    | 38.3                             | 65.0                   | 75.0                         |
| Denmark                          | 76.9                                 | 62.9                             | 79.1                   | 85.7                         | 80.2                    | 69.7                             | 80.9                   | 87.5                         | 74.5                    | 56.5                             | 77.0                   | 84.3                         |
| Estonia                          | 70.0                                 | 44.8                             | 68.6                   | 79.9                         | 70.7                    | 45.7                             | 71.9                   | 81.1                         | 69.4                    | 43.3                             | 65.0                   | 79.2                         |
| Finland                          | 74.7                                 | 55.0                             | 74.1                   | 84.1                         | 76.3                    | 59.1                             | 76.1                   | 86.8                         | 73.0                    | 49.4                             | 71.6                   | 82.1                         |
| France                           | 71.5                                 | 55.4                             | 74.4                   | 83.6                         | 76.3                    | 62.4                             | 78.6                   | 86.8                         | 66.9                    | 49.3                             | 69.8                   | 80.8                         |
| Germany                          | 76.2                                 | 55.3                             | 76.3                   | 86.9                         | 81.8                    | 65.5                             | 80.8                   | 90.1                         | 70.5                    | 48.2                             | 71.9                   | 82.8                         |
| Greece                           | 66.6                                 | 56.7                             | 67.1                   | 79.8                         | 79.3                    | 73.8                             | 80.9                   | 84.3                         | 53.9                    | 39.6                             | 53.3                   | 75.1                         |
| Hungary                          | 63.4                                 | 37.6                             | 66.2                   | 78.6                         | 69.4                    | 44.8                             | 71.5                   | 83.1                         | 57.6                    | 32.7                             | 60.2                   | 75.2                         |
| Iceland                          | 82.3                                 | 76.5                             | 82.0                   | 89.1                         | 85.8                    | 81.2                             | 85.8                   | 91.2                         | 79.1                    | 71.8                             | 76.5                   | 87.4                         |
| Ireland                          | 66.5                                 | 46.8                             | 66.4                   | 81.1                         | 72.0                    | 56.0                             | 73.1                   | 84.5                         | 61.5                    | 35.4                             | 59.7                   | 78.3                         |
| Israel                           | 71.2                                 | 44.7                             | 70.1                   | 82.4                         | 76.8                    | 59.6                             | 75.5                   | 85.9                         | 65.7                    | 27.9                             | 64.2                   | 79.5                         |
| Italy                            | 63.5                                 | 50.4                             | 72.6                   | 78.3                         | 75.8                    | 68.0                             | 81.8                   | 84.2                         | 51.4                    | 32.5                             | 63.1                   | 73.6                         |
| Japan                            | 76.1                                 | —                                | 73.3                   | 79.5                         | 88.5                    | —                                | 85.7                   | 91.9                         | 63.7                    | —                                | 61.2                   | 66.7                         |
| Korea, Republic of               | 71.8                                 | 65.0                             | 70.6                   | 76.3                         | 85.5                    | 77.4                             | 84.7                   | 89.1                         | 58.0                    | 57.1                             | 56.8                   | 60.1                         |
| Luxembourg                       | 74.2                                 | 61.9                             | 72.1                   | 85.0                         | 83.6                    | 74.6                             | 81.1                   | 90.7                         | 65.1                    | 52.1                             | 63.2                   | 77.9                         |
| Mexico                           | 67.7                                 | 63.0                             | 71.6                   | 80.4                         | 88.2                    | 87.7                             | 90.1                   | 88.2                         | 49.6                    | 42.5                             | 56.3                   | 71.6                         |
| Netherlands                      | 77.3                                 | 61.1                             | 80.0                   | 87.5                         | 84.0                    | 74.5                             | 85.0                   | 89.8                         | 70.7                    | 49.3                             | 75.0                   | 85.0                         |
| New Zealand                      | 78.6                                 | 68.4                             | 82.0                   | 83.8                         | 86.2                    | 76.3                             | 88.8                   | 90.5                         | 72.4                    | 61.7                             | 73.0                   | 78.7                         |
| Norway                           | 81.1                                 | 63.9                             | 81.8                   | 90.4                         | 83.8                    | 68.1                             | 84.5                   | 91.6                         | 79.1                    | 59.6                             | 78.2                   | 89.4                         |
| Poland                           | 67.0                                 | 39.9                             | 65.6                   | 84.8                         | 74.3                    | 49.6                             | 74.2                   | 88.8                         | 60.1                    | 30.9                             | 56.2                   | 82.0                         |
| Portugal                         | 72.8                                 | 68.2                             | 79.9                   | 85.4                         | 78.1                    | 75.5                             | 83.6                   | 85.9                         | 67.7                    | 60.5                             | 76.3                   | 85.1                         |
| Slovak Republic                  | 68.4                                 | 29.7                             | 69.9                   | 82.2                         | 76.0                    | 37.1                             | 77.2                   | 88.0                         | 61.0                    | 24.9                             | 62.1                   | 77.5                         |
| Slovenia                         | 72.7                                 | 51.1                             | 73.0                   | 87.3                         | 76.4                    | 60.8                             | 76.1                   | 89.6                         | 68.8                    | 43.0                             | 68.9                   | 85.7                         |
| Spain                            | 64.7                                 | 52.9                             | 68.9                   | 79.7                         | 71.9                    | 63.3                             | 75.6                   | 83.1                         | 57.3                    | 41.8                             | 61.9                   | 76.5                         |
| Sweden                           | 81.5                                 | 63.8                             | 82.0                   | 88.1                         | 84.8                    | 73.7                             | 85.5                   | 89.2                         | 78.4                    | 51.1                             | 77.9                   | 87.3                         |
| Switzerland                      | 81.4                                 | 68.3                             | 80.0                   | 88.7                         | 87.9                    | 76.3                             | 86.5                   | 92.5                         | 74.9                    | 63.3                             | 74.4                   | 83.0                         |
| Turkey                           | 54.2                                 | 48.5                             | 60.0                   | 75.7                         | 75.7                    | 72.8                             | 79.4                   | 83.2                         | 29.3                    | 24.1                             | 28.6                   | 64.4                         |
| United Kingdom                   | 75.0                                 | 56.0                             | 76.8                   | 85.1                         | 81.2                    | 66.3                             | 81.8                   | 88.6                         | 68.8                    | 48.1                             | 71.0                   | 81.7                         |
| United States                    | 71.2                                 | 52.1                             | 67.9                   | 80.0                         | 75.7                    | 61.2                             | 72.2                   | 84.5                         | 66.9                    | 41.6                             | 63.5                   | 76.2                         |
| <b>Other reporting countries</b> |                                      |                                  |                        |                              |                         |                                  |                        |                              |                         |                                  |                        |                              |
| Brazil                           | 73.2                                 | —                                | —                      | —                            | 86.3                    | —                                | —                      | —                            | 61.2                    | —                                | —                      | —                            |

—Not available.

<sup>1</sup>Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally.

NOTE: The "high school completion" columns include International Standard Classification of Education (ISCED) levels 3 and 4, with the exception of ISCED level 3C short programs. (ISCED 3C short programs do not correspond to high school completion in the United States and are included in the "less than high school completion" columns in this table.)

ISCED level 5B corresponds to the associate's degree in the United States in this table. Also included in the "associate's or higher degree" columns are the following higher level degrees: ISCED 5A, first award, which corresponds to the bachelor's degree in the United States; ISCED 5A, second award, which corresponds to master's and first-professional degrees in the United States; and ISCED 6, which corresponds to doctor's degrees.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance, 2012*. (This table was prepared June 2012.)

**Table 476. Gross domestic product per capita and public and private education expenditures per student, by level of education and country:  
Selected years, 2005 through 2009**

| Country                            | Gross domestic product per capita |                 |                 |                 | Elementary and secondary<br>education expenditures per student |                       |                    |                     | Higher education expenditures per student |                     |                     |                     |
|------------------------------------|-----------------------------------|-----------------|-----------------|-----------------|--|-----------------------|--------------------|---------------------|---|---------------------|---------------------|---------------------|
|                                    | 2005                              | 2007            | 2008            | 2009            | 2005   | 2007                  | 2008               | 2009                | 2005                                      | 2007                | 2008                | 2009                |
| 1                                  | 2                                 | 3               | 4               | 5               | 6  | 7                     | 8                  | 9                   | 10  | 11                  | 12                  | 13                  |
|                                    | Current dollars                   |                 |                 |                 |  |                       |                    |                     |   |                     |                     |                     |
| <b>OECD average<sup>1</sup></b>    | <b>\$28,772</b>                   | <b>\$33,452</b> | <b>\$34,459</b> | <b>\$33,576</b> | <b>\$6,751</b>   | <b>\$7,407</b>        | <b>\$8,176</b>     | <b>\$8,595</b>      | <b>\$11,387</b>                           | <b>\$12,495</b>     | <b>\$13,463</b>     | <b>\$13,461</b>     |
| Australia.....                     | 33,983                            | 37,615          | 39,532          | 39,971          | 7,142  | 7,590                 | 7,814              | 9,139               | 14,579                                    | 14,726              | 15,043              | 16,074              |
| Austria.....                       | 34,107                            | 36,839          | 39,849          | 38,834          | 9,436  | 9,959                 | 10,994             | 11,681              | 14,775                                    | 15,039              | 15,043              | 14,257              |
| Belgium.....                       | 32,077                            | 34,662          | 36,879          | 36,698          | 7,306  | 8,333                 | 9,706              | 9,783               | 11,960                                    | 13,482              | 15,020              | 15,443              |
| Canada.....                        | —                                 | 38,883          | 38,522          | —               | 7,774 <sup>2</sup>   | 8,388 <sup>2</sup>    | 8,997 <sup>2</sup> | —                   | 23,329 <sup>3,4</sup>                     | 20,903 <sup>3</sup> | 20,932 <sup>3</sup> | —                   |
| Chile.....                         | 12,635                            | —               | 14,106          | 14,578          | 2,099  | 2,089                 | 2,245              | 2,635               | 6,873                                     | 6,292               | 6,626               | 6,071               |
| Czech Republic.....                | 20,280                            | 23,995          | 25,845          | 25,614          | 4,098  | 4,712                 | 5,236              | 5,615               | 6,649                                     | 8,209               | 8,318               | 8,237               |
| Denmark <sup>5</sup> .....         | 33,626                            | 36,326          | 39,494          | 38,299          | 8,997  | 9,448                 | 10,429             | 11,094              | 14,959                                    | 16,466              | 17,634              | 18,556              |
| Estonia.....                       | 16,660                            | 20,620          | 21,802          | 19,789          | 3,736  | 4,637                 | 6,054              | 6,149               | 3,869                                     | 5,653 <sup>4</sup>  | 6,022 <sup>4</sup>  | 6,373               |
| Finland.....                       | 30,468                            | 35,322          | 37,795          | 35,848          | 6,610  | 7,216                 | 8,068              | 8,314               | 12,285                                    | 13,566              | 15,402              | 16,569              |
| France.....                        | 29,644                            | 32,495          | 34,233          | 33,724          | 7,456  | 8,070                 | 8,559              | 8,861               | 10,995                                    | 12,773              | 14,079              | 14,642              |
| Germany.....                       | 30,496                            | 34,683          | 37,171          | 36,048          | 7,039  | 7,243                 | 7,859              | 8,534               | 12,446                                    | 13,823              | 15,390              | 15,711              |
| Greece.....                        | 25,472                            | 27,793          | 29,920          | 29,381          | 5,493 <sup>2</sup>   | —                     | —                  | —                   | 6,130                                     | —                   | —                   | —                   |
| Hungary <sup>3</sup> .....         | 17,014                            | 18,763          | 20,700          | 20,154          | 4,027  | 4,371                 | 4,626              | 4,506               | 6,244                                     | 6,721               | 7,327               | 8,518               |
| Iceland.....                       | 35,571                            | 36,325          | 39,029          | 36,718          | 8,815  | 8,949                 | 9,745              | 9,309               | 9,474 <sup>5</sup>                        | 9,309               | 10,429              | 9,939               |
| Ireland.....                       | 38,061                            | 44,381          | 42,644          | 39,750          | 6,411  | 7,791                 | 8,915 <sup>3</sup> | 9,615 <sup>3</sup>  | 10,468                                    | 12,631              | 16,284 <sup>3</sup> | 16,420 <sup>3</sup> |
| Israel.....                        | 21,474                            | 26,444          | 27,690          | 27,454          | 5,041  | 5,345                 | 5,780              | 5,464               | 10,919                                    | 11,435              | 12,568              | 11,214              |
| Italy.....                         | 27,750                            | 31,016          | 33,271          | 32,397          | 7,410 <sup>3</sup>   | 7,771 <sup>3</sup>    | 9,071 <sup>3</sup> | 8,943 <sup>3</sup>  | 8,026 <sup>3</sup>                        | 8,673               | 9,553               | 9,562               |
| Japan <sup>5</sup> .....           | 30,290                            | 33,635          | 33,902          | 32,324          | 7,343  | 8,012                 | 8,301              | 8,502               | 12,326                                    | 14,201              | 14,890              | 15,957              |
| Korea, Republic of.....            | 21,342                            | 26,574          | 26,877          | 27,171          | 5,638  | 6,663                 | 6,723              | 8,122               | 7,606                                     | 8,920               | 9,081               | 9,513               |
| Luxembourg.....                    | 69,984                            | 82,456          | 89,732          | 82,972          | 15,930 <sup>2,3</sup>  | 15,579 <sup>2,3</sup> | 16,909             | 18,018              | —   | —                   | —                   | —                   |
| Mexico.....                        | 11,299                            | 14,128          | 15,190          | 14,397          | 2,025  | 2,165                 | 2,284              | 2,339               | 6,402                                     | 6,971               | 7,504               | 8,020               |
| Netherlands.....                   | 34,724                            | 39,594          | 42,887          | 41,089          | 7,045  | 8,571                 | 9,251              | 10,030              | 13,883                                    | 15,969              | 17,245              | 17,849              |
| New Zealand.....                   | 24,882                            | 27,020          | 29,231          | 29,204          | 5,659  | 5,454                 | 6,496              | 7,556               | 10,262                                    | 9,905               | 10,526              | 10,619              |
| Norway.....                        | 47,620                            | 53,672          | 43,659          | 54,708          | 9,975  | 10,855                | 12,070             | 12,971              | 15,552                                    | 17,140              | 18,942              | 19,269              |
| Poland <sup>3</sup> .....          | 13,573                            | 16,312          | 18,062          | 18,910          | 3,165  | 3,804                 | 4,682              | 5,167               | 5,593                                     | 5,576               | 7,063               | 7,776               |
| Portugal <sup>3</sup> .....        | 19,967                            | 22,638          | 24,962          | 24,935          | 5,646  | 5,898                 | 6,276              | 7,288               | 8,787                                     | 10,398              | 10,373              | 10,481              |
| Slovak Republic <sup>6</sup> ..... | 15,881                            | 20,570          | 23,205          | 22,620          | 2,740  | 3,296                 | 4,006              | 4,781               | 5,783                                     | 5,736               | 6,560               | 6,758               |
| Slovenia.....                      | 23,043                            | 26,257          | 29,241          | 27,150          | 7,065  | 7,267                 | 8,555              | 8,670               | 8,573                                     | 8,559               | 9,263               | 9,311               |
| Spain.....                         | 27,270                            | 31,469          | 33,173          | 32,146          | 6,411  | 7,671                 | 8,522              | 8,818               | 10,089                                    | 12,548              | 13,366              | 13,614              |
| Sweden.....                        | 32,770                            | 36,785          | 39,321          | 37,192          | 7,861  | 8,773                 | 9,524              | 9,709               | 15,946                                    | 18,361              | 20,014              | 19,961              |
| Switzerland <sup>3</sup> .....     | 35,500                            | 41,800          | 45,517          | 44,773          | 10,721   | 11,702                | 13,775             | 13,411              | 21,734                                    | 20,883              | 21,648              | 21,577              |
| United Kingdom.....                | 31,580                            | 34,957          | 36,817          | 34,483          | 6,888  | 8,622                 | 9,169              | 9,602               | 13,506                                    | 15,463              | 15,310              | 16,338              |
| United States.....                 | 41,674                            | 46,434          | 46,901          | 45,087          | 9,769  | 10,768                | 10,995             | 11,831              | 24,370                                    | 27,010              | 29,910              | 29,201              |
|                                    | Constant 2011 dollars             |                 |                 |                 |  |                       |                    |                     |   |                     |                     |                     |
| <b>OECD average<sup>1</sup></b>    | <b>\$33,140</b>                   | <b>\$36,291</b> | <b>\$36,002</b> | <b>\$35,204</b> | <b>\$7,775</b>   | <b>\$8,035</b>        | <b>\$8,542</b>     | <b>\$9,012</b>      | <b>\$13,116</b>                           | <b>\$13,555</b>     | <b>\$14,066</b>     | <b>\$14,114</b>     |
| Australia.....                     | 39,142                            | 40,807          | 41,301          | 41,910          | 8,226  | 8,234                 | 8,163              | 9,582               | 16,793                                    | 15,976              | 15,716              | 16,854              |
| Austria.....                       | 39,285                            | 39,965          | 41,632          | 40,717          | 10,869   | 10,804                | 11,486             | 12,247              | 17,018                                    | 16,316              | 15,717              | 14,949              |
| Belgium.....                       | 36,946                            | 37,604          | 38,530          | 38,477          | 8,415  | 9,040                 | 10,140             | 10,258              | 13,776                                    | 14,626              | 15,693              | 16,192              |
| Canada.....                        | —                                 | 42,183          | 40,246          | —               | 8,954 <sup>2</sup>   | 9,100 <sup>2</sup>    | 9,399 <sup>2</sup> | —                   | 26,871 <sup>3,4</sup>                     | 22,677 <sup>3</sup> | 21,869 <sup>3</sup> | —                   |
| Chile.....                         | 14,553                            | —               | 14,737          | 15,284          | 2,417  | 2,266                 | 2,345              | 2,763               | 7,916                                     | 6,826               | 6,923               | 6,365               |
| Czech Republic.....                | 23,359                            | 26,031          | 27,002          | 26,856          | 4,720  | 5,112                 | 5,471              | 5,888               | 7,658                                     | 8,906               | 8,690               | 8,636               |
| Denmark <sup>5</sup> .....         | 38,731                            | 39,409          | 41,262          | 40,156          | 10,363   | 10,250                | 10,896             | 11,632              | 17,230                                    | 17,863              | 18,423              | 19,456              |
| Estonia.....                       | 19,189                            | 22,370          | 22,778          | 20,748          | 4,303  | 5,031                 | 6,325              | 6,448               | 4,456                                     | 6,133 <sup>4</sup>  | 6,292 <sup>4</sup>  | 6,682               |
| Finland.....                       | 35,094                            | 38,320          | 39,487          | 37,586          | 7,614  | 7,829                 | 8,429              | 8,717               | 14,150                                    | 14,717              | 16,091              | 17,372              |
| France.....                        | 34,144                            | 35,252          | 35,765          | 35,359          | 8,588  | 8,755                 | 8,942              | 9,290               | 12,665                                    | 13,857              | 14,709              | 15,352              |
| Germany.....                       | 35,125                            | 37,627          | 38,835          | 37,796          | 8,107  | 7,857                 | 8,210              | 8,948               | 14,335                                    | 14,996              | 16,078              | 16,473              |
| Greece.....                        | 29,339                            | 30,152          | 31,259          | 30,806          | 6,327 <sup>2</sup>   | —                     | —                  | —                   | 7,061                                     | —                   | —                   | —                   |
| Hungary <sup>3</sup> .....         | 19,597                            | 20,356          | 21,626          | 21,132          | 4,638  | 4,742                 | 4,833              | 4,725               | 7,192                                     | 7,291               | 7,655               | 8,931               |
| Iceland.....                       | 40,971                            | 39,408          | 40,776          | 38,498          | 10,153   | 9,708                 | 10,181             | 9,760               | 10,913 <sup>5</sup>                       | 10,099              | 10,896              | 10,420              |
| Ireland.....                       | 43,839                            | 48,148          | 44,552          | 41,677          | 7,384  | 8,453                 | 9,314 <sup>3</sup> | 10,082 <sup>3</sup> | 12,057                                    | 13,703              | 17,013 <sup>3</sup> | 17,216 <sup>3</sup> |
| Israel.....                        | 24,734                            | 28,688          | 28,929          | 28,786          | 5,806  | 5,799                 | 6,039              | 5,729               | 12,577                                    | 12,406              | 13,131              | 11,758              |
| Italy.....                         | 31,962                            | 33,648          | 34,760          | 33,968          | 8,534 <sup>3</sup>   | 8,430 <sup>3</sup>    | 9,477 <sup>3</sup> | 9,377 <sup>3</sup>  | 9,244 <sup>3</sup>                        | 9,409               | 9,981               | 10,025              |
| Japan <sup>5</sup> .....           | 34,889                            | 36,489          | 35,420          | 33,892          | 8,458  | 8,692                 | 8,672              | 8,914               | 14,197                                    | 15,407              | 15,556              | 16,731              |
| Korea, Republic of.....            | 24,582                            | 28,829          | 28,080          | 28,488          | 6,494  | 7,228                 | 7,024              | 8,516               | 8,761                                     | 9,677               | 9,488               | 9,974               |
| Luxembourg.....                    | 80,608                            | 89,454          | 93,748          | 86,995          | 18,349 <sup>2,3</sup>  | 16,901 <sup>2,3</sup> | 17,666             | 18,891              | —   | —                   | —                   | —                   |

See notes at end of table.

**Table 476. Gross domestic product per capita and public and private education expenditures per student, by level of education and country: Selected years, 2005 through 2009—Continued**

| Country                            | Gross domestic product per capita |        |        |        | Elementary and secondary education expenditures per student |        |        |        | Higher education expenditures per student |        |        |        |
|------------------------------------|-----------------------------------|--------|--------|--------|---|--------|--------|--------|---|--------|--------|--------|
|                                    | 2005                              | 2007   | 2008   | 2009   | 2005  | 2007   | 2008   | 2009   | 2005                                      | 2007   | 2008   | 2009   |
| 1                                  | 2                                 | 3      | 4      | 5      | 6   | 7      | 8      | 9      | 10  | 11     | 12     | 13     |
| Mexico .....                       | 13,014                            | 15,327 | 15,870 | 15,095 | 2,333   | 2,349  | 2,386  | 2,452  | 7,374                                     | 7,563  | 7,840  | 8,409  |
| Netherlands .....                  | 39,996                            | 42,954 | 44,807 | 43,082 | 8,115   | 9,299  | 9,665  | 10,517 | 15,991                                    | 17,324 | 18,016 | 18,715 |
| New Zealand.....                   | 28,659                            | 29,313 | 30,539 | 30,620 | 6,519   | 5,917  | 6,786  | 7,923  | 11,820                                    | 10,746 | 10,997 | 11,134 |
| Norway.....                        | 54,850                            | 58,227 | 45,613 | 57,360 | 11,490  | 11,776 | 12,611 | 13,600 | 17,913                                    | 18,594 | 19,789 | 20,203 |
| Poland <sup>3</sup> .....          | 15,633                            | 17,696 | 18,871 | 19,827 | 3,645   | 4,127  | 4,891  | 5,417  | 6,442                                     | 6,049  | 7,379  | 8,153  |
| Portugal <sup>3</sup> .....        | 22,999                            | 24,560 | 26,079 | 26,145 | 6,503   | 6,398  | 6,557  | 7,641  | 10,121                                    | 11,281 | 10,837 | 10,989 |
| Slovak Republic <sup>6</sup> ..... | 18,292                            | 21,990 | 24,244 | 23,717 | 3,156   | 3,575  | 4,186  | 5,012  | 6,661                                     | 6,223  | 6,854  | 7,086  |
| Slovenia.....                      | 26,542                            | 28,810 | 30,549 | 28,466 | 8,137   | 7,883  | 8,938  | 9,091  | 9,875                                     | 9,285  | 9,677  | 9,763  |
| Spain .....                        | 31,410                            | 34,140 | 34,658 | 33,705 | 7,384   | 8,322  | 8,903  | 9,246  | 11,621                                    | 13,613 | 13,965 | 14,274 |
| Sweden.....                        | 37,745                            | 39,907 | 41,081 | 38,995 | 9,055   | 9,517  | 9,951  | 10,180 | 18,367                                    | 19,920 | 20,910 | 20,929 |
| Switzerland <sup>3</sup> .....     | 40,889                            | 45,348 | 47,554 | 46,944 | 12,348  | 12,695 | 14,392 | 14,061 | 25,034                                    | 22,656 | 22,617 | 22,623 |
| United Kingdom .....               | 36,375                            | 37,924 | 38,465 | 36,155 | 7,934   | 9,354  | 9,579  | 10,068 | 15,557                                    | 16,776 | 15,995 | 17,130 |
| United States .....                | 48,001                            | 50,375 | 49,000 | 47,274 | 11,252  | 11,682 | 11,488 | 12,404 | 28,070                                    | 29,302 | 31,249 | 30,616 |

—Not available.

<sup>1</sup>Refers to the mean of the data values for all reporting OECD countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year.

<sup>2</sup>Includes preprimary education.

<sup>3</sup>Public institutions only.

<sup>4</sup>Excludes occupation-specific education corresponding to that offered at the vocational associate's degree level in the United States.

<sup>5</sup>Postsecondary non-higher-education included in both secondary and higher education.

<sup>6</sup>Occupation-specific education corresponding to that offered at the vocational associate's degree level in the United States is included under elementary and secondary education instead of under higher education.

NOTE: Includes all expenditures by public and private education institutions (such as administration, instruction, ancillary services for students and families, and research and development) unless otherwise noted. Postsecondary non-higher-education is included in elementary and secondary education unless otherwise noted. Data adjusted to U.S. dollars using the purchasing-power-parity (PPP) index. Constant dollars based on the Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor.

SOURCE: Organization for Economic Cooperation and Development (OECD), *Education at a Glance*, 2008 through 2012. (This table was prepared June 2012.)

Table 477. Public and private direct expenditures on education institutions as a percentage of gross domestic product, by level of education and country: Selected years, 1995 through 2009

| Country                   | All institutions (including preprimary education and subsidies to households, not separately shown) |                   |                   |                   |                   |                           |         |       | Elementary and secondary institutions |                      |                    |                   |                   |                           |                    |                    |      | Higher education institutions |                   |                   |                   |                     |                           |                    |  |  |
|---------------------------|---|-------------------|-------------------|-------------------|-------------------|---------------------------|---------|-------|---------------------------------------|----------------------|--------------------|-------------------|-------------------|---------------------------|--------------------|--------------------|------|-------------------------------|-------------------|-------------------|-------------------|---------------------|---------------------------|--------------------|--|--|
|                           | Public direct expenditures  |                   |                   |                   |                   | Direct expenditures, 2009 |         |       | Public direct expenditures            |                      |                    |                   |                   | Direct expenditures, 2009 |                    |                    |      | Public direct expenditures    |                   |                   |                   |                     | Direct expenditures, 2009 |                    |  |  |
|                           | 1995  | 2000 <sup>1</sup> | 2005 <sup>1</sup> | 2007 <sup>1</sup> | 2008 <sup>1</sup> | Public <sup>1</sup>       | Private | Total | 1995                                  | 2000 <sup>1</sup>    | 2005 <sup>1</sup>  | 2007 <sup>1</sup> | 2008 <sup>1</sup> | Public <sup>1</sup>       | Private            | Total              | 1995 | 2000 <sup>1</sup>             | 2005 <sup>1</sup> | 2007 <sup>1</sup> | 2008 <sup>1</sup> | Public <sup>1</sup> | Private                   | Total              |  |  |
| 1                         | 2   | 3                 | 4                 | 5                 | 6                 | 7                         | 8       | 9     | 10                                    | 11                   | 12                 | 13                | 14                | 15                        | 16                 | 17                 | 18   | 19                            | 20                | 21                | 22                | 23                  | 24                        | 25                 |  |  |
| OECD average <sup>2</sup> | 4.9   | 4.9               | 5.0               | 4.8               | 5.1               | 5.4                       | 0.9     | 6.3   | 3.5                                   | 3.4                  | 3.5                | 3.3               | 3.5               | 3.7                       | 0.3                | 4.0                | 0.9  | 1.0                           | 1.0               | 1.0               | 1.1               | 1.1                 | 0.5                       | 1.6                |  |  |
| Australia                 | 4.5   | 4.6               | 4.3               | 3.7               | 3.7               | 4.5                       | 1.5     | 6.0   | 3.2                                   | 3.7                  | 3.4                | 2.9               | 3.0               | 3.6                       | 0.6                | 4.2                | 1.2  | 0.8                           | 0.8               | 0.7               | 0.7               | 0.7                 | 0.9                       | 1.6                |  |  |
| Austria                   | 5.3   | 5.4 <sup>3</sup>  | 5.2               | 5.1               | 5.2               | 5.7                       | 0.2     | 5.9   | 3.8                                   | 3.7 <sup>3</sup>     | 3.5                | 3.5               | 3.5               | 3.8                       | 0.1                | 3.9                | 0.9  | 1.2 <sup>3</sup>              | 1.2               | 1.3               | 1.2               | 1.4                 | 0.1                       | 1.4                |  |  |
| Belgium                   | 5.0   | 5.1               | 5.8               | 5.9               | 6.3               | 6.4                       | 0.3     | 6.7   | 3.4                                   | 3.4 <sup>4</sup>     | 3.9                | 3.9               | 4.3               | 4.3                       | 0.2                | 4.4                | 0.9  | 1.2 <sup>4</sup>              | 1.2               | 1.2               | 1.3               | 1.4                 | 0.1                       | 1.5                |  |  |
| Canada                    | 5.8   | 5.2               | 4.8               | 4.6               | 6.1               | —                         | —       | —     | 4.0                                   | 3.3 <sup>5</sup>     | 3.3 <sup>5,6</sup> | 3.1 <sup>6</sup>  | 3.6 <sup>6</sup>  | —                         | —                  | —                  | 1.5  | 1.6 <sup>5</sup>              | 1.5 <sup>5</sup>  | 1.5               | 2.5               | —                   | —                         | —                  |  |  |
| Chile                     | —   | 4.2               | 3.3               | 3.1               | 3.7               | 4.1                       | 2.9     | 7.0   | —                                     | 3.2                  | 2.7                | 2.5               | 3.0               | 3.3                       | 0.9                | 4.2                | —    | 0.6                           | 0.3               | 0.3               | 0.3               | 0.3                 | 1.9                       | 2.1                |  |  |
| Czech Republic            | 4.8   | 4.2               | 4.1               | 4.1               | 3.9               | 4.2                       | 0.6     | 4.8   | 3.4                                   | 2.8 <sup>4</sup>     | 2.7                | 2.5               | 2.5               | 2.6                       | 0.3                | 2.9                | 0.7  | 0.8 <sup>4</sup>              | 0.8               | 1.0               | 0.9               | 1.0                 | 0.2                       | 1.3                |  |  |
| Denmark                   | 6.5   | 6.4 <sup>3</sup>  | 6.8               | 6.6               | 6.5               | 7.5                       | 0.3     | 7.9   | 4.2                                   | 4.1 <sup>3,7</sup>   | 4.4 <sup>7</sup>   | 4.2 <sup>7</sup>  | 4.2 <sup>7</sup>  | 4.7 <sup>7</sup>          | 0.1 <sup>7</sup>   | 4.8 <sup>7</sup>   | 1.3  | 1.5 <sup>3,7</sup>            | 1.6 <sup>7</sup>  | 1.6 <sup>7</sup>  | 1.6 <sup>7</sup>  | 1.8 <sup>7</sup>    | 0.1 <sup>7</sup>          | 1.9 <sup>7</sup>   |  |  |
| Estonia                   | —   | —                 | 4.7               | 4.7               | 5.5               | 5.9                       | 0.4     | 6.3   | —                                     | —                    | 3.5                | 3.3               | 3.8               | 4.1                       | 0.1                | 4.2                | —    | —                             | 0.9               | 1.1               | 1.1               | 1.3                 | 0.3                       | 1.6                |  |  |
| Finland                   | 6.6   | 5.5               | 5.9               | 5.5               | 5.7               | 6.3                       | 0.1     | 6.4   | 4.2                                   | 3.5                  | 3.8                | 3.6               | 3.8               | 4.1                       | #                  | 4.1                | 1.7  | 1.7                           | 1.7               | 1.6               | 1.6               | 1.8                 | 0.1                       | 1.9                |  |  |
| France                    | 5.8   | 5.7               | 5.6               | 5.5               | 5.5               | 5.8                       | 0.5     | 6.3   | 4.1                                   | 4.0                  | 3.8                | 3.7               | 3.7               | 3.8                       | 0.2                | 4.1                | 1.0  | 1.0                           | 1.1               | 1.2               | 1.2               | 1.3                 | 0.2                       | 1.5                |  |  |
| Germany                   | 4.5   | 4.3               | 4.2               | 4.0               | 4.1               | 4.5                       | 0.8     | 5.3   | 2.9                                   | 2.9                  | 2.8                | 2.6               | 2.6               | 2.9                       | 0.4                | 3.3                | 1.0  | 1.0                           | 0.9               | 0.9               | 1.0               | 1.1                 | 0.2                       | 1.3                |  |  |
| Greece                    | 3.7   | 3.7 <sup>3</sup>  | 4.0               | —                 | —                 | —                         | —       | —     | 2.8                                   | 2.7 <sup>3,6</sup>   | 2.5 <sup>6</sup>   | —                 | —                 | —                         | —                  | —                  | 0.8  | 0.9 <sup>3</sup>              | 1.4               | —                 | —                 | —                   | —                         | —                  |  |  |
| Hungary                   | 4.9   | 4.4               | 5.1               | 4.9               | 4.8               | 4.8                       | —       | —     | 3.3                                   | 2.8                  | 3.3                | 3.2               | 3.0               | 3.0                       | —                  | —                  | 0.8  | 0.9                           | 0.9               | 0.9               | 0.9               | 1.0                 | —                         | —                  |  |  |
| Iceland                   | 4.5   | 5.7 <sup>3</sup>  | 7.2               | 7.0               | 7.2               | 7.3                       | 0.7     | 8.1   | 3.4                                   | 4.6 <sup>3</sup>     | 5.2 <sup>7</sup>   | 4.9               | 4.9               | 5.0                       | 0.2                | 5.2                | 0.7  | 0.8 <sup>3</sup>              | 1.1 <sup>7</sup>  | 1.1               | 1.2               | 1.2                 | 0.1                       | 1.3                |  |  |
| Ireland                   | 4.7   | 4.1               | 4.3               | 4.4               | 5.2               | 6.0                       | 0.4     | 6.3   | 3.3                                   | 2.9 <sup>4</sup>     | 3.3                | 3.4               | 4.0               | 4.6                       | 0.1                | 4.7                | 0.9  | 1.2 <sup>4</sup>              | 1.0               | 1.0               | 1.2               | 1.4                 | 0.3                       | 1.6                |  |  |
| Israel                    | —   | 6.6               | 6.2               | 5.9               | 5.9               | 5.8                       | 1.3     | 7.2   | —                                     | 4.5                  | 4.2                | 3.9               | 4.0               | 3.8                       | 0.2                | 4.0                | —    | 1.1                           | 1.0               | 1.0               | 0.9               | 1.0                 | 0.6                       | 1.6                |  |  |
| Italy                     | 4.5   | 4.5               | 4.3               | 4.1               | 4.5               | 4.5                       | 0.4     | 4.9   | 3.2                                   | 3.2                  | 3.2                | 3.0               | 3.2               | 3.3                       | 0.1                | 3.4                | 0.7  | 0.7                           | 0.6               | 0.6               | 0.8               | 0.8                 | 0.2                       | 1.0                |  |  |
| Japan                     | 3.6   | 3.5               | 3.4               | 3.3               | 3.3               | 3.6                       | 1.7     | 5.2   | 2.8                                   | 2.7 <sup>7</sup>     | 2.6 <sup>7</sup>   | 2.5 <sup>7</sup>  | 2.5 <sup>7</sup>  | 2.7 <sup>7</sup>          | 0.3 <sup>7</sup>   | 3.0 <sup>7</sup>   | 0.4  | 0.5 <sup>7</sup>              | 0.5 <sup>7</sup>  | 0.5 <sup>7</sup>  | 0.5 <sup>7</sup>  | 0.5 <sup>7</sup>    | 1.0 <sup>7</sup>          | 1.6 <sup>7</sup>   |  |  |
| Korea, Republic of        | 3.6   | 4.3               | 4.3               | 4.2               | 4.7               | 4.9                       | 3.1     | 8.0   | 3.0                                   | 3.3                  | 3.4                | 3.1               | 3.4               | 3.6                       | 1.1                | 4.7                | 0.3  | 0.6                           | 0.6               | 0.6               | 0.7               | 1.9                 | 2.6                       |                    |  |  |
| Luxembourg                | 4.3   | —                 | —                 | —                 | —                 | —                         | —       | —     | 4.2                                   | —                    | 3.7 <sup>6</sup>   | 3.1 <sup>6</sup>  | 2.8               | 3.2                       | 0.1                | 3.3                | 0.1  | —                             | —                 | —                 | —                 | —                   | —                         | —                  |  |  |
| Mexico                    | 4.6   | 4.7               | 5.3               | 4.7               | 4.7               | 5.0                       | 1.2     | 6.2   | 3.4                                   | 3.3                  | 3.7                | 3.1               | 3.1               | 3.3                       | 0.7                | 4.0                | 0.8  | 0.8                           | 0.9               | 0.9               | 0.9               | 1.0                 | 0.4                       | 1.4                |  |  |
| Netherlands               | 4.6   | 4.3               | 4.6               | 4.7               | 4.8               | 5.3                       | 0.9     | 6.2   | 3.0                                   | 3.0                  | 3.3                | 3.3               | 3.3               | 3.7                       | 0.4                | 4.1                | 1.1  | 1.0                           | 1.0               | 1.1               | 1.1               | 1.2                 | 0.5                       | 1.7                |  |  |
| New Zealand               | 5.3   | 5.8               | 5.2               | 4.8               | 5.4               | 6.1                       | 1.3     | 7.4   | 3.8                                   | 4.6                  | 4.0                | 3.5               | 3.8               | 4.5                       | 0.7                | 5.2                | 1.1  | 0.9                           | 0.9               | 1.0               | 1.1               | 1.1                 | 0.5                       | 1.6                |  |  |
| Norway                    | 6.8   | 5.8               | 5.7               | 5.4               | 7.3               | 6.1                       | —       | —     | 4.1                                   | 3.6                  | 3.8                | 3.7               | 5.0               | 4.2                       | —                  | —                  | 1.5  | 1.2                           | 1.3               | 1.2               | 1.6               | 1.3                 | 0.1                       | 1.4                |  |  |
| Poland                    | 5.2   | 5.2 <sup>3</sup>  | 5.4               | 4.8               | 5.0               | 5.0                       | 0.8     | 5.8   | 3.3                                   | 3.7 <sup>3</sup>     | 3.7                | 3.4               | 3.4               | 3.5                       | 0.2                | 3.6                | 0.8  | 0.8 <sup>3</sup>              | 1.2               | 0.9               | 1.0               | 1.1                 | 0.5                       | 1.5                |  |  |
| Portugal                  | 5.4   | 5.6 <sup>3</sup>  | 5.3               | 5.1               | 4.7               | 5.5                       | 0.4     | 5.9   | 4.1                                   | 4.1 <sup>3</sup>     | 3.8                | 3.5               | 3.4               | 4.0                       | #                  | 4.0                | 1.0  | 1.0 <sup>3</sup>              | 0.9               | 1.1               | 0.9               | 1.0                 | 0.4                       | 1.4                |  |  |
| Slovak Republic           | 4.6   | 4.0 <sup>3</sup>  | 3.7               | 3.4               | 3.5               | 4.1                       | 0.6     | 4.7   | —                                     | 2.7 <sup>3,4,8</sup> | 2.5 <sup>8</sup>   | 2.3 <sup>8</sup>  | 2.2 <sup>8</sup>  | 2.7 <sup>7,8</sup>        | 0.3 <sup>7,8</sup> | 3.1 <sup>7,8</sup> | —    | 0.7 <sup>3,4,8</sup>          | 0.7 <sup>8</sup>  | 0.7 <sup>8</sup>  | 0.7 <sup>8</sup>  | 0.7 <sup>7,8</sup>  | 0.3 <sup>7,8</sup>        | 0.9 <sup>7,8</sup> |  |  |
| Slovenia                  | —   | —                 | 5.3               | 4.8               | 4.8               | 5.3                       | 0.7     | 6.0   | —                                     | —                    | 3.9                | 3.3               | 3.4               | 3.6                       | 0.3                | 4.0                | —    | —                             | 1.0               | 1.0               | 1.0               | 1.1                 | 0.2                       | 1.3                |  |  |
| Spain                     | 4.8   | 4.3               | 4.1               | 4.2               | 4.5               | 4.9                       | 0.7     | 5.6   | 3.5                                   | 3.1                  | 2.7                | 2.7               | 2.9               | 3.1                       | 0.2                | 3.3                | 0.8  | 0.9                           | 0.9               | 0.9               | 1.0               | 1.1                 | 0.3                       | 1.3                |  |  |
| Sweden                    | 6.6   | 6.3               | 6.2               | 6.1               | 6.1               | 6.6                       | 0.2     | 6.7   | 4.4                                   | 4.4 <sup>4</sup>     | 4.2                | 4.1               | 4.0               | 4.2                       | #                  | 4.2                | 1.6  | 1.5 <sup>4</sup>              | 1.5               | 1.4               | 1.4               | 1.6                 | 0.2                       | 1.8                |  |  |
| Switzerland               | 5.5   | 5.3               | 5.6               | 5.1               | 5.3               | 5.5                       | —       | —     | 4.1                                   | 3.8                  | 3.9                | 3.5               | 3.8               | 3.8                       | 0.6                | 4.4                | 1.1  | 1.2                           | 1.4               | 1.3               | 1.3               | 1.4                 | —                         | —                  |  |  |
| Turkey                    | 2.2   | 3.4 <sup>3</sup>  | —                 | —                 | —                 | —                         | —       | —     | 1.4                                   | 2.4 <sup>3</sup>     | —                  | —                 | —                 | —                         | —                  | —                  | 0.8  | 1.0 <sup>3</sup>              | —                 | —                 | —                 | —                   | —                         | —                  |  |  |
| United Kingdom            | 4.6   | 4.5               | 5.0               | 5.2               | 5.1               | 5.3                       | 0.7     | 6.0   | 3.8                                   | 3.4                  | 3.8                | 4.1               | 4.2               | 4.5                       | #                  | 4.5                | 0.7  | 0.7                           | 0.9               | 0.7               | 0.6               | 0.6                 | 0.7                       | 1.3                |  |  |
| United States             | 5.0   | 4.8               | 4.8               | 5.0               | 5.1               | 5.3                       | 2.1     | 7.3   | 3.5                                   | 3.5 <sup>5</sup>     | 3.5                | 3.7               | 3.8               | 3.9                       | 0.3                | 4.3                | 1.1  | 0.9 <sup>5</sup>              | 1.0               | 1.0               | 1.0               | 1.0                 | 1.6                       | 2.6                |  |  |
| Other reporting countries | —   | —                 | —                 | —                 | —                 | —                         | —       | —     | —                                     | —                    | —                  | —                 | —                 | —                         | —                  | —                  | —    | —                             | —                 | —                 | —                 | —                   | —                         | —                  |  |  |
| Brazil                    | —   | —                 | 4.4               | 5.2               | 5.3               | 5.5                       | —       | —     | —                                     | —                    | 3.3                | 4.0               | 4.1               | 4.3                       | —                  | —                  | —    | —                             | 0.8               | 0.8               | 0.8               | 0.8                 | —                         | —                  |  |  |
| Russian Federation        | 3.4   | 3.0 <sup>3</sup>  | 3.8               | 6.1               | 4.1               | 4.7                       | 0.8     | 5.5   | 1.9                                   | 1.7                  | 1.9                | 3.4               | 2.0               | 2.3                       | 0.1                | 2.4                | 0.7  | 0.5                           | 0.8               | 1.0               | 0.9               | 1.2                 | 0.6                       | 1.8                |  |  |

—Not available.

#Rounds to zero.

<sup>1</sup>Unless otherwise noted, includes public subsidies to households for payments to education institutions and direct expenditures on education institutions from international sources.<sup>2</sup>Refers to the mean of the data values for all reporting Organization for Economic Cooperation and Development (OECD) countries, to which each country reporting data contributes equally. The average includes all current OECD countries for which a given year's data are available, even if they were not members of OECD in that year.<sup>3</sup>Public subsidies to households not included in public expenditures.<sup>4</sup>Direct expenditures on education institutions from international sources exceed 1.5 percent of all public expenditures.<sup>5</sup>Postsecondary non-higher-education included in higher education.<sup>6</sup>Preprimary education (for children ages 3 and older) included in elementary and secondary education.<sup>7</sup>Postsecondary non-higher-education included in both secondary and higher education.<sup>8</sup>Occupation-specific education corresponding to that offered at the vocational associate's degree level in the United States is included in secondary education.

NOTE: Public direct expenditures on education include both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions. Private direct expenditures exclude public subsidies that are used for payments to education institutions. Postsecondary non-higher-education is included in elementary and secondary education unless otherwise noted. All institutions total includes expenditures that could not be reported by level of education. Some data have been revised from previously published figures. Detail may not sum to totals because of rounding.

SOURCE: Organization for Economic Cooperation and Development (OECD), Online Education Database; and *Education at a Glance*, 2007 through 2012. U.S. Department of Education, National Center for Education Statistics, *International Education Indicators: A Time Series Perspective, 1985–1995* (NCES 2000-021). (This table was prepared June 2012.)

## CHAPTER 7

# Libraries and Adult Education

This chapter contains statistics on libraries and adult education. These data provide a capsule description of the magnitude and availability of library resources as well as the extent of adults' involvement in educational activities other than postsecondary degree programs.

The first section of the chapter (tables 478 to 483) deals with elementary and secondary school libraries, college and university libraries, and public libraries. It contains data on collections, population served, staff, and expenditures. Table 482 provides institutional-level information for the 60 largest college libraries in the country.

The second section of the chapter (tables 484 to 486) provides information about adults' participation in various types of educational activities, including basic skills and General Educational Development (GED) classes, English as a Second Language (ESL) classes, career-related classes, and personal-interest classes. Information on participation is shown for adults having various demographic characteristics and for adults living in different states.

### Libraries

Among public schools that had a library in 2007–08, the average number of library staff per school was 1.7, including 0.8 certified library/media specialists (table 478). On average, public school libraries had larger numbers of books on a per student basis in 2007–08 (2,015 per 100 students) than in 1999–2000 (1,803 per 100 students) and 2003–04 (1,891 per 100 students). In 2007–08, public elementary school libraries had larger holdings than public secondary school libraries on a per student basis (2,316 books per 100 students, compared with 1,432 books per 100 students).

At postsecondary degree-granting institutions, library operating expenditures per full-time-equivalent (FTE) student were 1 percent higher in 2001–02 than in 1991–92, after adjustment for inflation (table 481). From 2001–02 to 2009–10, library operating expenditures per FTE student dropped 21 percent in inflation-adjusted dollars. Overall, there was a net decrease of 20 percent in library operating expenditures per FTE student between 1991–92 and 2009–10. In 2009–10, library operating expenditures per FTE student averaged \$441 (in current dollars) across all degree-granting institutions. The amount varied widely by institution control, however. Library operating expenditures averaged \$849 per FTE student attending a private nonprofit institution in 2009–10, compared with \$374 per FTE student attending a public institution, and \$71 per FTE student attending a private for-profit institution. In 2009–10,

the average number of volumes per FTE student also differed for public institutions (61 volumes), private nonprofit institutions (131 volumes), and private for-profit institutions (3 volumes). Across all degree-granting institutions, the average number of volumes per FTE student in 2009–10 was 69, which was 4 percent less than in 1991–92. The calculations of library operating expenditures and number of volumes per FTE student include both institutions with libraries and those without libraries. In 2009–10, there were libraries at 82 percent of degree-granting institutions overall, 93 percent of public institutions, 89 percent of private nonprofit institutions, and 57 percent of private for-profit institutions.

In 2009, there were 9,225 public libraries in the United States with a total of 816 million books and serial volumes (table 483). The annual number of visits per capita—that is, per resident of the areas served by the libraries—was 5.4, and the annual number of reference transactions per capita was 1.0.

### Adult Education

The percentage of adults who reported participating in any adult education courses was higher in 2005 (44 percent) than in 1995 (40 percent) (table 486). Adults are defined here as people age 17 and over who are not enrolled in high school, and the same individual could report participating in multiple types of courses. In 2005, the percentage of adults who participated in career- or job-related courses (27 percent) was higher than the percentage who participated in personal-interest courses (21 percent). About 1 percent of adults participated in each of the following three types of adult education activities: basic skills/GED classes, ESL classes, and apprenticeship programs.

Among people age 17 and over who were employed, 39 percent participated in career- or job-related courses in 2005 (table 485). Participation rates varied for employees with different characteristics. For example, employed women's participation in career- or job-related courses was higher than that of employed men in 2005 (47 percent vs. 32 percent). For employees with some vocational or technical education, employees with some college (but no degree), and employees with an associate's or higher degree, rates of participation in career- or job-related courses were generally higher than for employees with less than high school completion or high school completion. For example, 53 percent of employees whose highest level of education was a bachelor's degree took such courses in 2005, compared with 25 percent of employees whose highest level was high school completion.

**Table 478. Selected statistics on public school libraries/media centers, by level of school: 1999–2000, 2003–04, and 2007–08**

[Standard errors appear in parentheses]

| Selected statistic  | 1999–2000       | 2003–04         |                 |                 |                               | 2007–08         |                 |                 |                               |
|---|-----------------|-----------------|-----------------|-----------------|-------------------------------|-----------------|-----------------|-----------------|-------------------------------|
|   |                 | Total           | Elementary      | Secondary       | Combined elementary/secondary | Total           | Elementary      | Secondary       | Combined elementary/secondary |
| 1   | 2               | 3               | 4               | 5               | 6                             | 7               | 8               | 9               | 10                            |
| Number of schools with libraries/media centers .....                          | 77,300 (421)    | 78,300 (548)    | 57,400 (440)    | 16,300 (313)    | 4,600 (201)                   | 81,900 (634)    | 59,700 (492)    | 17,800 (414)    | 4,400 (239)                   |
| Average number of staff per library/media center .....                        | 1.89 (0.018)    | 1.76 (0.014)    | 1.66 (0.018)    | 2.09 (0.025)    | 1.74 (0.116)                  | 1.72 (0.017)    | 1.65 (0.019)    | 2.04 (0.039)    | 1.42 (0.057)                  |
| Certified library/media specialists .....                                     | 0.81 (0.007)    | 0.79 (0.009)    | 0.73 (0.012)    | 1.03 (0.018)    | 0.73 (0.023)                  | 0.78 (0.011)    | 0.73 (0.013)    | 0.98 (0.019)    | 0.66 (0.033)                  |
| Full-time .....   | 0.65 (0.007)    | 0.65 (0.009)    | 0.58 (0.010)    | 0.92 (0.018)    | 0.55 (0.027)                  | 0.66 (0.010)    | 0.61 (0.012)    | 0.88 (0.018)    | 0.49 (0.032)                  |
| Part-time .....   | 0.16 (0.006)    | 0.14 (0.007)    | 0.15 (0.009)    | 0.11 (0.009)    | 0.18 (0.020)                  | 0.13 (0.007)    | 0.13 (0.010)    | 0.10 (0.009)    | 0.18 (0.020)                  |
| Other professional staff .....  | 0.17 (0.007)    | 0.19 (0.008)    | 0.19 (0.011)    | 0.14 (0.010)    | 0.28 (0.036)                  | 0.22 (0.010)    | 0.22 (0.013)    | 0.21 (0.021)    | 0.24 (0.027)                  |
| Full-time .....   | 0.12 (0.005)    | 0.13 (0.007)    | 0.14 (0.009)    | 0.11 (0.009)    | 0.16 (0.022)                  | 0.13 (0.008)    | 0.13 (0.010)    | 0.14 (0.017)    | 0.15 (0.022)                  |
| Part-time .....   | 0.06 (0.004)    | 0.05 (0.005)    | 0.05 (0.006)    | 0.03 (0.004)    | 0.11 (0.031)                  | 0.08 (0.007)    | 0.08 (0.009)    | 0.07 (0.013)    | 0.08 (0.017)                  |
| Other paid employees .....  | 0.91 (0.014)    | 0.78 (0.011)    | 0.75 (0.013)    | 0.93 (0.017)    | 0.73 (0.085)                  | 0.72 (0.013)    | 0.70 (0.016)    | 0.86 (0.027)    | 0.51 (0.036)                  |
| Full-time .....   | 0.49 (0.008)    | 0.46 (0.009)    | 0.41 (0.011)    | 0.65 (0.017)    | 0.35 (0.028)                  | 0.43 (0.013)    | 0.39 (0.016)    | 0.60 (0.022)    | 0.27 (0.028)                  |
| Part-time .....   | 0.41 (0.014)    | 0.33 (0.012)    | 0.34 (0.014)    | 0.28 (0.014)    | 0.38 (0.085)                  | 0.29 (0.011)    | 0.31 (0.014)    | 0.26 (0.018)    | 0.24 (0.028)                  |
| Percent of libraries/media centers with certain media equipment               |                 |                 |                 |                 |                               |                 |                 |                 |                               |
| Automated catalog .....   | 72.8 (0.69)     | 82.7 (0.66)     | 81.9 (0.89)     | 90.6 (0.76)     | 63.7 (2.59)                   | 87.2 (0.71)     | 87.5 (0.94)     | 90.6 (1.08)     | 69.8 (2.88)                   |
| Automated circulation system .....  | 74.4 (0.65)     | 86.9 (0.61)     | 86.7 (0.82)     | 92.8 (0.80)     | 68.8 (2.45)                   | 89.5 (0.68)     | 89.9 (0.87)     | 92.6 (0.98)     | 72.4 (3.15)                   |
| Media retrieval system <sup>1</sup> .....                                     | — (†)           | — (†)           | — (†)           | — (†)           | — (†)                         | 34.9 (1.05)     | 35.9 (1.33)     | 35.1 (1.66)     | 20.6 (2.32)                   |
| Connection to Internet .....  | 90.1 (0.57)     | 95.1 (0.35)     | 94.1 (0.48)     | 99.2 (0.22)     | 92.6 (1.40)                   | 96.7 (0.40)     | 96.5 (0.51)     | 98.6 (0.51)     | 91.6 (1.90)                   |
| Digital video disc (DVD) player/video cassette recorder (VCR) .....           | — (†)           | 87.8 (0.60)     | 87.0 (0.70)     | 90.4 (1.19)     | 89.1 (1.53)                   | 87.2 (0.77)     | 86.7 (1.02)     | 89.6 (1.00)     | 84.5 (2.20)                   |
| Disability assistance technologies, such as TDD .....                         | — (†)           | 11.9 (0.50)     | 10.2 (0.61)     | 18.0 (0.79)     | 11.7 (1.34)                   | 23.9 (1.05)     | 23.0 (1.33)     | 26.4 (1.34)     | 25.9 (2.76)                   |
| Percent of libraries/media centers with certain services                      |                 |                 |                 |                 |                               |                 |                 |                 |                               |
| Students permitted to check out laptops .....                                 | — (†)           | — (†)           | — (†)           | — (†)           | — (†)                         | 27.5 (1.02)     | 26.9 (1.27)     | 29.8 (1.34)     | 26.1 (2.57)                   |
| Staff permitted to check out laptops .....                                    | — (†)           | — (†)           | — (†)           | — (†)           | — (†)                         | 45.9 (1.07)     | 45.2 (1.35)     | 50.1 (1.50)     | 38.5 (2.85)                   |
| Number of library computer workstations per 100 students .....                | — (†)           | 2.3 (0.04)      | 2.2 (0.05)      | 2.5 (0.05)      | 2.7 (0.17)                    | 2.6 (0.05)      | 2.5 (0.07)      | 2.9 (0.06)      | 3.0 (0.17)                    |
| Average holdings per 100 students at the end of the school year <sup>2</sup>  |                 |                 |                 |                 |                               |                 |                 |                 |                               |
| Books (number of volumes) .....   | 1,803 (19.7)    | 1,891 (45.1)    | 2,127 (70.2)    | 1,376 (20.0)    | 2,407 (117.7)                 | 2,015 (30.5)    | 2,316 (40.2)    | 1,432 (36.6)    | 2,439 (132.3)                 |
| Audio and video materials .....   | 59 (0.9)        | 80 (3.7)        | 86 (5.7)        | 65 (2.2)        | 97 (13.6)                     | 90 (3.8)        | 93 (5.6)        | 81 (5.2)        | 107 (13.3)                    |
| Average additions per 100 students during the school year <sup>2</sup>        |                 |                 |                 |                 |                               |                 |                 |                 |                               |
| Books (number of volumes) .....   | — (†)           | 99.3 (2.08)     | 118.4 (3.13)    | 61.2 (1.75)     | 109.2 (8.40)                  | 95.3 (2.21)     | 113.3 (3.26)    | 62.1 (2.67)     | 103.4 (7.41)                  |
| Audio and video materials .....   | — (†)           | 5.1 (0.19)      | 5.3 (0.28)      | 4.4 (0.20)      | 6.9 (0.83)                    | 5.4 (0.49)      | 5.9 (0.77)      | 4.5 (0.41)      | 5.7 (0.84)                    |
| Total expenditures for library/media materials per pupil <sup>2,3</sup> ..... | \$23.37 (0.438) | \$16.24 (0.322) | \$16.00 (0.469) | \$16.11 (0.320) | \$21.24 (2.498)               | \$16.11 (0.461) | \$16.18 (0.591) | \$15.90 (0.647) | \$17.00 (1.216)               |
| Books .....   | 9.97 (0.153)    | 10.99 (0.299)   | 11.72 (0.452)   | 9.68 (0.275)    | 10.19 (0.631)                 | 11.40 (0.291)   | 11.99 (0.389)   | 10.26 (0.504)   | 12.10 (1.094)                 |
| Audio and video materials .....   | 1.66 (0.032)    | 1.14 (0.045)    | 1.11 (0.053)    | 1.11 (0.062)    | 1.96 ! (0.619)                | 1.08 (0.055)    | 1.06 (0.088)    | 1.11 (0.054)    | 1.16 (0.152)                  |
| Current serial subscriptions .....  | 1.26 (0.016)    | 1.38 (0.025)    | 1.06 (0.031)    | 1.87 (0.049)    | 2.50 (0.148)                  | — (†)           | — (†)           | — (†)           | — (†)                         |
| Electronic subscriptions .....  | 0.81 (0.018)    | 0.88 (0.033)    | 0.39 (0.042)    | 1.79 (0.061)    | 1.25 (0.249)                  | — (†)           | — (†)           | — (†)           | — (†)                         |

—Not available.

†Not applicable.

!Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 percent and 50 percent.

<sup>1</sup>Centralized video distribution equipment with a scheduling and control server that telecasts video to classrooms.

<sup>2</sup>Average holdings, acquisitions, and expenditures are from the prior school year, while enrollment counts are from the current school year.

<sup>3</sup>Includes other expenditures not separately shown.

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

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Library Media Center Questionnaire," 1999–2000, 2003–04, and 2007–08; and "Charter School Questionnaire," 1999–2000. (This table was prepared November 2009.)



**Table 479. Selected statistics on public school libraries/media centers, by level and enrollment size of school: 2007–08**

[Standard errors appear in parentheses]

| Selected statistic  | All public school libraries/<br>media centers | Elementary school enrollment size |                  |                 |                 |                 | Secondary school enrollment size |                 |                 |                 |                 |
|---|---|-----------------------------------|------------------|-----------------|-----------------|-----------------|----------------------------------|-----------------|-----------------|-----------------|-----------------|
|   |   | Total                             | Less than 150    | 150 to 499      | 500 to 749      | 750 or more     | Total                            | Less than 500   | 500 to 749      | 750 to 1,499    | 1,500 or more   |
| 1   | 2   | 3                                 | 4                | 5               | 6               | 7               | 8                                | 9               | 10              | 11              | 12              |
| Number of schools with libraries/media centers .....                          | 81,900 (634)                                  | 59,700 (492)                      | 3,300 (399)      | 31,100 (1054)   | 16,400 (812)    | 8,900 (534)     | 17,800 (414)                     | 6,300 (353)     | 3,000 (246)     | 5,100 (273)     | 3,300 (198)     |
| Average number of staff per library/media center .....                        | 1.72 (0.017)                                  | 1.65 (0.019)                      | 1.28 (0.099)     | 1.58 (0.027)    | 1.73 (0.045)    | 1.89 (0.053)    | 2.04 (0.039)                     | 1.59 (0.071)    | 1.78 (0.068)    | 2.18 (0.054)    | 2.94 (0.081)    |
| Certified library/media specialists .....                                     | 0.78 (0.011)                                  | 0.73 (0.013)                      | 0.60 (0.069)     | 0.70 (0.019)    | 0.76 (0.024)    | 0.86 (0.030)    | 0.98 (0.019)                     | 0.73 (0.035)    | 0.87 (0.035)    | 1.09 (0.026)    | 1.38 (0.046)    |
| Full-time .....   | 0.66 (0.010)                                  | 0.61 (0.012)                      | 0.25 (0.072)     | 0.53 (0.018)    | 0.71 (0.022)    | 0.81 (0.029)    | 0.88 (0.018)                     | 0.57 (0.033)    | 0.80 (0.040)    | 1.02 (0.029)    | 1.31 (0.049)    |
| Part-time .....   | 0.13 (0.007)                                  | 0.13 (0.010)                      | 0.36 (0.070)     | 0.17 (0.014)    | 0.06 (0.016)    | 0.05 (0.013)    | 0.10 (0.009)                     | 0.16 (0.019)    | 0.07 (0.020)    | 0.07 (0.017)    | 0.07 (0.022)    |
| Other professional staff .....  | 0.22 (0.010)                                  | 0.22 (0.013)                      | 0.20 (0.059)     | 0.23 (0.016)    | 0.20 (0.028)    | 0.21 (0.030)    | 0.21 (0.021)                     | 0.27 (0.044)    | 0.20 (0.051)    | 0.16 (0.026)    | 0.15 (0.033)    |
| Full-time .....   | 0.13 (0.008)                                  | 0.13 (0.010)                      | †                | 0.13 (0.014)    | 0.14 (0.021)    | 0.13 (0.021)    | 0.14 (0.017)                     | 0.17 (0.039)    | 0.11 (0.027)    | 0.13 (0.023)    | 0.12 (0.025)    |
| Part-time .....   | 0.08 (0.007)                                  | 0.08 (0.009)                      | 0.10 †           | 0.09 (0.012)    | 0.06 (0.016)    | 0.09 (0.023)    | 0.07 (0.013)                     | 0.10 (0.027)    | 0.09 †          | 0.04 †          | †               |
| Other paid employees .....  | 0.72 (0.013)                                  | 0.70 (0.016)                      | 0.48 (0.068)     | 0.65 (0.023)    | 0.78 (0.039)    | 0.82 (0.044)    | 0.86 (0.027)                     | 0.59 (0.041)    | 0.71 (0.050)    | 0.93 (0.045)    | 1.40 (0.068)    |
| Full-time .....   | 0.43 (0.013)                                  | 0.39 (0.016)                      | 0.13 †           | 0.33 (0.019)    | 0.46 (0.035)    | 0.59 (0.044)    | 0.60 (0.022)                     | 0.34 (0.031)    | 0.51 (0.049)    | 0.66 (0.039)    | 1.07 (0.067)    |
| Part-time .....   | 0.29 (0.011)                                  | 0.31 (0.014)                      | 0.34 (0.064)     | 0.32 (0.023)    | 0.31 (0.032)    | 0.23 (0.036)    | 0.26 (0.018)                     | 0.25 (0.032)    | 0.20 (0.029)    | 0.28 (0.035)    | 0.34 (0.053)    |
| Percent of libraries/media centers with certain media equipment               |   |                                   |                  |                 |                 |                 |                                  |                 |                 |                 |                 |
| Automated catalog .....   | 87.2 (0.71)                                   | 87.5 (0.94)                       | 57.1 (6.87)      | 86.6 (1.56)     | 91.6 (1.55)     | 94.4 (1.62)     | 90.6 (1.08)                      | 79.6 (2.59)     | 94.0 (2.14)     | 97.2 (0.86)     | 98.4 (1.05)     |
| Automated circulation system .....  | 89.5 (0.68)                                   | 89.9 (0.87)                       | 57.1 (6.78)      | 89.4 (1.35)     | 94.8 (1.19)     | 95.0 (1.84)     | 92.6 (0.98)                      | 83.0 (2.49)     | 96.0 (1.72)     | 98.4 (0.44)     | 98.7 (0.81)     |
| Media retrieval system <sup>1</sup> .....                                     | 34.9 (1.05)                                   | 35.9 (1.33)                       | 10.6 †           | 29.3 (1.62)     | 43.9 (2.68)     | 53.7 (3.51)     | 35.1 (1.66)                      | 32.8 (3.39)     | 34.1 (3.00)     | 37.9 (2.85)     | 36.4 (3.28)     |
| Connection to Internet .....  | 96.7 (0.40)                                   | 96.5 (0.51)                       | 81.0 (5.95)      | 96.9 (0.55)     | 98.0 (0.53)     | 98.5 (0.70)     | 98.6 (0.51)                      | 96.0 (1.42)     | 99.9 (0.05)     | 100.0 (†)       | 100.0 (†)       |
| Digital video disc (DVD) player/video cassette recorder(VCR) .....            | 87.2 (0.77)                                   | 86.7 (1.02)                       | 80.0 (5.53)      | 86.3 (1.27)     | 87.4 (1.71)     | 89.1 (2.21)     | 89.6 (1.00)                      | 87.3 (2.11)     | 89.9 (2.67)     | 92.3 (1.80)     | 89.3 (2.80)     |
| Disability assistance technologies, such as TDD .....                         | 23.9 (1.05)                                   | 23.0 (1.33)                       | 14.7 (3.85)      | 20.2 (1.68)     | 24.6 (2.08)     | 33.1 (3.20)     | 26.4 (1.34)                      | 18.4 (1.91)     | 26.7 (3.14)     | 28.4 (2.06)     | 38.0 (3.38)     |
| Percent of libraries/media centers with certain services                      |   |                                   |                  |                 |                 |                 |                                  |                 |                 |                 |                 |
| Students permitted to check out laptops .....                                 | 27.5 (1.02)                                   | 26.9 (1.27)                       | 22.5 (6.15)      | 25.7 (1.72)     | 27.0 (2.23)     | 32.4 (3.13)     | 29.8 (1.34)                      | 29.2 (2.84)     | 29.9 (3.18)     | 31.0 (2.40)     | 29.0 (2.76)     |
| Staff permitted to check out laptops .....                                    | 45.9 (1.07)                                   | 45.2 (1.35)                       | 30.7 (6.44)      | 42.4 (1.97)     | 48.4 (2.83)     | 54.6 (4.01)     | 50.1 (1.50)                      | 46.3 (3.06)     | 49.7 (3.38)     | 54.5 (2.50)     | 51.1 (3.39)     |
| Number of library computer workstations per 100 students .....                | 2.6 (0.05)                                    | 2.5 (0.07)                        | 8.8 (1.24)       | 3.2 (0.13)      | 2.1 (0.10)      | 1.7 (0.11)      | 2.9 (0.06)                       | 5.9 (0.28)      | 3.8 (0.22)      | 2.9 (0.10)      | 1.9 (0.08)      |
| Average holdings per 100 students at the end of the school year <sup>2</sup>  |   |                                   |                  |                 |                 |                 |                                  |                 |                 |                 |                 |
| Books (number of volumes) .....   | 2,015 (30.5)                                  | 2,316 (40.2)                      | 6,384 (531.1)    | 2,993 (67.3)    | 2,117 (45.7)    | 1,559 (85.2)    | 1,432 (36.6)                     | 3,203 (162.4)   | 1,854 (101.1)   | 1,332 (34.1)    | 975 (40.6)      |
| Audio and video materials .....   | 90 (3.8)                                      | 93 (5.6)                          | 157 (36.7)       | 105 (5.9)       | 89 (6.2)        | 82 (16.1)       | 81 (5.2)                         | 132 (14.4)      | 138 (30.0)      | 83 (8.5)        | 52 (4.1)        |
| Average additions per 100 students during the school year <sup>2</sup>        |   |                                   |                  |                 |                 |                 |                                  |                 |                 |                 |                 |
| Books (number of volumes) .....   | 95.3 (2.21)                                   | 113.3 (3.26)                      | 247.0 (38.53)    | 134.9 (5.28)    | 106.4 (5.76)    | 89.6 (6.32)     | 62.1 (2.67)                      | 124.8 (11.48)   | 81.1 (8.27)     | 61.3 (4.78)     | 42.7 (2.66)     |
| Audio and video materials .....   | 5.4 (0.49)                                    | 5.9 (0.77)                        | 7.6 (2.14)       | 5.7 (0.44)      | 4.9 (0.55)      | 7.1 †           | 4.5 (0.41)                       | 6.4 (0.59)      | 6.1 (1.44)      | 4.8 (0.65)      | 3.4 (0.60)      |
| Total expenditures for library/media materials per pupil <sup>2,3</sup> ..... | \$16.11 (0.461)                               | \$16.18 (0.591)                   | \$43.28 (11.551) | \$18.49 (0.700) | \$14.63 (0.799) | \$14.11 (1.496) | \$15.90 (0.647)                  | \$27.86 (3.234) | \$18.51 (1.931) | \$16.68 (1.171) | \$11.75 (0.773) |
| Books .....   | 11.40 (0.291)                                 | 11.99 (0.389)                     | 21.99 (4.023)    | 13.80 (0.539)   | 11.25 (0.679)   | 10.23 (0.836)   | 10.26 (0.504)                    | 17.30 (1.454)   | 13.47 (1.905)   | 10.87 (1.103)   | 7.26 (0.386)    |
| Audio and video materials .....   | 1.08 (0.055)                                  | 1.06 (0.088)                      | †                | 1.24 (0.154)    | 0.88 (0.082)    | 1.01 (0.180)    | 1.11 (0.054)                     | 1.57 (0.157)    | 1.20 (0.151)    | 1.19 (0.102)    | 0.91 (0.085)    |

†Not applicable.

†Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 percent and 50 percent.

‡Reporting standards not met. The coefficient of variation (CV) for this estimate is 50 percent or greater.

<sup>1</sup>Centralized video distribution equipment with a scheduling and control server that telecasts video to classrooms.<sup>2</sup>Average holdings, acquisitions, and expenditures are from the prior school year, while enrollment counts are from the current school year.<sup>3</sup>Includes other expenditures not separately shown.

NOTE: Total includes combined elementary/secondary schools not separately shown. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey (SASS), "Public School Library Media Center Questionnaire," 2007–08. (This table was prepared November 2009.)



**Table 481. Collections, staff, and operating expenditures of degree-granting institution libraries: Selected years, 1981–82 through 2009–10**

| Collections, staff, and operating expenditures   | 1981–82              | 1987–88          | 1991–92          | 1997–98          | 2001–02          | 2003–04          | 2005–06          | 2007–08          | 2009–10          |                  |                   |                    |
|--|----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|--------------------|
|  |                      |                  |                  |                  |                  |                  |                  |                  | Total            | Public           | Private nonprofit | Private for-profit |
| 1  | 2                    | 3                | 4                | 5                | 6                | 7                | 8                | 9                | 10               | 11               | 12                | 13                 |
| Number of libraries .....  | 3,104                | 3,438            | 3,274            | 3,568            | 3,568            | 3,653            | 3,617            | 3,827            | 3,689            | 1,559            | 1,449             | 681                |
| Percentage of institutions with libraries .....  | —                    | —                | —                | 90.0             | 85.0             | 86.2             | 84.6             | 87.9             | 82.1             | 93.2             | 89.2              | 56.8               |
| Number of circulation transactions (in thousands) .....  | —                    | —                | —                | 216,067          | 189,248          | 200,204          | 187,236          | 178,766          | 176,736          | 116,084          | 58,660            | 1,992              |
| Number of circulation transactions per full-time equivalent (FTE) student .....  | —                    | —                | —                | 20               | 16               | 16               | 14               | 13               | 11               | 11               | 18                | 1                  |
| Enrollment (in thousands)  |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |
| Total enrollment <sup>1</sup> .....  | 12,372               | 12,767           | 14,359           | 14,502           | 15,928           | 16,911           | 17,487           | 18,248           | 20,428           | 14,811           | 3,765             | 1,852              |
| Full-time-equivalent (FTE) enrollment <sup>1</sup> .....   | 9,015                | 9,230            | 10,361           | 10,615           | 11,766           | 12,688           | 13,201           | 13,783           | 15,496           | 10,750           | 3,178             | 1,568              |
| <b>Collections (in thousands)</b>  |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |
| Number of volumes at end of year .....   | 567,826              | 718,504          | 749,429          | 878,906          | 954,030          | 982,590          | 1,015,658        | 1,052,531        | 1,076,027        | 654,865          | 416,144           | 5,019              |
| Number of volumes added during year .....  | 19,507               | 21,907           | 20,982           | 24,551           | 24,574           | 24,615           | 22,241           | 23,990           | 27,164           | 15,249           | 11,419            | 495                |
| Number of serial subscriptions at end of year <sup>2</sup> .....   | 4,890                | 6,416            | 6,966            | 10,908           | 9,855            | 12,764           | 16,361           | 25,342           | 25,041           | 13,714           | 10,869            | 459                |
| Microform units at end of year .....   | —                    | —                | —                | 1,062,082        | 1,143,678        | 1,173,287        | 1,166,295        | 1,157,365        | 1,124,941        | 768,270          | 355,326           | 1,344              |
| E-books at end of year .....   | —                    | —                | —                | —                | 10,318           | 32,775           | 64,366           | 102,502          | 158,652          | 91,552           | 61,554            | 5,546              |
| Number of volumes per FTE student .....  | 63                   | 78               | 72               | 83               | 81               | 77               | 77               | 76               | 69               | 61               | 131               | 3                  |
| <b>Full-time-equivalent (FTE) library staff</b>  |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |
| Total staff in regular positions <sup>3</sup> .....  | 58,476               | 67,251           | 67,166           | 68,337           | 69,526           | 69,047           | 69,615           | 69,328           | 66,562           | 40,907           | 24,092            | 1,563              |
| Librarians and professional staff .....  | 23,816               | 25,115           | 26,341           | 30,041           | 32,053           | 32,280           | 33,265           | 34,520           | 34,147           | 19,706           | 13,166            | 1,274              |
| Other paid staff .....   | 34,660               | 40,733           | 40,421           | 38,026           | 37,473           | 36,767           | 36,350           | 34,808           | 32,415           | 21,201           | 10,925            | 289                |
| Contributed services .....   | —                    | 1,403            | 404              | 270              | —                | —                | —                | —                | —                | —                | —                 | —                  |
| Student assistants .....   | —                    | 33,821           | 29,075           | 28,373           | 25,305           | 25,038           | 23,976           | 24,110           | 22,382           | 12,700           | 9,017             | 665                |
| FTE student enrollment per FTE staff member .....  | 154                  | 137              | 154              | 155              | 169              | 184              | 190              | 199              | 233              | 263              | 132               | 1,003              |
| <b>Library operating expenditures<sup>4</sup></b>  |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |
| Total operating expenditures<br>(in thousands of current dollars) .....  | \$1,943,769          | \$2,770,075      | \$3,648,654      | \$4,592,657      | \$5,416,716      | \$5,751,247      | \$6,234,192      | \$6,785,542      | \$6,829,108      | \$4,019,666      | \$2,697,599       | \$111,843          |
| Salaries and wages .....   | 914,379 <sup>5</sup> | 1,451,551        | 1,889,368        | 2,314,380        | 2,753,404        | 2,913,221        | 3,102,561        | 3,342,082        | 3,401,649        | 2,055,389        | 1,280,579         | 65,681             |
| Student hourly wages .....   | 100,847              | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> )  | ( <sup>6</sup> )   |
| Fringe benefits .....  | 167,515              | —                | —                | —                | —                | —                | —                | —                | —                | —                | —                 | —                  |
| Preservation .....   | 30,351               | 34,144           | 43,126           | 42,919           | 46,499           | 42,976           | 41,102           | 41,591           | 31,212           | 17,436           | 13,682            | 94                 |
| Furniture/equipment .....  | —                    | —                | —                | 57,013           | —                | —                | —                | —                | —                | —                | —                 | —                  |
| Computer hardware/software .....   | —                    | —                | —                | 164,379          | 155,791          | 143,042          | 153,002          | 158,698          | 142,652          | 92,073           | 48,684            | 1,894              |
| Bibliographic utilities/networks/consortia .....   | —                    | —                | —                | 89,618           | 92,242           | 101,293          | 106,268          | 113,427          | 117,838          | 67,772           | 49,028            | 1,037              |
| Information resources <sup>7</sup> .....   | 561,199              | 891,281          | 1,197,293        | 1,600,995        | 1,944,490        | 2,114,555        | 2,334,382        | 2,621,491        | 2,649,086        | 1,514,816        | 1,094,136         | 40,135             |
| Books and serial backfiles—paper .....   | —                    | —                | —                | 514,048          | 563,007          | 550,599          | 572,228          | 611,192          | 515,942          | 277,021          | 229,619           | 9,301              |
| Books and serial backfiles—electronic .....  | —                    | —                | —                | 28,061           | 44,792           | 65,597           | 93,778           | 133,586          | 152,359          | 87,571           | 60,255            | 4,533              |
| Current serials—paper .....  | —                    | —                | —                | 849,399          | 926,105          | 883,534          | 830,137          | 699,906          | 536,357          | 296,777          | 232,210           | 7,370              |
| Current serials—electronic .....   | —                    | —                | —                | 125,470          | 297,657          | 480,138          | 691,585          | 1,004,393        | 1,249,726        | 760,412          | 474,194           | 15,121             |
| Audiovisual materials .....  | —                    | —                | 23,879           | 30,623           | 37,041           | 35,216           | 39,029           | 43,849           | 55,659           | 23,165           | 30,145            | 2,350              |
| Document delivery/interlibrary loan .....  | —                    | —                | —                | 19,309           | 22,913           | 24,823           | 26,513           | 30,496           | 33,679           | 20,679           | 11,953            | 1,047              |
| Other collection expenditures .....  | 561,199              | 891,281          | 1,173,414        | 34,086           | 52,976           | 74,648           | 81,113           | 98,069           | 105,364          | 49,191           | 55,760            | 413                |
| Other library operating expenditures .....   | 169,478              | 393,099          | 518,867          | 323,354          | 424,290          | 436,160          | 496,877          | 508,253          | 486,672          | 272,179          | 211,491           | 3,002              |
| Operating expenditures per full-time-equivalent (FTE) student  |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |
| In current dollars .....   | 216                  | 300              | 352              | 433              | 460              | 453              | 472              | 492              | 441              | 374              | 849               | 71                 |
| In constant 2011–12 dollars <sup>8</sup> .....   | 521                  | 590              | 580              | 609              | 588              | 554              | 540              | 529              | 463              | 393              | 891               | 75                 |
| Information resource expenditures per FTE student  |                      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                   |                    |
| In current dollars .....   | 62                   | 97               | 116              | 151              | 165              | 167              | 177              | 190              | 171              | 141              | 344               | 26                 |
| In constant 2011–12 dollars <sup>8</sup> .....   | 151                  | 190              | 190              | 212              | 211              | 204              | 202              | 204              | 179              | 148              | 362               | 27                 |
| Operating expenditures (percentage distribution) ..  | 100.0                | 100.0            | 100.0            | 100.0            | 100.0            | 100.0            | 100.0            | 100.0            | 100.0            | 100.0            | 100.0             | 100.0              |
| Salaries and wages .....   | 47.0                 | 52.4             | 51.8             | 50.4             | 50.8             | 50.7             | 49.8             | 49.3             | 49.8             | 51.1             | 47.5              | 58.7               |
| Student hourly wages .....   | 5.2                  | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> ) | ( <sup>6</sup> )  | ( <sup>6</sup> )   |
| Fringe benefits .....  | 8.6                  | —                | —                | —                | —                | —                | —                | —                | —                | —                | —                 | —                  |
| Preservation .....   | 1.6                  | 1.2              | 1.2              | 0.9              | 0.9              | 0.7              | 0.7              | 0.6              | 0.5              | 0.4              | 0.5               | 0.1                |
| Information resources .....  | 28.9                 | 32.2             | 32.8             | 34.9             | 35.9             | 36.8             | 37.4             | 38.6             | 38.8             | 37.7             | 40.6              | 35.9               |
| Other <sup>9</sup> .....   | 8.7                  | 14.2             | 14.2             | 13.8             | 12.4             | 11.8             | 12.1             | 11.5             | 10.9             | 10.7             | 11.5              | 5.3                |
| Library operating expenditures as a percent of total institutional expenditures for educational and general purposes ..... | 3.5                  | 3.2              | 3.0              | —                | —                | —                | —                | —                | —                | —                | —                 | —                  |

—Not available.

<sup>1</sup>Fall enrollment for the academic year specified.<sup>2</sup>For 1997–98 and later years, includes microform and electronic serials.<sup>3</sup>Excludes student assistants.<sup>4</sup>Excludes capital outlay.<sup>5</sup>Includes salary equivalents of contributed services staff.<sup>6</sup>Included under salaries and wages.<sup>7</sup>Includes resources not listed.<sup>8</sup>Constant dollars based on the Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor, adjusted to a school-year basis.<sup>9</sup>Includes furniture/equipment, computer hardware/software, and bibliographic utilities/networks/consortia as well as expenditures classified as "other library operating expenditures."

NOTE: Data through 1995 are for institutions of higher education, while later data are for degree-granting institutions. Degree-granting institutions grant associate's or higher degrees and participate in Title IV federal financial aid programs. The degree-granting classification is very similar to the earlier higher education classification, but it includes more 2-year colleges and excludes a few higher education institutions that did not grant degrees. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Library Statistics of Colleges and Universities*, 1981–82; Integrated Postsecondary Education Data System (IPEDS), "Academic Libraries Survey" (IPEDS-L:88–98), "Fall Enrollment Survey" (IPEDS-EF:87–98), and IPEDS Spring 2002 through Spring 2010, Enrollment component; Academic Libraries Survey (ALS), 2000 through 2010; and *Academic Libraries: 2010* (NCES 2012-365). (This table was prepared November 2012.)

**Table 482. Collections, staff, operating expenditures, public service hours, and reference services of the 60 largest college and university libraries: Fiscal year 2010**

| Institution   | Rank order, by number of volumes | Number of volumes at end of year (in thousands) | Number of e-books at end of year | Number of serials at end of year | Full-time-equivalent staff |            | Operating expenditures (in thousands of current dollars) |                    | Public service hours per typical week | Gate count per typical week <sup>1</sup> | Annual reference information services to individuals <sup>2</sup> |                                     |
|---|----------------------------------|---|----------------------------------|----------------------------------|----------------------------|------------|--|--------------------|---------------------------------------|--|---|-------------------------------------|
|   |                                  |   |                                  |                                  | Total                      | Librarians | Total  | Salaries and wages |                                       |  | Total   | Consultations of 20 minutes or more |
| 1   | 2                                | 3   | 4                                | 5                                | 6                          | 7          | 8  | 9                  | 10                                    | 11                                       | 12  | 13                                  |
| Harvard University (MA).....  | 1                                | 16,833  | 161,554                          | 157,854                          | 1,089                      | 394        | \$133,427  | \$84,272           | 168                                   | 28,867 <sup>3</sup>                      | 196,992   | 12,336                              |
| University of Illinois at Urbana-Champaign.....                       | 2                                | 13,159  | 453,562                          | 123,857                          | 483                        | 105        | 40,327   | 21,218             | 144                                   | 125,938                                  | 109,918   | —                                   |
| Yale University (CT).....   | 3                                | 12,788  | 1,000,000                        | 106,481                          | 621                        | 168        | 84,140   | 36,189             | 111                                   | 28,867 <sup>3</sup>                      | 37,765  | 554                                 |
| University of California, Berkeley.....                               | 4                                | 11,335  | 879,868                          | 108,130                          | 472                        | 90         | 42,424   | 20,114             | 77                                    | 29,636                                   | 77,895  | 3,086                               |
| University of Michigan, Ann Arbor.....                                | 5                                | 10,779  | 1,875,374                        | 83,062                           | 719                        | 223        | 67,223   | 33,396             | 168                                   | 85,770                                   | 128,565   | 5,093                               |
| Columbia University in the City of New York.....                      | 6                                | 10,265  | 1,061,823                        | 167,721                          | 533                        | 156        | 55,913   | 26,129             | 109                                   | 79,028                                   | 133,868   | 8,383                               |
| University of Texas at Austin.....                                    | 7                                | 9,991   | 633,376                          | 100,006                          | 533                        | 135        | 46,276   | 22,206             | 120                                   | 99,302                                   | 38,398  | 1,128                               |
| University of California, Los Angeles.....                            | 8                                | 9,152   | 982,907                          | 78,463                           | 532                        | 113        | 46,007   | 25,361             | 96                                    | 61,748                                   | 105,269   | 471                                 |
| Stanford University (CA).....   | 9                                | 8,819   | 588,809                          | 35,877                           | 664                        | 151        | 69,129   | 31,922             | 105                                   | 20,974                                   | 110,745   | 6,935                               |
| Indiana University, Bloomington.....                                  | 10                               | 8,678   | 940,231                          | 106,138                          | 482                        | 99         | 33,899   | 15,796             | 168                                   | 88,998                                   | 134,561   | —                                   |
| University of Chicago (IL).....                                       | 11                               | 8,367   | 1,470,379                        | 116,750                          | 306                        | 70         | 33,320   | 13,150             | 146                                   | 32,535                                   | 16,842  | 226                                 |
| University of Wisconsin, Madison.....                                 | 12                               | 7,977   | 444,529                          | 103,844                          | 580                        | 228        | 41,334   | 22,174             | 148                                   | 119,697                                  | 97,925  | 701                                 |
| Cornell University (NY).....  | 13                               | 7,532   | 642,103                          | 104,000                          | 486                        | 106        | 44,200   | 21,643             | 145                                   | 79,710                                   | 71,454  | 4,475                               |
| University of Minnesota, Twin Cities.....                             | 14                               | 7,111   | 415,831                          | 109,681                          | 380                        | 101        | 40,734   | 18,181             | 107                                   | 45,850                                   | 66,184  | 6,306                               |
| Princeton University (NJ).....  | 15                               | 7,075   | 282,214                          | 59,942                           | 401                        | 86         | 52,829   | 21,571             | 120                                   | 11,017                                   | 17,964  | 2,325                               |
| University of Washington, Seattle Campus.....                         | 16                               | 7,013   | 469,807                          | 63,221                           | 418                        | 126        | 36,926   | 19,131             | 138                                   | 125,000                                  | 74,863  | 2,965                               |
| University of North Carolina at Chapel Hill.....                      | 17                               | 6,189   | 823,314                          | 87,686                           | 455                        | 147        | 41,659   | 19,672             | 142                                   | 65,984                                   | 102,130   | —                                   |
| Duke University (NC).....   | 18                               | 6,172   | 217,916                          | 111,851                          | 347                        | 110        | 40,058   | 17,473             | 149                                   | 24,954                                   | 118,629   | 23,726                              |
| Ohio State University, Main Campus.....                               | 19                               | 6,162   | 463,952                          | 90,965                           | 455                        | 79         | 42,440   | 16,981             | 168                                   | 69,870                                   | 12,360  | 9,305                               |
| University of Pittsburgh, Main Campus (PA).....                       | 20                               | 6,148   | 681,238                          | 58,000                           | 330                        | 118        | 32,763   | 12,119             | 118                                   | 41,202 <sup>3</sup>                      | 111,814   | —                                   |
| University of Pennsylvania.....                                       | 21                               | 5,929   | 509,365                          | 98,145                           | 392                        | 121        | 40,461   | 18,556             | 116                                   | 40,000                                   | 5,180   | 324                                 |
| University of Arizona.....  | 22                               | 5,538   | 832,443                          | 26,670                           | 233                        | 62         | 25,402   | 8,882              | 142                                   | 41,678                                   | 29,302  | 750                                 |
| Pennsylvania State University, Main Campus.....                       | 23                               | 5,467   | 200,000                          | 109,132                          | 588                        | 140        | 50,451   | 25,673             | 148                                   | 129,951                                  | 174,795   | 50,461                              |
| Michigan State University.....  | 24                               | 5,453   | 592,024                          | 110,673                          | 245                        | 68         | 25,409   | 10,517             | 138                                   | 81,300                                   | 62,758  | 2,486                               |
| University of Virginia, Main Campus.....                              | 25                               | 5,167   | 440,911                          | 185,140                          | 350                        | 101        | 31,488   | 17,056             | 149                                   | 78,532                                   | 106,634   | 4,662                               |
| Rutgers University, New Brunswick (NJ).....                           | 26                               | 5,115   | 376,155                          | 87,902                           | 294                        | 58         | 23,755   | 13,590             | 105                                   | 52,313                                   | 56,037  | —                                   |
| Northwestern University (IL).....                                     | 27                               | 5,048   | 370,629                          | 26,830                           | 341                        | 101        | 29,933   | 14,008             | 122                                   | 29,132                                   | 68,355  | —                                   |
| University of Oklahoma, Norman Campus.....                            | 28                               | 5,046   | 936,050                          | 92,336                           | 152                        | 37         | 16,579   | 4,598              | 117                                   | 22,000                                   | 31,182  | —                                   |
| University of California, Davis.....                                  | 29                               | 5,039   | 484,795                          | 73,649                           | 193                        | 52         | 20,485   | 9,226              | 96                                    | 36,746                                   | 63,354  | 16,140                              |
| University of Colorado at Boulder.....                                | 30                               | 4,983   | 758,891                          | 85,771                           | 238                        | 62         | 25,659   | 10,158             | 128                                   | 71,853                                   | 65,608  | —                                   |
| University of Kansas.....   | 31                               | 4,877   | 404,676                          | 18,313                           | 253                        | 61         | 19,536   | 9,398              | 140                                   | 31,790                                   | 95,233  | 4,632                               |
| University of Georgia.....  | 32                               | 4,810   | 383,014                          | 93,148                           | 267                        | 74         | 22,569   | 10,063             | 137                                   | 15,000                                   | 39,466  | 2,224                               |
| University of Florida.....  | 33                               | 4,725   | 477,867                          | 109,181                          | 391                        | 87         | 28,546   | 13,445             | 105                                   | 59,164                                   | 51,499  | —                                   |
| New York University.....  | 34                               | 4,673   | 698,666                          | 111,962                          | 470                        | 63         | 52,605   | 22,911             | 126                                   | 60,196                                   | 61,022  | —                                   |
| University of Iowa.....   | 35                               | 4,639   | 946,531                          | 68,653                           | 207                        | 61         | 23,649   | 9,453              | 116                                   | 35,000                                   | 73,528  | 2,913                               |
| Texas A & M University.....   | 36                               | 4,577   | 936,270                          | 108,064                          | 355                        | 92         | 40,367   | 14,344             | 145                                   | 57,493                                   | 33,000  | —                                   |
| Arizona State University.....   | 37                               | 4,497   | 313,728                          | 44,590                           | 267                        | 83         | 26,186   | 9,789              | 149                                   | 81,105                                   | 74,390  | 2,947                               |
| University of Cincinnati, Main Campus (OH).....                       | 38                               | 4,379   | 1,015,550                        | 110,087                          | 186                        | 45         | 21,526   | 6,923              | 104                                   | 29,797                                   | 99,173  | 1,984                               |
| Brown University (RI).....  | 39                               | 4,187   | 534,514                          | 75,023                           | 184                        | 61         | 20,983   | 9,313              | 112                                   | 21,967                                   | 15,737  | 2,439                               |
| University of Southern California.....                                | 40                               | 4,181   | 399,112                          | 86,758                           | 368                        | 75         | 44,482   | 16,809             | 160                                   | 60,352                                   | 116,316   | 7,284                               |
| Tulane University of Louisiana.....                                   | 41                               | 4,158   | 742,844                          | 96,379                           | 187                        | 48         | 16,777   | 6,131              | 118                                   | 15,000                                   | 36,831  | —                                   |
| Louisiana State University and Agricultural & Mechanical College..... | 42                               | 4,129   | 384,366                          | 125,186                          | 159                        | 50         | 17,271   | —                  | 109                                   | 47,467                                   | 31,723  | —                                   |
| Miami University-Oxford (OH).....                                     | 43                               | 4,112   | 572,506                          | 93,225                           | 121                        | 43         | 9,395  | 4,475              | 168                                   | 37,715                                   | 55,007  | 7,025                               |
| University at Buffalo (NY).....                                       | 44                               | 4,030   | 679,863                          | 87,997                           | 204                        | 67         | 20,163   | 10,467             | 168                                   | 27,000                                   | 32,709  | 3,270                               |
| Temple University (PA).....   | 45                               | 3,990   | 517,395                          | 76,659                           | 207                        | 62         | 22,752   | 8,191              | 145                                   | 70,356                                   | 65,281  | 4,453                               |
| University of South Carolina, Columbia.....                           | 46                               | 3,964   | 128,066                          | 67,016                           | 269                        | 68         | 19,500   | 7,506              | 111                                   | 26,666                                   | 103,239   | 571                                 |
| University of Maryland, College Park.....                             | 47                               | 3,930   | 383,014                          | 68,514                           | 246                        | 74         | 31,678   | 12,069             | 162                                   | 55,233                                   | 423,573   | 90,122                              |
| Washington University in St. Louis (MO).....                          | 48                               | 3,918   | 470,191                          | 85,796                           | 250                        | 94         | 31,428   | 10,767             | 120                                   | 30,000                                   | 35,931  | —                                   |
| University of Kentucky.....   | 49                               | 3,916   | 522,509                          | 87,287                           | 245                        | 69         | 21,179   | 8,507              | 140                                   | 56,821                                   | 44,444  | 93                                  |
| Brigham Young University (UT).....                                    | 50                               | 3,851   | 440,649                          | 80,292                           | 395                        | 87         | 29,878   | 13,157             | 105                                   | 75,066                                   | 75,387  | 11,984                              |
| University of Rochester (NY).....                                     | 51                               | 3,827   | 225,297                          | 29,573                           | 209                        | 96         | 19,993   | 7,727              | 119                                   | 10,239 <sup>3</sup>                      | 53,522  | —                                   |
| University of Notre Dame (IN).....                                    | 52                               | 3,713   | 228,312                          | 87,690                           | 259                        | 76         | 25,413   | 11,044             | 126                                   | 26,413                                   | 24,438  | 785                                 |
| Johns Hopkins University (MD).....                                    | 53                               | 3,701   | 675,275                          | 141,636                          | 279                        | 114        | 31,846   | 11,783             | 120                                   | 30,000                                   | 51,420  | 3,220                               |
| Emory University (GA).....  | 54                               | 3,620   | 380,834                          | 66,992                           | 256                        | 80         | 33,592   | 12,661             | 112                                   | 50,884                                   | 9,037   | 3,730                               |
| North Carolina State University at Raleigh.....                       | 55                               | 3,567   | 420,980                          | 66,205                           | 263                        | 98         | 25,189   | 12,302             | 146                                   | 44,109                                   | 33,213  | 3,487                               |
| University of Missouri, Columbia.....                                 | 56                               | 3,562   | 409,409                          | 55,814                           | 192                        | 52         | 18,343   | 7,020              | 114                                   | 52,027                                   | 38,134  | —                                   |
| University of California, San Diego.....                              | 57                               | 3,542   | 428,633                          | 19,855                           | 335                        | 56         | 31,752   | 16,597             | 103                                   | 52,065                                   | 62,849  | 1,861                               |
| The University of Alabama.....  | 58                               | 3,534   | 870,600                          | 88,083                           | 210                        | 61         | 19,903   | 6,945              | 136                                   | 33,287                                   | 54,618  | 2,164                               |
| Auburn University (AL).....   | 59                               | 3,473   | 765,710                          | 9,541                            | 116                        | 27         | 13,087   | 5,138              | 146                                   | 26,851                                   | 115,232   | —                                   |
| University of Utah.....   | 60                               | 3,442   | 155,669                          | 76,314                           | 312                        | 65         | 21,201   | 11,515             | 142                                   | 41,829                                   | 202,287   | 8,013                               |

—Not available.

<sup>1</sup>The number of entries into the library in an average week. A single person can be counted more than once.

<sup>2</sup>Includes both in-person and virtual services.

<sup>3</sup>Estimated.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Academic Libraries Survey (ALS), fiscal year 2010. (This table was prepared June 2012.)

**Table 483. Public libraries, books and serial volumes, library visits, circulation, and reference transactions, by state: Fiscal years 2008 and 2009**

| State                      | Number of public libraries |                           | Number of books and serial volumes |                |            |            | Library visits per capita <sup>1</sup> |            | Circulation per capita <sup>2</sup> |            | Reference transactions per capita <sup>3</sup> |            |
|----------------------------|----------------------------|---------------------------|------------------------------------|----------------|------------|------------|--|------------|-------------------------------------|------------|--|------------|
|                            |                            |                           | In thousands                       |                | Per capita |            |  |            |                                     |            |  |            |
|                            | 2008                       | 2009                      | 2008                               | 2009           | 2008       | 2009       | 2008                                   | 2009       | 2008                                | 2009       | 2008   | 2009       |
| 1                          | 2                          | 3                         | 4                                  | 5              | 6          | 7          | 8                                      | 9          | 10                                  | 11         | 12   | 13         |
| <b>United States</b> ..... | <b>9,221</b> <sup>4</sup>  | <b>9,225</b> <sup>4</sup> | <b>816,099</b>                     | <b>815,909</b> | <b>2.8</b> | <b>2.7</b> | <b>5.1</b>                             | <b>5.4</b> | <b>7.7</b>                          | <b>8.1</b> | <b>1.0</b>                                     | <b>1.0</b> |
| Alabama.....               | 210                        | 210                       | 9,615                              | 9,546          | 2.2        | 2.1        | 3.5                                    | 3.7        | 4.4                                 | 4.6        | 0.8  | 0.9        |
| Alaska.....                | 86                         | 87                        | 2,491                              | 2,532          | 3.7        | 3.7        | 5.1                                    | 5.1        | 6.3                                 | 6.4        | 0.6  | 0.7        |
| Arizona.....               | 86                         | 89                        | 8,619                              | 8,807          | 1.3        | 1.3        | 4.0                                    | 4.4        | 7.3                                 | 7.4        | 0.7  | 0.7        |
| Arkansas.....              | 51                         | 52                        | 6,450                              | 6,578          | 2.4        | 2.5        | 3.7                                    | 4.0        | 4.9                                 | 5.3        | 0.7  | 0.7        |
| California.....            | 181                        | 181                       | 74,197                             | 75,299         | 2.0        | 2.0        | 4.5                                    | 4.8        | 5.8                                 | 6.2        | 0.9  | 0.9        |
| Colorado.....              | 115                        | 114                       | 12,039                             | 11,916         | 2.5        | 2.4        | 6.3                                    | 6.7        | 12.0                                | 13.0       | 1.2  | 1.2        |
| Connecticut.....           | 195                        | 195                       | 15,609                             | 15,646         | 4.4        | 4.5        | 6.8                                    | 7.0        | 9.4                                 | 9.7        | 1.4  | 1.3        |
| Delaware.....              | 21                         | 21                        | 1,991                              | 1,701          | 2.5        | 2.2        | 5.5                                    | 5.6        | 10.4                                | 10.5       | 0.6  | 0.6        |
| District of Columbia.....  | 1                          | 1                         | 2,063                              | 2,130          | 3.5        | 3.6        | 4.6                                    | 4.9        | 3.0                                 | 3.9        | 1.4  | 1.4        |
| Florida.....               | 80                         | 80                        | 32,736                             | 32,643         | 1.7        | 1.7        | 4.5                                    | 4.8        | 6.2                                 | 6.8        | 1.6  | 1.6        |
| Georgia.....               | 59                         | 61                        | 16,087                             | 16,341         | 1.7        | 1.7        | 4.0                                    | 4.3        | 4.7                                 | 5.1        | 1.0  | 0.9        |
| Hawaii.....                | 1                          | 1                         | 3,399                              | 3,383          | 2.6        | 2.6        | 4.6                                    | 4.7        | 5.5                                 | 5.6        | 0.7  | 0.7        |
| Idaho.....                 | 104                        | 104                       | 4,192                              | 4,275          | 3.1        | 3.2        | 6.4                                    | 6.8        | 9.4                                 | 10.3       | 0.8  | 0.9        |
| Illinois.....              | 634                        | 634                       | 45,263                             | 45,250         | 3.9        | 3.8        | 6.6                                    | 7.0        | 9.0                                 | 9.7        | 1.2  | 1.2        |
| Indiana.....               | 238                        | 238                       | 25,873                             | 25,672         | 4.5        | 4.5        | 7.2                                    | 7.4        | 13.7                                | 14.1       | 1.0  | 1.0        |
| Iowa.....                  | 539                        | 541                       | 12,235                             | 12,143         | 4.1        | 4.1        | 6.3                                    | 6.5        | 9.6                                 | 9.7        | 0.6  | 0.6        |
| Kansas.....                | 327                        | 328                       | 10,381                             | 10,314         | 4.4        | 4.3        | 6.2                                    | 6.6        | 11.4                                | 11.8       | 1.1  | 1.1        |
| Kentucky.....              | 116                        | 117                       | 8,674                              | 8,849          | 2.1        | 2.1        | 4.4                                    | 4.5        | 6.7                                 | 6.9        | 0.9  | 0.7        |
| Louisiana.....             | 68                         | 68                        | 11,641                             | 11,651         | 2.6        | 2.6        | 3.3                                    | 3.5        | 4.0                                 | 4.2        | 1.2  | 1.4        |
| Maine.....                 | 272                        | 269                       | 6,505                              | 6,536          | 5.4        | 5.4        | 5.9                                    | 5.9        | 7.7                                 | 7.9        | 0.6  | 0.6        |
| Maryland.....              | 24                         | 24                        | 14,378                             | 13,892         | 2.6        | 2.5        | 5.9                                    | 6.1        | 9.9                                 | 10.7       | 1.1  | 1.3        |
| Massachusetts.....         | 370                        | 370                       | 32,713                             | 32,969         | 5.1        | 5.1        | 6.5                                    | 6.5        | 8.4                                 | 8.9        | 0.9  | 0.8        |
| Michigan.....              | 384                        | 384                       | 34,556                             | 35,539         | 3.5        | 3.6        | 5.5                                    | 6.0        | 8.0                                 | 8.6        | 0.9  | 1.0        |
| Minnesota.....             | 138                        | 138                       | 14,762                             | 15,535         | 2.8        | 2.9        | 5.5                                    | 5.6        | 10.7                                | 11.2       | 0.8  | 0.7        |
| Mississippi.....           | 50                         | 50                        | 5,530                              | 5,556          | 1.9        | 1.9        | 3.0                                    | 3.2        | 2.9                                 | 3.0        | 0.6  | 0.6        |
| Missouri.....              | 152                        | 150                       | 18,034                             | 17,592         | 3.5        | 3.4        | 5.5                                    | 5.9        | 9.4                                 | 10.1       | 1.1  | 1.1        |
| Montana.....               | 80                         | 80                        | 2,732                              | 2,731          | 3.0        | 3.0        | 4.5                                    | 4.9        | 6.5                                 | 6.9        | 0.5  | 0.5        |
| Nebraska.....              | 270                        | 269                       | 6,643                              | 6,345          | 5.1        | 4.7        | 6.9                                    | 6.8        | 10.5                                | 10.4       | 0.9  | 0.8        |
| Nevada.....                | 22                         | 22                        | 5,405                              | 4,782          | 2.0        | 1.8        | 4.0                                    | 4.3        | 6.5                                 | 7.2        | 0.7  | 0.6        |
| New Hampshire.....         | 231                        | 230                       | 6,210                              | 6,217          | 4.7        | 4.7        | 5.6                                    | 5.9        | 8.4                                 | 8.9        | 0.6  | 0.6        |
| New Jersey.....            | 303                        | 301                       | 30,342                             | 30,230         | 3.6        | 3.6        | 5.9                                    | 6.1        | 7.3                                 | 7.8        | 1.0  | 1.0        |
| New Mexico.....            | 91                         | 91                        | 4,578                              | 4,615          | 2.9        | 2.9        | 4.8                                    | 5.0        | 6.3                                 | 6.5        | 0.9  | 0.8        |
| New York.....              | 755                        | 756                       | 74,635                             | 75,760         | 3.9        | 4.0        | 6.2                                    | 6.3        | 8.2                                 | 8.4        | 1.5  | 1.5        |
| North Carolina.....        | 77                         | 77                        | 16,833                             | 16,907         | 1.9        | 1.8        | 4.1                                    | 4.8        | 5.8                                 | 6.0        | 1.3  | 1.4        |
| North Dakota.....          | 81                         | 85                        | 2,453                              | 2,575          | 4.3        | 4.5        | 4.3                                    | 4.4        | 7.2                                 | 7.8        | 0.7  | 0.8        |
| Ohio.....                  | 251                        | 251                       | 46,893                             | 45,818         | 4.1        | 4.0        | 8.0                                    | 8.0        | 16.7                                | 17.0       | 1.8  | 1.8        |
| Oklahoma.....              | 115                        | 115                       | 7,249                              | 7,278          | 2.4        | 2.4        | 4.9                                    | 7.0        | 7.0                                 | 7.1        | 0.7  | 0.7        |
| Oregon.....                | 126                        | 127                       | 9,407                              | 9,927          | 2.8        | 2.7        | 6.6                                    | 6.8        | 15.4                                | 15.4       | 0.8  | 0.8        |
| Pennsylvania.....          | 457                        | 458                       | 29,837                             | 28,180         | 2.5        | 2.4        | 4.0                                    | 4.1        | 5.8                                 | 6.0        | 0.7  | 0.7        |
| Rhode Island.....          | 48                         | 48                        | 4,420                              | 4,334          | 4.2        | 4.1        | 6.0                                    | 6.4        | 7.0                                 | 7.3        | 0.8  | 0.8        |
| South Carolina.....        | 42                         | 42                        | 9,421                              | 9,430          | 2.1        | 2.2        | 3.8                                    | 4.2        | 5.4                                 | 6.1        | 1.1  | 1.2        |
| South Dakota.....          | 114                        | 112                       | 3,134                              | 3,096          | 4.5        | 4.2        | 5.6                                    | 5.4        | 8.4                                 | 8.4        | 0.9  | 0.9        |
| Tennessee.....             | 187                        | 186                       | 11,595                             | 11,754         | 1.9        | 1.9        | 3.4                                    | 3.5        | 4.1                                 | 4.0        | 0.7  | 0.6        |
| Texas.....                 | 561                        | 559                       | 41,797                             | 41,749         | 1.9        | 1.8        | 3.3                                    | 3.5        | 4.9                                 | 5.1        | 0.7  | 0.7        |
| Utah.....                  | 69                         | 71                        | 6,556                              | 6,744          | 2.5        | 2.5        | 6.7                                    | 7.0        | 13.0                                | 13.4       | 1.7  | 1.9        |
| Vermont.....               | 183                        | 184                       | 2,900                              | 2,964          | 4.8        | 4.9        | 6.4                                    | 6.5        | 7.7                                 | 7.8        | 0.8  | 0.8        |
| Virginia.....              | 91                         | 91                        | 19,181                             | 19,151         | 2.5        | 2.5        | 5.2                                    | 5.5        | 9.2                                 | 9.8        | 1.0  | 1.0        |
| Washington.....            | 64                         | 63                        | 16,433                             | 15,377         | 2.5        | 2.3        | 6.5                                    | 6.7        | 12.1                                | 12.9       | 1.0  | 0.9        |
| West Virginia.....         | 97                         | 97                        | 5,119                              | 5,213          | 2.8        | 2.9        | 3.3                                    | 3.4        | 4.2                                 | 4.3        | 0.5  | 0.5        |
| Wisconsin.....             | 381                        | 380                       | 19,843                             | 19,956         | 3.5        | 3.5        | 6.3                                    | 6.4        | 10.9                                | 11.5       | 0.9  | 0.9        |
| Wyoming.....               | 23                         | 23                        | 2,447                              | 2,484          | 4.7        | 4.7        | 6.8                                    | 7.1        | 9.0                                 | 9.5        | 1.1  | 1.2        |

<sup>1</sup>The number of visits (entering the library for any purpose) per person during the year.<sup>2</sup>The number of library materials lent per person during the year.<sup>3</sup>A reference transaction is an information contact that involves the knowledge, use, recommendations, interpretation, or instructions in the use of one or more information sources by a member of the library staff.<sup>4</sup>In 2008, of the 9,221 public libraries in the 50 states and the District of Columbia, 7,469 were single-outlet libraries and 1,752 were multiple-outlet libraries. In 2009, of the 9,225 public libraries in the 50 states and the District of Columbia, 7,466 were single-outlet libraries and 1,759 were multiple-outlet libraries. Single-outlet libraries consist of a central

library, bookmobile, or books-by-mail-only outlet. Multiple-outlet libraries have two or more direct service outlets, including some combination of one central library, branch(es), bookmobile(s), and/or books-by-mail-only outlets.

NOTE: Data include imputations for nonresponse. Detail may not sum to totals because of rounding. Per capita figures are based on unduplicated populations of the areas served by public libraries.

SOURCE: Institute of Museum and Library Services, *Public Libraries Survey*, fiscal years 2008 and 2009, retrieved October 28, 2011, from <https://harvester.census.gov/imls/pubs/pls/index.asp>. (This table was prepared October 2011.)

**Table 484. Participants in state-administered adult basic education, secondary education, and English as a second language programs, by type of program and state or jurisdiction: Selected fiscal years, 2000 through 2010**

| State or jurisdiction                | Total            |                  |                  | 2009             |                       |                           |                              | 2010             |                       |                           |                              |
|--------------------------------------|------------------|------------------|------------------|------------------|-----------------------|---------------------------|------------------------------|------------------|-----------------------|---------------------------|------------------------------|
|                                      | 2000             | 2005             | 2008             | Total            | Adult basic education | Adult secondary education | English as a second language | Total            | Adult basic education | Adult secondary education | English as a second language |
| 1                                    | 2                | 3                | 4                | 5                | 6                     | 7                         | 8                            | 9                | 10                    | 11                        | 12                           |
| <b>United States .....</b>           | <b>2,629,643</b> | <b>2,543,953</b> | <b>2,364,051</b> | <b>2,157,155</b> | <b>979,604</b>        | <b>256,323</b>            | <b>921,228</b>               | <b>1,990,118</b> | <b>921,374</b>        | <b>230,163</b>            | <b>838,581</b>               |
| Alabama .....                        | 23,666           | 19,827           | 23,815           | 25,153           | 17,967                | 4,952                     | 2,234                        | 24,339           | 17,725                | 4,560                     | 2,054                        |
| Alaska .....                         | 5,312            | 3,791            | 3,179            | 3,326            | 2,129                 | 476                       | 721                          | 3,176            | 2,010                 | 360                       | 806                          |
| Arizona .....                        | 31,136           | 26,881           | 21,760           | 19,789           | 11,791                | 1,506                     | 6,492                        | 18,552           | 11,296                | 1,391                     | 5,865                        |
| Arkansas .....                       | 38,867           | 37,102           | 32,610           | 31,551           | 20,515                | 6,105                     | 4,931                        | 27,603           | 17,410                | 5,702                     | 4,491                        |
| California .....                     | 473,050          | 591,893          | 618,767          | 434,428          | 97,976                | 37,192                    | 299,260                      | 392,918          | 98,721                | 33,013                    | 261,184                      |
| Colorado .....                       | 13,818           | 15,011           | 14,203           | 14,298           | 3,929                 | 1,331                     | 9,038                        | 12,873           | 3,836                 | 1,240                     | 7,797                        |
| Connecticut .....                    | 30,844           | 31,958           | 27,859           | 28,255           | 7,472                 | 7,502                     | 13,281                       | 25,924           | 7,234                 | 6,618                     | 12,072                       |
| Delaware .....                       | 4,342            | 6,329            | 5,155            | 5,059            | 3,151                 | 588                       | 1,320                        | 4,961            | 3,077                 | 516                       | 1,368                        |
| District of Columbia .....           | 3,667            | 3,646            | 3,956            | 4,247            | 2,362                 | 223                       | 1,662                        | 3,808            | 2,064                 | 189                       | 1,555                        |
| Florida .....                        | 404,912          | 348,119          | 260,931          | 256,498          | 113,430               | 30,288                    | 112,780                      | 239,653          | 105,307               | 25,475                    | 108,871                      |
| Georgia .....                        | 108,004          | 95,434           | 75,487           | 72,657           | 48,584                | 6,135                     | 17,938                       | 64,668           | 46,149                | 5,949                     | 12,570                       |
| Hawaii .....                         | 10,525           | 7,461            | 8,944            | 9,196            | 3,867                 | 2,149                     | 3,180                        | 9,058            | 3,849                 | 2,099                     | 3,110                        |
| Idaho .....                          | 10,506           | 7,744            | 7,535            | 7,429            | 4,541                 | 546                       | 2,342                        | 6,675            | 4,066                 | 484                       | 2,125                        |
| Illinois .....                       | 122,043          | 118,296          | 108,024          | 108,383          | 29,922                | 15,835                    | 62,626                       | 96,620           | 26,175                | 14,086                    | 56,359                       |
| Indiana .....                        | 42,135           | 43,498           | 40,226           | 35,995           | 22,939                | 6,791                     | 6,265                        | 28,571           | 19,815                | 3,945                     | 4,811                        |
| Iowa .....                           | 20,161           | 11,989           | 9,918            | 10,752           | 5,095                 | 2,061                     | 3,596                        | 11,167           | 5,254                 | 1,931                     | 3,982                        |
| Kansas .....                         | 11,248           | 9,475            | 8,916            | 9,024            | 4,381                 | 902                       | 3,741                        | 8,100            | 3,873                 | 863                       | 3,364                        |
| Kentucky .....                       | 31,050           | 30,931           | 40,235           | 39,218           | 26,972                | 8,207                     | 4,039                        | 38,654           | 26,410                | 8,468                     | 3,776                        |
| Louisiana .....                      | 30,929           | 29,367           | 26,633           | 30,559           | 24,588                | 3,696                     | 2,275                        | 27,270           | 22,340                | 3,142                     | 1,788                        |
| Maine .....                          | 12,430           | 8,151            | 9,270            | 8,604            | 4,448                 | 2,400                     | 1,756                        | 6,776            | 3,800                 | 1,611                     | 1,365                        |
| Maryland .....                       | 22,702           | 27,055           | 33,673           | 33,942           | 15,865                | 3,667                     | 14,410                       | 32,833           | 15,174                | 3,953                     | 13,706                       |
| Massachusetts .....                  | 24,053           | 21,448           | 21,491           | 20,372           | 4,813                 | 3,295                     | 12,264                       | 20,314           | 4,888                 | 3,473                     | 11,953                       |
| Michigan .....                       | 56,096           | 34,768           | 28,243           | 31,106           | 18,391                | 3,786                     | 8,929                        | 25,745           | 14,359                | 2,994                     | 8,392                        |
| Minnesota .....                      | 42,039           | 47,174           | 46,109           | 47,612           | 17,658                | 5,948                     | 24,006                       | 46,009           | 17,948                | 5,720                     | 22,341                       |
| Mississippi .....                    | 37,947           | 25,675           | 20,480           | 17,782           | 14,410                | 3,067                     | 305                          | 16,854           | 13,877                | 2,750                     | 227                          |
| Missouri .....                       | 41,089           | 37,052           | 36,161           | 35,542           | 24,217                | 4,244                     | 7,081                        | 31,397           | 21,612                | 3,655                     | 6,130                        |
| Montana .....                        | 4,892            | 3,291            | 3,151            | 3,735            | 2,753                 | 772                       | 210                          | 3,494            | 2,581                 | 720                       | 193                          |
| Nebraska .....                       | 7,917            | 10,226           | 8,435            | 8,588            | 4,213                 | 906                       | 3,469                        | 8,485            | 4,108                 | 893                       | 3,484                        |
| Nevada .....                         | 22,992           | 9,981            | 8,571            | 9,193            | 1,195                 | 502                       | 7,496                        | 8,673            | 1,508                 | 447                       | 6,718                        |
| New Hampshire .....                  | 5,962            | 5,804            | 5,806            | 5,589            | 1,770                 | 1,671                     | 2,148                        | 5,740            | 1,676                 | 1,737                     | 2,327                        |
| New Jersey .....                     | 44,317           | 40,889           | 32,823           | 33,901           | 11,626                | 1,400                     | 20,875                       | 30,976           | 12,152                | 1,325                     | 17,499                       |
| New Mexico .....                     | 23,243           | 24,132           | 22,920           | 23,248           | 12,941                | 2,069                     | 8,238                        | 21,466           | 12,154                | 1,725                     | 7,587                        |
| New York .....                       | 176,239          | 157,486          | 133,255          | 129,636          | 50,261                | 7,868                     | 71,507                       | 122,833          | 48,118                | 7,544                     | 67,171                       |
| North Carolina .....                 | 107,504          | 109,047          | 121,708          | 123,030          | 69,472                | 24,396                    | 29,162                       | 115,312          | 66,377                | 23,294                    | 25,641                       |
| North Dakota .....                   | 2,124            | 2,063            | 1,822            | 1,783            | 973                   | 409                       | 401                          | 1,581            | 773                   | 415                       | 393                          |
| Ohio .....                           | 65,579           | 50,869           | 50,537           | 46,042           | 32,588                | 6,729                     | 6,725                        | 41,692           | 30,093                | 5,341                     | 6,258                        |
| Oklahoma .....                       | 20,101           | 20,447           | 18,411           | 19,711           | 13,634                | 2,164                     | 3,913                        | 18,329           | 12,539                | 1,809                     | 3,981                        |
| Oregon .....                         | 25,228           | 21,668           | 23,600           | 22,976           | 10,310                | 2,924                     | 9,742                        | 20,851           | 9,914                 | 2,592                     | 8,345                        |
| Pennsylvania .....                   | 49,369           | 54,274           | 52,795           | 34,975           | 21,407                | 5,257                     | 8,311                        | 30,577           | 17,957                | 4,037                     | 8,583                        |
| Rhode Island .....                   | 5,592            | 6,697            | 6,580            | 6,497            | 2,748                 | 685                       | 3,064                        | 6,012            | 2,484                 | 561                       | 2,967                        |
| South Carolina .....                 | 94,452           | 65,901           | 54,538           | 53,645           | 40,310                | 8,019                     | 5,316                        | 49,484           | 37,205                | 7,500                     | 4,779                        |
| South Dakota .....                   | 5,637            | 3,517            | 3,025            | 2,773            | 1,730                 | 566                       | 477                          | 2,423            | 1,398                 | 558                       | 467                          |
| Tennessee .....                      | 40,615           | 48,924           | 37,048           | 32,177           | 23,959                | 4,055                     | 4,163                        | 28,170           | 21,254                | 3,409                     | 3,507                        |
| Texas .....                          | 111,585          | 119,867          | 84,514           | 98,063           | 46,427                | 3,591                     | 48,045                       | 99,333           | 45,638                | 3,553                     | 50,142                       |
| Utah .....                           | 30,714           | 29,320           | 25,978           | 26,337           | 15,383                | 2,809                     | 8,145                        | 24,686           | 15,048                | 2,659                     | 6,979                        |
| Vermont .....                        | 1,146            | 2,015            | 2,505            | 2,461            | 1,841                 | 379                       | 241                          | 1,590            | 1,019                 | 277                       | 294                          |
| Virginia .....                       | 35,261           | 29,222           | 31,106           | 29,802           | 12,512                | 4,632                     | 12,658                       | 28,220           | 11,481                | 4,336                     | 12,403                       |
| Washington .....                     | 53,460           | 50,386           | 64,982           | 65,606           | 27,120                | 4,546                     | 33,940                       | 61,392           | 26,324                | 4,264                     | 30,804                       |
| West Virginia .....                  | 13,072           | 9,444            | 9,628            | 9,780            | 7,609                 | 1,912                     | 259                          | 9,785            | 7,679                 | 1,871                     | 235                          |
| Wisconsin .....                      | 27,304           | 26,029           | 23,856           | 23,694           | 13,791                | 4,324                     | 5,579                        | 21,523           | 11,964                | 4,334                     | 5,225                        |
| Wyoming .....                        | 2,767            | 2,379            | 2,877            | 3,136            | 1,618                 | 846                       | 672                          | 2,973            | 1,661                 | 775                       | 537                          |
| <b>Other jurisdictions .....</b>     | <b>44,785</b>    | <b>37,328</b>    | <b>36,071</b>    | <b>24,098</b>    | <b>4,044</b>          | <b>19,437</b>             | <b>617</b>                   | <b>22,045</b>    | <b>4,791</b>          | <b>16,436</b>             | <b>818</b>                   |
| American Samoa .....                 | 662              | 838              | 264              | 169              | 123                   | 24                        | 22                           | 225              | 38                    | 52                        | 135                          |
| Federated States of Micronesia ..... | 0                | 0                | 0                | 0                | 0                     | 0                         | 0                            | 0                | 0                     | 0                         | 0                            |
| Guam .....                           | 1,092            | 1,062            | 1,154            | 633              | 382                   | 166                       | 85                           | 539              | 364                   | 59                        | 116                          |
| Marshall Islands .....               | 335              | 0                | 0                | 0                | 0                     | 0                         | 0                            | 0                | 0                     | 0                         | 0                            |
| Northern Marianas .....              | 680              | 740              | 583              | 607              | 387                   | 77                        | 143                          | 607              | 369                   | 90                        | 148                          |
| Palau .....                          | 132              | 206              | 51               | 63               | 0                     | 63                        | 0                            | 56               | 0                     | 56                        | 0                            |
| Puerto Rico .....                    | 41,043           | 33,463           | 34,019           | 22,626           | 3,152                 | 19,107                    | 367                          | 20,464           | 3,873                 | 16,172                    | 419                          |
| U.S. Virgin Islands .....            | 841              | 1,019            | 0                | 0                | 0                     | 0                         | 0                            | 154              | 147                   | 7                         | 0                            |

NOTE: Adult basic education provides instruction in basic skills for adults 16 and over functioning at literacy levels below the secondary level. Adult secondary education provides instruction at the high school level for adults who are seeking to pass the GED or obtain an adult high school credential. English as a second language instruction is for adults who lack proficiency in English and who seek to improve their literacy and competence in English.

SOURCE: U.S. Department of Education, Office of Vocational and Adult Education (OVAE), OVAE National Reporting System, retrieved June 4, 2012, from <http://wdcrobcolp01.ed.gov/CFAPPS/OVAE/NRS/reports/index.cfm>. (This table was prepared June 2012.)

**Table 485. Participation of employed persons, 17 years old and over, in career-related adult education during the previous 12 months, by selected characteristics of participants: 1995, 1999, and 2005**

[Standard errors appear in parentheses]

| Characteristic of<br>employed person          | 1995   |        |  |        | 1999  |         |  |        | 2005                              |                                       |        |                               |        |                                 |        |   |        |                 |                    |        |
|---|--|--------|--|--------|---|---------|--|--------|-----------------------------------|---------------------------------------|--------|-------------------------------|--------|---------------------------------|--------|---|--------|-----------------|--------------------|--------|
|   | Percent<br>of adults<br>participating in<br>career- or job-<br>related courses |        | Number of<br>career- or<br>job-related<br>courses taken,<br>per employed adult |        | Percent of<br>adults<br>participating<br>in career- or<br>job-related courses |         | Number of<br>career- or<br>job-related<br>courses taken,<br>per employed adult |        | Employed persons,<br>in thousands | Percent of adults participating       |        |                               |        |                                 |        | Number of career- or<br>job-related courses taken¹          |        |                 |                    |        |
|   |  |        |  |        |   |         |  |        |                                   | In career- or<br>job-related courses¹ |        | In apprenticeship<br>programs |        | In personal<br>interest courses |        | In informal learning<br>activities for<br>personal interest |        | In<br>thousands | Per employed adult |        |
| 1   | 2  |        | 3  |        | 4   |         | 5  |        | 6                                 | 7                                     |        | 8                             |        | 9                               |        | 10  |        | 11              | 12                 |        |
| Total .....                                   | 31.1   | (0.54) | 0.8  | (0.02) | 30.5  | (1.14)  | 0.7  | (0.03) | 133,386 (1,508.1)                 | 38.8                                  | (0.83) | 1.4                           | (0.24) | 21.8                            | (0.94) | 73.5  | (1.01) | 108,443         | 0.8                | (0.03) |
| Sex   |  |        |  |        |   |         |  |        |                                   |                                       |        |                               |        |                                 |        |   |        |                 |                    |        |
| Male .....                                    | 29.0   | (0.72) | 0.7  | (0.02) | 28.3  | (1.15)  | 0.6  | (0.03) | 71,754 (934.7)                    | 31.7                                  | (1.22) | 2.0                           | (0.37) | 18.5                            | (1.30) | 73.4  | (1.52) | 44,512          | 0.6                | (0.03) |
| Female .....                                  | 33.4   | (0.83) | 0.9  | (0.03) | 32.9  | (1.14)  | 0.8  | (0.03) | 61,632 (1,219.3)                  | 47.1                                  | (1.43) | 0.8                           | (0.23) | 25.8                            | (1.23) | 73.6  | (1.37) | 63,931          | 1.0                | (0.05) |
| Age   |  |        |  |        |   |         |  |        |                                   |                                       |        |                               |        |                                 |        |   |        |                 |                    |        |
| 17 through 24 years old.....                  | 18.6   | (1.01) | 0.4  | (0.02) | 19.1  | (1.91)  | 0.4  | (0.06) | 15,027 (1,030.4)                  | 26.4                                  | (3.01) | 3.0 !                         | (1.03) | 25.2                            | (3.37) | 71.4  | (3.15) | 8,024           | 0.5                | (0.09) |
| 25 through 29 years old.....                  | 31.2   | (1.46) | 0.8  | (0.05) | 34.3  | (2.44)  | 0.8  | (0.08) | 14,555 (918.4)                    | 36.1                                  | (2.94) | 3.1 !                         | (1.12) | 24.5                            | (3.66) | 70.9  | (4.49) | 9,493           | 0.7                | (0.06) |
| 30 through 34 years old.....                  | 31.6   | (1.30) | 0.8  | (0.04) | 34.4  | (2.50)  | 0.8  | (0.08) | 15,250 (977.2)                    | 41.0                                  | (3.06) | 2.7 !                         | (1.10) | 23.7                            | (2.63) | 74.0  | (2.54) | 12,681          | 0.8                | (0.07) |
| 35 through 39 years old.....                  | 35.1   | (1.02) | 0.9  | (0.03) | 29.2  | (2.15)  | 0.7  | (0.07) | 15,286 (922.4)                    | 41.7                                  | (4.16) | 1.0 !                         | (0.46) | 21.6                            | (3.15) | 77.7  | (3.00) | 13,807          | 0.9                | (0.14) |
| 40 through 44 years old.....                  | 36.6   | (1.29) | 0.9  | (0.04) | 36.4  | (2.44)  | 0.8  | (0.07) | 18,141 (946.3)                    | 39.8                                  | (2.73) | ‡                             | (†)    | 23.3                            | (2.60) | 71.2  | (3.15) | 15,586          | 0.9                | (0.07) |
| 45 through 49 years old.....                  | 39.6   | (1.94) | 1.0  | (0.06) | 30.4  | (2.42)  | 0.7  | (0.06) | 18,149 (842.5)                    | 45.0                                  | (2.15) | 0.7 !                         | (0.29) | 19.0                            | (2.09) | 73.5  | (2.68) | 16,809          | 0.9                | (0.06) |
| 50 through 54 years old.....                  | 34.4   | (1.69) | 0.9  | (0.04) | 34.7  | (2.57)  | 0.8  | (0.07) | 14,624 (732.1)                    | 42.6                                  | (2.49) | 0.7 !                         | (0.32) | 19.5                            | (1.92) | 76.3  | (2.27) | 14,881          | 1.0                | (0.10) |
| 55 through 59 years old.....                  | 26.7   | (1.86) | 0.7  | (0.06) | 30.3  | (2.83)  | 0.6  | (0.08) | 10,522 (676.0)                    | 44.7                                  | (2.98) | ‡                             | (†)    | 18.3                            | (1.93) | 73.0  | (2.95) | 9,901           | 0.9                | (0.09) |
| 60 through 64 years old.....                  | 21.1   | (2.41) | 0.5  | (0.06) | 27.2  | (3.80)  | 0.7  | (0.15) | 6,021 (498.8)                     | 38.9                                  | (3.97) | ‡                             | (†)    | 23.4                            | (3.52) | 73.0  | (4.22) | 4,919           | 0.8                | (0.10) |
| 65 years old and over.....                    | 13.7   | (1.86) | 0.4  | (0.06) | 20.3  | (4.21)  | 0.4  | (0.08) | 5,812 (493.3)                     | 21.6                                  | (3.48) | #                             | (†)    | 17.4                            | (3.13) | 74.2  | (3.75) | 2,343           | 0.4                | (0.07) |
| 65 through 69 .....                           | 13.1   | (2.28) | 0.4  | (0.08) | —   | (†)     | —  | (†)    | 3,385 (415.5)                     | 19.1                                  | (4.05) | #                             | (†)    | 20.9                            | (4.88) | 75.4  | (5.18) | 1,102           | 0.3                | (0.08) |
| 70 and over.....                              | 14.6   | (2.85) | 0.4  | (0.09) | —   | (†)     | —  | (†)    | 2,427 (282.3)                     | 25.1                                  | (5.81) | #                             | (†)    | 12.6                            | (2.93) | 72.6  | (6.11) | 1,241           | 0.5                | (0.14) |
| Race/ethnicity                                |  |        |  |        |   |         |  |        |                                   |                                       |        |                               |        |                                 |        |   |        |                 |                    |        |
| White .....                                   | 33.2   | (0.61) | 0.8  | (0.02) | 32.8  | (0.98)  | 0.6  | (0.03) | 94,881 (1,538.6)                  | 41.3                                  | (0.93) | 1.2                           | (0.25) | 22.2                            | (1.11) | 75.3  | (1.17) | 82,511          | 0.9                | (0.03) |
| Black .....                                   | 26.2   | (1.46) | 0.7  | (0.04) | 28.1  | (2.34)  | 1.0  | (0.07) | 13,773 (533.2)                    | 39.2                                  | (3.82) | 1.7 !                         | (0.83) | 23.5                            | (3.04) | 66.9  | (3.02) | 10,311          | 0.7                | (0.11) |
| Hispanic .....                                | 18.1   | (1.00) | 0.4  | (0.02) | 16.4  | (1.83)  | 0.5  | (0.05) | 15,741 (681.1)                    | 25.0                                  | (2.66) | 2.9                           | (0.85) | 16.2                            | (2.31) | 65.8  | (3.39) | 8,786           | 0.6                | (0.11) |
| Asian .....                                   | —  | (†)    | —  | (†)    | —   | (†)     | —  | (†)    | 3,770 (520.7)                     | 36.9                                  | (7.00) | ‡                             | (†)    | 32.3                            | (7.26) | 81.1  | (5.88) | 2,207           | 0.6                | (0.12) |
| Pacific Islander .....                        | —  | (†)    | —  | (†)    | —   | (†)     | —  | (†)    | ‡                                 | (†)                                   | ‡      | (†)                           | ‡      | (†)                             | ‡      | (†)   | ‡      | (†)             | ‡                  | (†)    |
| Asian/Pacific Islander .....                  | 25.5   | (2.69) | 0.6  | (0.07) | 32.8  | (4.84)  | 0.4 !  | (0.15) | —                                 | (†)                                   | —      | (†)                           | —      | (†)                             | —      | (†)   | —      | (†)             | —                  | (†)    |
| American Indian/Alaska<br>Native .....        | 34.0   | (6.32) | 0.9  | (0.20) | 29.5 !  | (11.52) | ‡  | (†)    | ‡                                 | (†)                                   | ‡      | (†)                           | ‡      | (†)                             | ‡      | (†)   | ‡      | (†)             | ‡                  | (†)    |
| Two or more races .....                       | —  | (†)    | —  | (†)    | —   | (†)     | —  | (†)    | 3,786 (562.7)                     | 39.1                                  | (6.85) | ‡                             | (†)    | 22.6                            | (6.34) | 77.6  | (8.40) | 3,083           | 0.8                | (0.15) |
| Other races .....                             | 25.3   | (2.99) | 0.7  | (0.09) | —   | (†)     | —  | (†)    | ‡                                 | (†)                                   | ‡      | (†)                           | ‡      | (†)                             | ‡      | (†)   | ‡      | (†)             | ‡                  | (†)    |
| Highest level of education<br>completed       |  |        |  |        |   |         |  |        |                                   |                                       |        |                               |        |                                 |        |   |        |                 |                    |        |
| Less than high school<br>completion .....     | 8.8  | (1.05) | 0.1  | (0.02) | 7.9   | (2.29)  | 0.4  | (0.05) | 16,627 (838.2)                    | 10.4                                  | (2.11) | 2.4 !                         | (0.90) | 8.8                             | (1.54) | 57.0  | (3.76) | 2,592           | 0.2                | (0.03) |
| 8th grade or less.....                        | 6.1 !  | (2.00) | 0.1 !  | (0.04) | —   | (†)     | —  | (†)    | 5,016 (599.7)                     | 2.7                                   | (1.12) | ‡                             | (†)    | 3.8 !                           | (1.71) | 46.7  | (7.11) | 197             | #                  | (†)    |
| 9th through 12th grade,<br>no completion..... | 10.0   | (1.27) | 0.2  | (0.02) | —   | (†)     | —  | (†)    | 11,610 (792.8)                    | 13.7                                  | (2.99) | ‡                             | (†)    | 11.0                            | (2.06) | 61.5  | (4.05) | 2,396           | 0.2                | (0.04) |
| High school completion .....                  | 20.9   | (0.79) | 0.4  | (0.02) | 21.4  | (1.45)  | 0.8  | (0.03) | 34,121 (1,147.2)                  | 24.7                                  | (1.76) | 1.3 !                         | (0.46) | 17.1                            | (1.89) | 63.4  | (2.55) | 16,640          | 0.5                | (0.05) |
| Some vocational/technical ...                 | 32.3   | (2.50) | 0.8  | (0.07) | 28.7  | (5.76)  | 0.9  | (0.17) | 3,744 (393.1)                     | 48.2                                  | (5.92) | ‡                             | (†)    | 25.5                            | (4.61) | 74.0  | (5.54) | 3,802           | 1.0                | (0.17) |
| Some college.....                             | 29.9   | (0.91) | 0.7  | (0.03) | 29.0  | (1.78)  | 0.7  | (0.06) | 24,479 (1,067.7)                  | 39.9                                  | (2.36) | 1.9 !                         | (0.69) | 25.2                            | (2.50) | 79.8  | (2.04) | 18,437          | 0.8                | (0.05) |
| Associate's degree .....                      | 39.2   | (1.58) | 1.0  | (0.05) | 39.7  | (3.07)  | 0.9  | (0.09) | 9,943 (730.7)                     | 50.4                                  | (3.71) | 2.3 !                         | (0.84) | 19.1                            | (2.86) | 78.4  | (3.88) | 14,224          | 1.4                | (0.21) |
| Bachelor's degree.....                        | 44.6   | (1.33) | 1.2  | (0.04) | 43.8  | (2.01)  | 1.0  | (0.06) | 26,475 (902.7)                    | 53.1                                  | (1.88) | ‡                             | (†)    | 29.0                            | (1.77) | 78.7  | (1.94) | 28,099          | 1.1                | (0.06) |
| Some graduate work<br>(or study) .....        | 50.2   | (1.63) | 1.4  | (0.05) | 46.8  | (4.17)  | 1.2  | (0.14) | 17,998 (735.4)                    | 61.1                                  | (2.16) | ‡                             | (†)    | 28.6                            | (2.01) | 88.8  | (1.16) | 24,649          | 1.4                | (0.07) |
| No degree .....                               | 44.3   | (3.18) | 1.2  | (0.10) | 54.2  | (4.94)  | 1.2  | (0.14) | 2,125 (227.9)                     | 53.8                                  | (5.79) | ‡                             | (†)    | 39.3                            | (6.05) | 75.0  | (5.64) | 2,412           | 1.1                | (0.16) |
| Master's .....                                | 50.5   | (1.99) | 1.4  | (0.06) | 45.3  | (2.97)  | 1.1  | (0.11) | 11,330 (614.7)                    | 62.7                                  | (2.98) | ‡                             | (†)    | 28.2                            | (2.27) | 90.5  | (1.40) | 15,394          | 1.4                | (0.09) |
| Doctor's.....                                 | 40.4   | (6.42) | 1.0  | (0.16) | 34.4  | (4.79)  | 0.7  | (0.12) | 1,600 (227.2)                     | 49.0                                  | (5.80) | ‡                             | (†)    | 28.8                            | (4.76) | 87.8  | (4.35) | 2,204           | 1.4                | (0.36) |
| Professional .....                            | 67.6   | (3.89) | 2.0  | (0.15) | 67.6  | (6.98)  | 1.9  | (0.31) | 2,943 (382.7)                     | 66.5                                  | (6.39) | ‡                             | (†)    | 22.1                            | (5.05) | 92.9  | (2.21) | 4,639           | 1.6                | (0.21) |

See notes at end of table.

**Table 485. Participation of employed persons, 17 years old and over, in career-related adult education during the previous 12 months, by selected characteristics of participants: 1995, 1999, and 2005—Continued**

[Standard errors appear in parentheses]

| Characteristic of employed person  | 1995  |            |  |              | 1999  |               |  |                | 2005                           |  |                            |                              |   |   |                    |    |
|--|---|------------|--|--------------|---|---------------|--|----------------|--------------------------------|--|----------------------------|------------------------------|---|---|--------------------|----|
|  | Percent of adults participating in career- or job-related courses |            | Number of career- or job-related courses taken, per employed adult |              | Percent of adults participating in career- or job-related courses |               | Number of career- or job-related courses taken, per employed adult |                | Employed persons, in thousands | Percent of adults participating                |                            |                              |   | Number of career- or job-related courses taken <sup>1</sup> |                    |    |
|  |   |            |  |              |   |               |  |                |                                | In career- or job-related courses <sup>1</sup> | In apprenticeship programs | In personal interest courses | In informal learning activities for personal interest | In thousands  | Per employed adult |    |
|  |   |            |  |              |   |               |  |                |                                |  |                            |                              |   |   |                    |    |
| 1  | 2   | 3          | 4  | 5            | 6   | 7             | 8  | 9              | 10                             | 11   | 12                         | 13                           | 14  | 15  | 16                 | 17 |
| <b>Locale<sup>2</sup></b>  |   |            |  |              |   |               |  |                |                                |  |                            |                              |   |   |                    |    |
| City.....  | — (t)   | — (t)      | — (t)  | — (t)        | 39,283 (1,391.3)  | 39.6 (1.67)   | 2.2 (0.60)   | 23.1 (1.43)    | 74.0 (1.77)                    | 34,327   | 0.9 (0.05)                 |                              |   |   |                    |    |
| Suburban.....  | — (t)   | — (t)      | — (t)  | — (t)        | 48,452 (1,555.0)  | 41.1 (1.87)   | 1.2 (0.32)   | 23.3 (1.38)    | 74.2 (1.49)                    | 39,802   | 0.8 (0.04)                 |                              |   |   |                    |    |
| Town.....  | — (t)   | — (t)      | — (t)  | — (t)        | 17,616 (1,060.7)  | 36.0 (2.64)   | ‡ (t)  | 19.6 (2.83)    | 71.7 (3.02)                    | 12,947   | 0.7 (0.07)                 |                              |   |   |                    |    |
| Rural.....   | — (t)   | — (t)      | — (t)  | — (t)        | 27,847 (885.2)  | 35.4 (2.14)   | 1.4 ! (0.58)   | 19.0 (2.19)    | 72.7 (2.22)                    | 21,135   | 0.8 (0.06)                 |                              |   |   |                    |    |
| <b>Occupation</b>  |   |            |  |              |   |               |  |                |                                |  |                            |                              |   |   |                    |    |
| Executive, administrative, or managerial occupations.....                              | 42.9 (1.49)   | 1.2 (0.05) | 40.6 (2.06)  | 1.0 (0.07)   | 14,596 (707.6)  | 53.6 (2.79)   | ‡ (t)  | 29.5 (2.89)    | 77.7 (2.87)                    | 16,567   | 1.1 (0.09)                 |                              |   |   |                    |    |
| Engineers, surveyors, and architects.....  | 44.2 (4.46)   | 1.1 (0.12) | 52.1 (6.96)  | 1.0 (0.16)   | 1,987 (244.9)   | 56.3 (5.68)   | ‡ (t)  | 30.5 (6.36)    | 81.0 (4.73)                    | 2,323  | 1.2 (0.16)                 |                              |   |   |                    |    |
| Natural scientists and mathematicians.....   | 59.7 (3.97)   | 1.7 (0.15) | 46.0 (6.61)  | 0.8 (0.14)   | 4,130 (445.4)   | 51.5 (5.64)   | ‡ (t)  | 31.2 (4.83)    | 85.3 (5.44)                    | 3,693  | 0.9 (0.11)                 |                              |   |   |                    |    |
| Social scientists and workers, religious workers, and lawyers....                      | 59.5 (2.61)   | 1.8 (0.11) | 56.9 (5.66)  | 1.7 (0.24)   | 4,697 (480.9)   | 66.8 (4.48)   | ‡ (t)  | 28.3 (3.81)    | 88.6 (2.95)                    | 7,822  | 1.7 (0.29)                 |                              |   |   |                    |    |
| Teachers, elementary/secondary.....  | 53.9 (2.23)   | 1.5 (0.08) | 52.1 (3.53)  | 1.2 (0.11)   | 7,085 (568.5)   | 67.7 (4.16)   | ‡ (t)  | 31.5 (3.93)    | 83.0 (2.79)                    | 12,233   | 1.7 (0.13)                 |                              |   |   |                    |    |
| Teachers, postsecondary and counselors, librarians, and archivists.....                | 41.6 (4.57)   | 1.0 (0.15) | 35.6 (5.85)  | 0.7 (0.14)   | 2,393 (420.9)   | 53.1 (8.63)   | ‡ (t)  | 17.7 (4.91)    | 90.9 (3.97)                    | 2,122  | 0.9 (0.09)                 |                              |   |   |                    |    |
| Health diagnosing and treating practitioners.....                                      | 68.6 (5.85)   | 2.0 (0.23) | 65.2 (11.99)   | 1.5 ! (0.50) | 978 (208.8)   | 78.9 (7.10)   | ‡ (t)  | 27.4 ! (9.60)  | 86.6 (5.37)                    | 1,951  | 2.0 (0.25)                 |                              |   |   |                    |    |
| Registered nurses, pharmacists, dietitians, therapists, and physician's assistants.... | 72.8 (3.02)   | 2.2 (0.14) | 72.2 (5.04)  | 1.8 (0.21)   | 2,794 (238.8)   | 79.7 (4.60)   | ‡ (t)  | 29.4 (4.17)    | 84.3 (3.70)                    | 4,984  | 1.8 (0.15)                 |                              |   |   |                    |    |
| Writers, artists, entertainers, and athletes.....                                      | 23.4 (2.89)   | 0.5 (0.07) | 30.6 (6.21)  | 0.6 (0.18)   | 2,969 (405.2)   | 29.9 (5.69)   | ‡ (t)  | 31.8 (6.15)    | 88.9 (4.39)                    | 1,865  | 0.6 (0.15)                 |                              |   |   |                    |    |
| Health technologists and technicians.....  | 50.0 (4.08)   | 1.4 (0.12) | 41.8 (6.00)  | 1.0 (0.19)   | 3,060 (436.7)   | 70.6 (7.31)   | ‡ (t)  | 27.8 (6.48)    | 77.5 (6.40)                    | 4,473  | 1.5 (0.18)                 |                              |   |   |                    |    |
| Technologists and technicians, except health.....                                      | 43.8 (2.67)   | 1.1 (0.10) | 37.6 (4.87)  | 1.0 (0.15)   | 1,774 (336.5)   | 29.4 (8.10)   | ‡ (t)  | 5.3 ! (2.02)   | 75.2 (8.98)                    | 1,015  | 0.6 (0.17)                 |                              |   |   |                    |    |
| Marketing and sales occupations.....   | 25.2 (1.26)   | 0.6 (0.03) | 21.1 (2.27)  | 0.4 (0.06)   | 14,845 (971.9)  | 32.3 (3.17)   | ‡ (t)  | 20.8 (2.64)    | 70.5 (3.53)                    | 7,724  | 0.5 (0.05)                 |                              |   |   |                    |    |
| Administrative support occupations, including clerical.....                            | 30.8 (1.15)   | 0.7 (0.03) | 27.4 (2.02)  | 0.6 (0.05)   | 21,167 (1,179.4)  | 36.1 (2.95)   | 0.8 ! (0.40)   | 28.2 (2.28)    | 72.9 (2.37)                    | 15,443   | 0.7 (0.10)                 |                              |   |   |                    |    |
| Service occupations.....   | 22.6 (1.25)   | 0.6 (0.04) | 21.0 (2.15)  | 0.5 (0.07)   | 17,180 (1,033.7)  | 33.7 (3.13)   | 1.1 ! (0.36)   | 16.2 (2.31)    | 69.0 (2.74)                    | 13,029   | 0.8 (0.10)                 |                              |   |   |                    |    |
| Agriculture, forestry, and fishing occupations.....                                    | 12.4 (2.47)   | 0.3 (0.07) | 12.2 ! (4.09)  | 0.2 ! (0.07) | 2,522 (423.8)   | 22.4 ! (7.61) | ‡ (t)  | 23.0 ! (11.03) | 62.9 (11.04)                   | 960  | 0.4 ! (0.12)               |                              |   |   |                    |    |
| Mechanics and repairers.....   | 29.1 (2.62)   | 0.7 (0.08) | 15.0 (3.40)  | 0.3 (0.09)   | 5,241 (521.6)   | 28.3 (4.47)   | 4.0 ! (1.44)   | 12.6 (3.24)    | 69.3 (4.36)                    | 2,669  | 0.5 (0.09)                 |                              |   |   |                    |    |
| Construction and extractive occupations.....   | 18.6 (2.33)   | 0.3 (0.04) | 13.2 (3.16)  | 0.2 (0.06)   | 6,827 (647.1)   | 12.4 (3.04)   | 5.3 ! (2.26)   | 7.8 (1.88)     | 69.0 (5.25)                    | 2,323  | 0.3 ! (0.13)               |                              |   |   |                    |    |
| Precision production <sup>3</sup> .....  | 25.6 (4.04)   | 0.6 (0.12) | 18.3 ! (6.52)  | 0.4 ! (0.12) | 10,483 (839.3)  | 23.5 (3.79)   | ‡ (t)  | 14.0 (3.34)    | 64.9 (3.74)                    | 4,904  | 0.5 (0.07)                 |                              |   |   |                    |    |
| Production workers.....  | 14.8 (1.13)   | 0.3 (0.02) | 23.0 (3.17)  | 0.5 (0.08)   | — (t)   | — (t)         | — (t)  | — (t)          | — (t)                          | —  | —                          |                              |   |   |                    |    |

See notes at end of table.



**Table 485. Participation of employed persons, 17 years old and over, in career-related adult education during the previous 12 months, by selected characteristics of participants: 1995, 1999, and 2005—Continued**

[Standard errors appear in parentheses]

| Characteristic of employed person                         | 1995  |        |  |        | 1999  |        |  |        | 2005                           |  |                            |                              |             |   |              |              | Number of career- or job-related courses taken <sup>1</sup> |     |
|---|---|--------|--|--------|---|--------|--|--------|--------------------------------|--|----------------------------|------------------------------|-------------|---|--------------|--------------|---|-----|
|   | Percent of adults participating in career- or job-related courses |        | Number of career- or job-related courses taken, per employed adult |        | Percent of adults participating in career- or job-related courses |        | Number of career- or job-related courses taken, per employed adult |        | Employed persons, in thousands | Percent of adults participating                |                            |                              |             | In informal learning activities for personal interest |              | In thousands | Per employed adult  |     |
|   |   |        |  |        |   |        |  |        |                                | In career- or job-related courses <sup>1</sup> | In apprenticeship programs | In personal interest courses |             |   |              |              |   |     |
| 1   | 2   |        | 3  |        | 4   |        | 5  |        | 6                              | 7  | 8                          | 9                            | 10          | 11  |              | 12           |   | 12  |
| Transportation and material moving.....                   | 15.8  | (1.83) | 0.3  | (0.04) | 18.4  | (3.62) | 0.3  | (0.06) | 7,858 (742.5)                  | 15.2 (2.81)                                    | ‡ (†)                      | 10.5 (3.10)                  | 62.5 (5.32) | 1,935   | 0.2          | (0.05)       |   |     |
| Handlers, equipment cleaners, helpers, and laborers ..... | 11.7  | (2.77) | 0.2  | (0.06) | ‡ (†)   |        | ‡ (†)  |        | — (†)                          | — (†)  | — (†)                      | — (†)                        | — (†)       | —   | —            | (†)          |   |     |
| Miscellaneous occupations..                               | 38.8  | (3.50) | 1.0  | (0.11) | 14.2 !  | (4.62) | 0.3 !  | (0.08) | 801 (189.4)                    | 17.2 !   | (6.87)                     | ‡ (†)                        | 8.7 !       | (4.31)  | 48.3 (13.96) | 409          | ‡   | (†) |
| <b>Annual household income</b>                            |   |        |  |        |   |        |  |        |                                |  |                            |                              |             |   |              |              |   |     |
| \$10,000 or less .....                                    | 12.6  | (1.31) | 0.2  | (0.03) | 9.5 !   | (3.09) | 0.2 !  | (0.05) | 4,425 (444.8)                  | 16.7 (4.35)                                    | ‡ (†)                      | 26.2 !                       | (7.96)      | 69.7 (5.72)   | 1,556        | 0.4 !        | (0.12)  |     |
| \$5,000 or less .....                                     | 8.7   | (1.91) | 0.1  | (0.03) | —   | (†)    | —  | (†)    | 1,635 (252.7)                  | 19.1 (6.52)                                    | ‡ (†)                      | 22.9 !                       | (7.91)      | 60.9 (8.84)   | 850          | ‡            | (†)   |     |
| \$5,001 to \$10,000 .....                                 | 15.1  | (1.62) | 0.3  | (0.04) | —   | (†)    | —  | (†)    | 2,791 (454.1)                  | 15.3 (5.68)                                    | ‡ (†)                      | 28.1 !                       | (12.27)     | 74.8 (6.88)   | 706          | 0.3 !        | (0.10)  |     |
| \$10,001 to \$15,000 .....                                | 15.1  | (1.71) | 0.4  | (0.04) | 8.3   | (1.88) | 0.1  | (0.03) | 4,814 (633.4)                  | 22.2 (5.77)                                    | ‡ (†)                      | 17.3 !                       | (5.25)      | 64.5 (7.57)   | 2,189        | 0.5          | (0.12)  |     |
| \$15,001 to \$20,000 .....                                | 20.1  | (1.36) | 0.4  | (0.03) | 16.3  | (2.75) | 0.3  | (0.05) | 4,515 (398.8)                  | 18.2 (3.09)                                    | 5.7 !                      | (2.71)                       | 11.5 (1.96) | 60.4 (5.11)   | 1,322        | 0.3          | (0.05)  |     |
| \$20,001 to \$25,000 .....                                | 20.4  | (1.52) | 0.5  | (0.05) | 18.8  | (2.79) | 0.4  | (0.08) | 5,593 (490.2)                  | 23.8 (4.02)                                    | 1.1 !                      | (0.51)                       | 13.3 (3.21) | 71.5 (4.11)   | 2,817        | 0.5          | (0.10)  |     |
| \$25,001 to \$30,000 .....                                | 24.7  | (1.34) | 0.5  | (0.03) | 22.2  | (2.73) | 0.5  | (0.07) | 7,444 (680.4)                  | 31.4 (4.88)                                    | ‡ (†)                      | 16.7 (3.77)                  | 73.5 (3.91) | 4,322   | 0.6          | (0.11)       |   |     |
| \$30,001 to \$40,000 .....                                | 30.2  | (1.13) | 0.8  | (0.03) | 26.6  | (2.82) | 0.6  | (0.07) | 13,123 (928.5)                 | 35.1 (3.45)                                    | 1.5 !                      | (0.65)                       | 21.7 (3.71) | 69.1 (3.55)   | 8,224        | 0.6          | (0.06)  |     |
| \$40,001 to \$50,000 .....                                | 34.7  | (1.30) | 0.8  | (0.04) | 32.3  | (2.34) | 0.7  | (0.07) | 13,647 (1,058.4)               | 31.5 (3.01)                                    | 1.8 !                      | (0.72)                       | 20.1 (3.32) | 73.5 (2.78)   | 10,072       | 0.7          | (0.10)  |     |
| \$50,001 to \$75,000 .....                                | 40.0  | (1.18) | 1.0  | (0.04) | 36.6  | (1.86) | 0.9  | (0.06) | 33,665 (1,430.4)               | 42.7 (1.80)                                    | 1.2 !                      | (0.51)                       | 20.9 (2.10) | 71.3 (2.55)   | 28,991       | 0.9          | (0.06)  |     |
| More than \$75,000 .....                                  | 45.2  | (1.40) | 1.3  | (0.04) | 42.5  | (1.79) | 1.0  | (0.06) | 46,160 (1,263.3)               | 48.1 (1.57)                                    | 1.3 !                      | (0.39)                       | 26.0 (1.37) | 79.2 (1.55)   | 48,951       | 1.1          | (0.05)  |     |

—Not available.

‡Not applicable.

#Rounds to zero.

!Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡Reporting standards not met. The coefficient of variation (CV) for this estimate is 50 percent or greater.

<sup>1</sup>The 2005 estimates on participation in career- or job-related courses were based on responses to multiple questions. Specifically, respondents were first asked what courses they had taken, and then whether each course was career- or job-related. In contrast, 1995 and 1999 respondents were asked a single, general question about whether they had participated in any career- or job-related courses. Therefore, 2005 results may not be comparable to results from the earlier years.

<sup>2</sup>Detail may not sum to totals due to missing locale information.

<sup>3</sup>For 2005, figures include "Production workers" occupations data.

NOTE: Data do not include persons enrolled in high school or below. Race categories exclude persons of Hispanic ethnicity. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education Survey (AE-NHES:1995, AE-NHES:1999, and AE-NHES:2005) of the National Household Education Surveys Program. (This table was prepared October 2010.)

**Table 486. Participation rate of persons, 17 years old and over, in adult education during the previous 12 months, by selected characteristics of participants: Selected years, 1991 through 2005**

[Standard errors appear in parentheses]

| Characteristic of participant               | Percent taking any program, class, or course |                    |                    |                    |                    | Percent taking specific programs, classes, or courses, 2005             |  |  |                                    |                            |                              |                    |  |  |  | Percent doing informal learning activities for personal interest, 2005 |
|---|--|--------------------|--------------------|--------------------|--------------------|---|--|--|------------------------------------|----------------------------|------------------------------|--------------------|--|--|--|--|
|   | 1991   | 1995               | 1999               | 2001               | 2005               | Basic skills/<br>General<br>Educational<br>Development<br>(GED) classes | English as a<br>second language<br>(ESL) classes | Part-time post-<br>secondary<br>education <sup>1</sup> | Career- or job-<br>related courses | Apprenticeship<br>programs | Personal-interest<br>courses |                    |  |  |  |  |
| 1   | 2  | 3                  | 4                  | 5                  | 6                  | 7   | 8  | 9  | 10                                 | 11                         | 12                           | 13                 |  |  |  |  |
| <b>Total .....</b>                          | <b>33.0 (0.68)</b>                           | <b>40.2 (0.48)</b> | <b>44.5 (0.77)</b> | <b>46.4 (0.55)</b> | <b>44.4 (0.74)</b> | <b>1.3 (0.22)</b>   | <b>0.9 (0.17)</b>                                | <b>5.0 (0.29)</b>                                      | <b>27.0 (0.63)</b>                 | <b>1.2 (0.18)</b>          | <b>21.4 (0.71)</b>           | <b>70.5 (0.79)</b> |  |  |  |  |
| <b>Sex</b>                                  |  |                    |                    |                    |                    |   |  |  |                                    |                            |                              |                    |  |  |  |  |
| Male .....                                  | 32.6 (1.09)                                  | 38.2 (0.65)        | 41.7 (1.15)        | 43.1 (0.83)        | 41.0 (1.20)        | 1.4 (0.41)  | 0.9 ! (0.29)                                     | 5.0 (0.44)   | 24.5 (0.99)                        | 1.7 (0.31)                 | 18.3 (1.08)                  | 70.8 (1.10)        |  |  |  |  |
| Female .....                                | 33.2 (0.97)                                  | 42.1 (0.59)        | 47.1 (1.02)        | 49.5 (0.78)        | 47.5 (1.01)        | 1.2 (0.19)  | 0.9 (0.15)                                       | 5.1 (0.37)   | 29.2 (0.95)                        | 0.7 (0.15)                 | 24.2 (0.88)                  | 70.2 (1.03)        |  |  |  |  |
| <b>Age</b>                                  |  |                    |                    |                    |                    |   |  |  |                                    |                            |                              |                    |  |  |  |  |
| 17 to 24 years old .....                    | 37.8 (1.46)                                  | 47.0 (1.12)        | 49.9 (2.34)        | 52.8 (2.04)        | 52.8 (2.79)        | 6.0 (1.48)  | 1.7 ! (0.61)                                     | 11.5 (1.34)  | 21.3 (2.22)                        | 2.7 (0.76)                 | 26.3 (2.60)                  | 69.2 (2.54)        |  |  |  |  |
| 25 to 29 years old .....                    | 40.0 (2.33)                                  | 49.6 (1.31)        | 56.5 (2.53)        | 52.9 (2.60)        | 51.6 (3.82)        | 1.8 (0.48)  | 3.3 ! (1.48)                                     | 9.1 (1.50)   | 29.5 (2.48)                        | 3.2 ! (1.06)               | 20.9 (2.78)                  | 66.8 (3.75)        |  |  |  |  |
| 30 to 34 years old .....                    | 37.6 (2.88)                                  | 47.3 (1.41)        | 56.2 (2.57)        | 53.7 (2.18)        | 52.7 (2.52)        | 1.9 ! (0.66)  | 1.6 ! (0.64)                                     | 8.4 (1.28)   | 33.8 (2.71)                        | 2.5 ! (0.89)               | 23.2 (2.23)                  | 73.8 (2.22)        |  |  |  |  |
| 35 to 39 years old .....                    | 42.1 (2.71)                                  | 47.7 (1.15)        | 50.1 (2.43)        | 54.0 (1.71)        | 48.6 (3.21)        | 0.4 ! (0.16)  | 0.7 ! (0.26)                                     | 6.1 (0.90)   | 32.6 (3.29)                        | 0.9 ! (0.36)               | 20.7 (2.67)                  | 75.5 (2.69)        |  |  |  |  |
| 40 to 44 years old .....                    | 49.2 (3.28)                                  | 50.9 (1.15)        | 50.5 (2.43)        | 53.5 (1.88)        | 48.9 (2.43)        | 0.8 ! (0.31)  | 0.6 ! (0.23)                                     | 4.7 (0.77)   | 34.8 (2.30)                        | 0.9 ! (0.42)               | 23.4 (2.29)                  | 71.5 (2.62)        |  |  |  |  |
| 45 to 49 years old .....                    | 40.0 (2.43)                                  | 48.7 (1.66)        | 49.8 (2.69)        | 55.4 (2.02)        | 49.0 (2.09)        | +   | 0.6 ! (0.25)                                     | 3.2 (0.48)   | 37.7 (1.83)                        | 0.5 ! (0.23)               | 19.3 (1.88)                  | 71.6 (2.52)        |  |  |  |  |
| 50 to 54 years old .....                    | 26.8 (3.31)                                  | 42.5 (1.38)        | 47.2 (2.51)        | 51.1 (2.22)        | 46.6 (2.36)        | +   | 0.3 ! (0.15)                                     | 4.5 (0.75)   | 35.2 (2.25)                        | 0.6 ! (0.28)               | 20.3 (1.64)                  | 75.6 (1.89)        |  |  |  |  |
| 55 to 59 years old .....                    | 29.0 (3.74)                                  | 32.2 (1.66)        | 38.0 (2.60)        | 44.1 (1.98)        | 42.2 (2.78)        | +   | +  | 1.9 (0.43)   | 31.9 (2.39)                        | +                          | 18.0 (1.63)                  | 69.5 (2.56)        |  |  |  |  |
| 60 to 64 years old .....                    | 17.4 (1.90)                                  | 23.7 (1.89)        | 31.4 (2.83)        | 30.8 (2.18)        | 37.9 (3.00)        | +   | +  | 0.9 ! (0.36)   | 20.9 (2.07)                        | +                          | 24.1 (2.40)                  | 71.4 (3.04)        |  |  |  |  |
| 65 to 69 years old .....                    | 14.2 (2.97)                                  | 18.1 (1.46)        | 25.4 (2.54)        | 20.5 (1.74)        | 26.2 (2.67)        | +   | +  | 0.5 ! (0.22)   | 8.1 (1.36)                         | +                          | 20.9 (2.41)                  | 67.6 (2.52)        |  |  |  |  |
| 70 years old and over .....                 | 8.6 (1.25)                                   | 13.8 (1.09)        | 15.0 (1.38)        | 21.7 (1.37)        | 21.5 (1.44)        | +   | +  | +  | 4.0 (0.78)                         | +                          | 17.9 (1.33)                  | 62.9 (1.82)        |  |  |  |  |
| <b>Racial/ethnic group</b>                  |  |                    |                    |                    |                    |   |  |  |                                    |                            |                              |                    |  |  |  |  |
| White .....                                 | 34.1 (0.82)                                  | 41.5 (0.54)        | 44.4 (0.89)        | 47.4 (0.59)        | 45.6 (0.84)        | 0.9 (0.23)  | 0.2 ! (0.08)                                     | 4.9 (0.35)   | 29.1 (0.70)                        | 0.9 (0.17)                 | 22.1 (0.87)                  | 73.0 (0.92)        |  |  |  |  |
| Black .....                                 | 25.9 (2.23)                                  | 37.0 (1.45)        | 46.3 (2.30)        | 43.3 (1.50)        | 46.4 (2.81)        | 1.9 (0.49)  | +  | 5.4 (0.97)   | 27.0 (2.53)                        | 1.5 ! (0.73)               | 23.7 (2.11)                  | 65.3 (2.02)        |  |  |  |  |
| Hispanic .....                              | 31.4 (2.63)                                  | 33.7 (1.18)        | 41.3 (2.51)        | 41.7 (2.28)        | 37.8 (2.43)        | 2.6 (0.72)  | 5.6 (1.22)                                       | 5.7 (1.55)   | 16.9 (1.72)                        | 2.2 (0.63)                 | 15.4 (1.75)                  | 57.5 (2.86)        |  |  |  |  |
| Asian .....                                 | — (t)  | — (t)              | — (t)              | — (t)              | 48.3 (5.39)        | +   | 2.6 ! (1.03)                                     | 7.6 ! (2.62)   | 27.2 (4.70)                        | +                          | 26.5 (5.06)                  | 81.1 (4.10)        |  |  |  |  |
| Pacific Islander .....                      | — (t)  | — (t)              | — (t)              | — (t)              | +                  | +   | +  | +  | +                                  | +                          | +                            | +                  |  |  |  |  |
| Asian/Pacific Islander .....                | 35.9 (5.55)                                  | 39.7 (2.92)        | 51.1 (4.63)        | 49.5 (3.81)        | +                  | +   | +  | +  | +                                  | +                          | +                            | +                  |  |  |  |  |
| American Indian/Alaska Native .....         | 29.3 ! (11.55)                               | 38.8 (4.85)        | 36.3 (9.16)        | 50.2 (8.28)        | 36.3 (10.17)       | +   | +  | 4.4 ! (1.82)   | 23.0 ! (8.51)                      | +                          | 13.0 ! (6.16)                | 70.6 (9.18)        |  |  |  |  |
| Two or more races .....                     | — (t)  | — (t)              | — (t)              | — (t)              | 39.4 (4.94)        | 5.1 ! (2.17)  | +  | 3.2 ! (1.07)   | 23.8 (4.06)                        | 1.3 ! (0.59)               | 21.0 (4.13)                  | 77.6 (5.28)        |  |  |  |  |
| <b>Highest level of education completed</b> |  |                    |                    |                    |                    |   |  |  |                                    |                            |                              |                    |  |  |  |  |
| 8th grade or less .....                     | 7.7 (1.44)                                   | 10.0 (1.10)        | 14.7 (2.92)        | 19.7 (2.84)        | 15.5 (2.47)        | 1.9 (0.57)  | 4.3 ! (1.70)                                     | +  | 1.7 ! (0.55)                       | +                          | 7.3 (1.24)                   | 38.1 (3.27)        |  |  |  |  |
| 9th through 12th grade, no completion ..... | 15.8 (2.25)                                  | 20.2 (1.38)        | 25.6 (2.55)        | 25.5 (1.53)        | 27.2 (2.40)        | 7.9 (1.69)  | 1.1 ! (0.41)                                     | 2.1 (0.57)   | 7.6 (1.44)                         | 1.5 ! (0.61)               | 12.5 (1.53)                  | 55.7 (2.52)        |  |  |  |  |
| High school completion .....                | 24.1 (1.10)                                  | 30.7 (0.84)        | 34.8 (1.37)        | 33.9 (1.07)        | 33.0 (1.62)        | 0.5 ! (0.24)  | 0.7 ! (0.24)                                     | 2.5 (0.36)   | 17.2 (1.18)                        | 1.1 ! (0.35)               | 16.8 (1.27)                  | 63.6 (1.93)        |  |  |  |  |
| Some vocational/technical .....             | 34.2 (3.80)                                  | 41.9 (2.16)        | 41.1 (3.97)        | 50.7 (3.51)        | 43.3 (4.30)        | +   | +  | 4.5 ! (1.42)   | 28.3 (3.71)                        | +                          | 23.2 (3.09)                  | 77.6 (3.98)        |  |  |  |  |
| Some college .....                          | 41.4 (1.67)                                  | 49.3 (0.92)        | 51.1 (1.76)        | 57.4 (1.29)        | 51.1 (1.79)        | +   | +  | 8.6 (1.06)   | 28.8 (1.54)                        | 1.4 ! (0.47)               | 26.8 (1.80)                  | 79.8 (1.52)        |  |  |  |  |
| Associate's degree .....                    | 49.2 (5.82)                                  | 56.1 (1.85)        | 56.6 (2.93)        | 62.5 (2.15)        | 56.5 (3.64)        | +   | 1.1 ! (0.51)                                     | 6.6 (1.42)   | 40.8 (3.27)                        | 1.9 ! (0.66)               | 20.1 (2.48)                  | 75.9 (3.70)        |  |  |  |  |
| Bachelor's degree .....                     | 51.1 (2.46)                                  | 56.9 (1.20)        | 60.3 (1.84)        | 64.5 (1.39)        | 59.8 (1.56)        | +   | 0.4 ! (0.17)                                     | 6.3 (0.82)   | 44.1 (1.61)                        | 0.4 ! (0.17)               | 28.6 (1.55)                  | 79.3 (1.72)        |  |  |  |  |
| Some graduate work (or study) .....         | 55.1 (2.90)                                  | 59.9 (1.55)        | 63.6 (1.96)        | 68.9 (1.64)        | 66.3 (1.99)        | +   | +  | 8.7 (0.86)   | 49.3 (2.15)                        | +                          | 30.7 (1.77)                  | 88.0 (1.06)        |  |  |  |  |
| No degree .....                             | — (t)  | 62.2 (2.67)        | 64.7 (4.39)        | 64.2 (3.54)        | 65.3 (4.84)        | +   | +  | 14.5 (2.55)  | 40.5 (4.68)                        | +                          | 38.7 (4.81)                  | 78.2 (4.34)        |  |  |  |  |
| Master's .....                              | — (t)  | 59.1 (1.88)        | 65.7 (2.64)        | 70.7 (2.10)        | 67.5 (2.59)        | +   | +  | 8.9 (1.31)   | 51.4 (2.81)                        | +                          | 30.6 (2.04)                  | 88.8 (1.33)        |  |  |  |  |
| Doctor's .....                              | — (t)  | 54.0 (6.99)        | 53.1 (4.73)        | 63.7 (3.98)        | 58.0 (4.94)        | +   | +  | 10.1 ! (3.14)  | 34.0 (4.53)                        | +                          | 31.4 (3.95)                  | 90.3 (3.26)        |  |  |  |  |
| Professional .....                          | — (t)  | 65.9 (3.91)        | 72.5 (5.75)        | 72.8 (3.79)        | 68.2 (5.77)        | +   | +  | +  | 59.0 (6.35)                        | +                          | 23.9 (4.35)                  | 91.6 (2.15)        |  |  |  |  |
| <b>Urbanicity</b>                           |  |                    |                    |                    |                    |   |  |  |                                    |                            |                              |                    |  |  |  |  |
| City .....                                  | — (t)  | — (t)              | — (t)              | — (t)              | 45.8 (1.46)        | 1.4 (0.31)  | 1.6 (0.38)                                       | 5.7 (0.59)   | 26.3 (1.24)                        | 1.8 (0.43)                 | 22.5 (1.10)                  | 69.2 (1.39)        |  |  |  |  |
| Suburban .....                              | — (t)  | — (t)              | — (t)              | — (t)              | 46.9 (1.33)        | 0.9 (0.23)  | 0.9 ! (0.36)                                     | 5.8 (0.55)   | 29.7 (1.26)                        | 0.9 (0.22)                 | 23.4 (1.16)                  | 73.4 (1.28)        |  |  |  |  |
| Town .....                                  | — (t)  | — (t)              | — (t)              | — (t)              | 41.8 (2.33)        | 2.7 ! (1.16)  | 0.4 ! (0.14)                                     | 4.2 (0.87)   | 25.6 (1.74)                        | 0.5 ! (0.21)               | 18.5 (1.96)                  | 70.5 (2.43)        |  |  |  |  |
| Rural .....                                 | — (t)  | — (t)              | — (t)              | — (t)              | 39.5 (2.04)        | 0.8 (0.22)  | +  | 3.3 (0.59)   | 24.2 (1.38)                        | 1.2 ! (0.40)               | 18.3 (1.76)                  | 67.6 (1.76)        |  |  |  |  |
| <b>Labor force status</b>                   |  |                    |                    |                    |                    |   |  |  |                                    |                            |                              |                    |  |  |  |  |
| In labor force .....                        | 40.7 (0.96)                                  | 49.8 (0.69)        | 52.1 (0.94)        | — (t)              | 52.3 (0.93)        | 1.4 (0.32)  | 0.8 (0.19)                                       | 6.4 (0.39)   | 37.1 (0.83)                        | 1.5 (0.24)                 | 21.9 (0.91)                  | 73.0 (0.94)        |  |  |  |  |
| Employed .....                              | 42.0 (1.00)                                  | 50.7 (0.53)        | 52.5 (0.96)        | — (t)              | 53.4 (0.94)        | 1.1 (0.31)  | 0.7 (0.20)                                       | 6.5 (0.39)   | 38.8 (0.83)                        | 1.4 (0.24)                 | 21.8 (0.94)                  | 73.5 (1.01)        |  |  |  |  |
| Unemployed .....                            | 26.0 (3.24)                                  | 36.6 (1.91)        | 44.9 (4.60)        | — (t)              | 37.8 (4.26)        | 5.8 (1.60)  | 1.9 ! (0.79)                                     | 5.2 (1.37)   | 13.5 (2.16)                        | +                          | 22.1 (3.99)                  | 66.7 (3.80)        |  |  |  |  |
| Not in labor force .....                    | 15.7 (0.91)                                  | 21.3 (0.69)        | 24.9 (1.17)        | — (t)              | 27.6 (1.18)        | 1.1 (0.24)  | 1.3 (0.36)                                       | 2.3 (0.45)   | 5.7 (0.55)                         | 0.6 ! (0.22)               | 20.5 (0.97)                  | 65.2 (1.27)        |  |  |  |  |

See notes at end of table.

**Table 486. Participation rate of persons, 17 years old and over, in adult education during the previous 12 months, by selected characteristics of participants: Selected years, 1991 through 2005—Continued**

[Standard errors appear in parentheses]

| Characteristic of participant  | Percent taking any program, class, or course |             |             |             |              | Percent taking specific programs, classes, or courses, 2005 |  |   |                                |                         |                           | Percent doing informal learning activities for personal interest, 2005 |
|--|--|-------------|-------------|-------------|--------------|---|--|---|--------------------------------|-------------------------|---------------------------|--|
|  | 1991   | 1995        | 1999        | 2001        | 2005         | Basic skills/General Educational Development (GED) classes  | English as a second language (ESL) classes | Part-time post-secondary education <sup>1</sup> | Career- or job-related courses | Apprenticeship programs | Personal-interest courses |  |
| 1  | 2  | 3           | 4           | 5           | 6            | 7   | 8  | 9   | 10                             | 11                      | 12                        | 13   |
| <b>Occupation</b>  |  |             |             |             |              |   |  |   |                                |                         |                           |  |
| Executive, administrative, or managerial occupations .....                               | 49.3 (3.45)                                  | 55.8 (1.92) | 57.0 (2.11) | 66.2 (1.61) | 64.1 (2.73)  | ‡ (†)   | ‡ (†)                                      | 6.0 (1.10)                                      | 51.8 (2.82)                    | ‡ (†)                   | 28.8 (2.89)               | 78.6 (2.71)  |
| Engineers, surveyors, and architects .....   | 62.6 (7.85)                                  | 65.5 (4.18) | 79.8 (6.01) | 68.1 (4.46) | 71.2 (5.68)  | ‡ (†)   | ‡ (†)                                      | 9.3 † (3.21)                                    | 55.6 (5.60)                    | ‡ (†)                   | 31.4 (6.19)               | 81.1 (4.63)  |
| Natural scientists and mathematicians .....  | 48.2 (9.86)                                  | 72.3 (3.52) | 60.5 (6.74) | 74.0 (4.46) | 69.1 (4.63)  | ‡ (†)   | ‡ (†)                                      | 9.2 (2.49)                                      | 49.6 (5.27)                    | ‡ (†)                   | 30.2 (4.53)               | 85.5 (5.16)  |
| Social scientists and workers, religious workers, and lawyers .....                      | 55.6 (6.01)                                  | 76.6 (2.61) | 79.3 (4.35) | 83.5 (3.05) | 77.7 (4.11)  | ‡ (†)   | ‡ (†)                                      | 12.8 (3.16)                                     | 64.3 (4.42)                    | ‡ (†)                   | 29.2 (3.52)               | 89.4 (2.78)  |
| Teachers, elementary/secondary .....   | 56.0 (4.20)                                  | 54.8 (4.64) | 66.5 (5.61) | 79.9 (2.95) | 79.7 (2.59)  | ‡ (†)   | ‡ (†)                                      | 8.3 † (3.16)                                    | 65.0 (3.99)                    | ‡ (†)                   | 31.7 (3.78)               | 83.8 (2.62)  |
| Teachers: college, university, postsecondary institutions .....                          | 45.5 (8.31)                                  | 76.7 (1.98) | 78.4 (3.11) | 69.4 (4.60) | 61.3 (6.96)  | ‡ (†)   | ‡ (†)                                      | ‡ (†)   | 49.0 (8.50)                    | ‡ (†)                   | 19.5 (4.98)               | 91.7 (3.58)  |
| Health diagnosing and treating practitioners .....                                       | 67.1 (13.73)                                 | 71.1 (5.78) | 79.8 (9.02) | 78.5 (6.38) | 88.8 (5.59)  | ‡ (†)   | ‡ (†)                                      | 15.4 (2.47)                                     | 79.5 (6.59)                    | ‡ (†)                   | 31.9 (9.15)               | 84.5 (5.63)  |
| Registered nurses, pharmacists, dietitians, therapists, and physician's assistants ..... | 59.6 (6.69)                                  | 86.7 (2.47) | 85.4 (4.10) | 82.7 (3.83) | 85.4 (4.05)  | ‡ (†)   | ‡ (†)                                      | 7.9 (2.17)                                      | 78.2 (4.89)                    | ‡ (†)                   | 27.4 (3.73)               | 83.1 (3.92)  |
| Writers, artists, entertainers, and athletes .....                                       | 42.9 (6.63)                                  | 49.9 (4.37) | 50.0 (6.93) | 46.8 (6.03) | 52.5 (6.59)  | ‡ (†)   | ‡ (†)                                      | 5.4 † (2.16)                                    | 27.8 (5.02)                    | ‡ (†)                   | 35.3 (6.42)               | 88.2 (3.89)  |
| Health technologists and technicians .....   | 68.6 (10.03)                                 | 74.8 (3.64) | 66.9 (6.16) | 85.6 (3.25) | 72.1 (8.37)  | ‡ (†)   | ‡ (†)                                      | 6.0 † (2.11)                                    | 63.2 (8.67)                    | ‡ (†)                   | 24.6 (5.91)               | 75.6 (7.26)  |
| Technologists and technicians, except health and engineering .....                       | 53.0 (6.49)                                  | 64.3 (2.84) | 59.6 (5.07) | 70.2 (3.32) | 33.8 (8.53)  | ‡ (†)   | ‡ (†)                                      | 7.1 † (3.19)                                    | 29.1 (7.68)                    | ‡ (†)                   | 6.2 † (2.14)              | 76.0 (8.80)  |
| Marketing and sales occupations .....  | 34.4 (2.38)                                  | 44.2 (1.34) | 44.4 (2.73) | 51.1 (2.10) | 45.7 (3.00)  | 1.7 † (0.59)  | ‡ (†)                                      | 4.5 (0.88)                                      | 30.2 (2.77)                    | ‡ (†)                   | 21.5 (2.43)               | 68.9 (3.37)  |
| Administrative support occupations, including clerical .....                             | 29.9 (1.74)                                  | 51.7 (1.25) | 50.1 (2.29) | 58.7 (1.72) | 54.6 (2.70)  | 1.1 † (0.53)  | ‡ (†)                                      | 6.6 (0.98)                                      | 33.5 (2.70)                    | ‡ (†)                   | 27.7 (2.18)               | 73.8 (2.33)  |
| Service occupations .....  | 25.2 (1.82)                                  | 46.5 (1.38) | 50.9 (2.74) | 49.3 (2.24) | 44.7 (2.47)  | 1.6 (0.39)  | 1.9 † (0.88)                               | 6.8 (1.42)                                      | 28.5 (2.64)                    | 1.4 † (0.57)            | 17.5 (2.10)               | 65.4 (2.71)  |
| Agriculture, forestry, and fishing occupations .....                                     | 14.3 † (5.19)                                | 26.4 (3.55) | 34.3 (7.16) | 46.4 (6.80) | 44.4 (9.02)  | ‡ (†)   | ‡ (†)                                      | ‡ (†)   | 20.3 † (6.92)                  | ‡ (†)                   | 21.6 † (10.05)            | 64.0 (10.03)   |
| Mechanics and repairers .....  | 32.1 (4.72)                                  | 47.6 (2.70) | 42.2 (5.44) | 35.1 (3.40) | 40.1 (5.10)  | ‡ (†)   | ‡ (†)                                      | 6.0 † (1.89)                                    | 27.4 (4.26)                    | 3.8 † (1.38)            | 12.7 (3.18)               | 69.3 (4.27)  |
| Construction and extractive occupations .....  | 21.9 (3.38)                                  | 38.0 (2.45) | 34.5 (4.78) | 32.3 (3.19) | 27.6 (3.73)  | ‡ (†)   | 1.1 † (0.49)                               | 3.2 † (1.08)                                    | 12.3 (2.54)                    | 5.2 † (1.89)            | 11.4 (2.72)               | 72.3 (4.48)  |
| Precision production <sup>2</sup> .....  | 31.2 (6.09)                                  | 43.0 (4.32) | 38.3 (8.48) | 35.1 (6.19) | 33.0 (3.98)  | ‡ (†)   | 0.4 † (0.16)                               | 4.2 † (1.42)                                    | 22.2 (3.41)                    | ‡ (†)                   | 13.3 (2.99)               | 63.9 (3.46)  |
| Production workers .....   | 21.1 (2.31)                                  | 30.7 (1.29) | 38.0 (3.47) | 39.4 (2.82) | — (†)        | — (†)   | — (†)                                      | — (†)   | — (†)                          | — (†)                   | — (†)                     | — (†)  |
| Transportation, material moving .....  | 20.7 (4.69)                                  | 28.4 (2.32) | 33.3 (4.25) | 30.4 (3.29) | 34.6 (5.27)  | ‡ (†)   | ‡ (†)                                      | ‡ (†)   | 14.7 (2.63)                    | 3.2 † (1.57)            | 11.2 (2.85)               | 60.8 (4.98)  |
| Handler, equipment, cleaners, helpers, and laborers .....                                | 20.8 (3.49)                                  | 25.1 (2.70) | 19.6 (4.56) | 18.2 (3.20) | — (†)        | — (†)   | — (†)                                      | — (†)   | — (†)                          | — (†)                   | — (†)                     | — (†)  |
| Miscellaneous occupations .....  | — (†)  | 56.6 (3.61) | 43.0 (7.98) | 64.9 (7.07) | 39.2 (11.25) | ‡ (†)   | ‡ (†)                                      | ‡ (†)   | 15.7 † (5.81)                  | ‡ (†)                   | 7.8 † (3.63)              | 52.2 (12.32)   |
| <b>Annual household income</b>   |  |             |             |             |              |   |  |   |                                |                         |                           |  |
| \$5,000 or less .....  | 13.6 (1.70)                                  | 21.3 (1.59) | 21.0 (3.22) | 25.1 (2.92) | 35.9 (4.83)  | ‡ (†)   | ‡ (†)                                      | 3.6 † (1.52)                                    | 13.7 (4.00)                    | ‡ (†)                   | 17.2 (3.59)               | 52.9 (4.97)  |
| \$5,001 to \$10,000 .....  | 17.5 (2.14)                                  | 23.9 (1.37) | 24.5 (3.39) | 28.0 (2.74) | 29.6 (4.49)  | 2.4 † (0.92)  | 1.5 † (0.71)                               | 1.7 † (0.81)                                    | 8.4 (2.11)                     | ‡ (†)                   | 21.8 (4.75)               | 61.0 (3.75)  |
| \$10,001 to \$15,000 .....   | 22.8 (2.60)                                  | 26.7 (1.61) | 22.8 (2.45) | 28.6 (2.30) | 25.0 (3.41)  | 2.4 (0.69)  | 0.8 † (0.33)                               | 3.3 † (1.17)                                    | 11.3 (2.52)                    | ‡ (†)                   | 15.5 (3.14)               | 58.6 (4.43)  |
| \$15,001 to \$20,000 .....   | 21.9 (2.35)                                  | 31.8 (1.55) | 31.4 (2.75) | 30.2 (2.48) | 24.3 (2.54)  | 1.0 † (0.38)  | ‡ (†)                                      | 3.3 † (1.19)                                    | 10.1 (1.37)                    | 2.6 † (1.20)            | 12.9 (2.00)               | 61.1 (3.17)  |
| \$20,001 to \$25,000 .....   | 26.7 (3.20)                                  | 31.4 (1.27) | 35.8 (2.81) | 35.2 (2.27) | 28.2 (2.51)  | 1.7 † (0.78)  | 1.9 † (0.62)                               | 4.4 (1.26)                                      | 12.8 (2.04)                    | 1.1 † (0.50)            | 13.6 (1.88)               | 63.2 (3.11)  |
| \$25,001 to \$30,000 .....   | 32.1 (2.51)                                  | 37.9 (1.47) | 36.7 (2.61) | 38.3 (2.43) | 38.6 (3.63)  | ‡ (†)   | 1.3 † (0.61)                               | 6.8 † (2.09)                                    | 20.2 (3.37)                    | ‡ (†)                   | 18.4 (2.52)               | 71.0 (3.38)  |
| \$30,001 to \$40,000 .....   | 35.6 (1.84)                                  | 42.7 (0.86) | 45.2 (2.05) | 44.6 (1.54) | 42.7 (2.65)  | 1.9 † (0.65)  | 1.0 † (0.49)                               | 3.7 (0.68)                                      | 22.8 (2.27)                    | 1.1 † (0.39)            | 23.0 (2.49)               | 68.7 (2.36)  |
| \$40,001 to \$50,000 .....   | 44.8 (1.84)                                  | 46.8 (1.39) | 47.9 (2.31) | 49.1 (1.93) | 41.4 (2.92)  | 1.6 † (0.53)  | ‡ (†)                                      | 2.9 (0.55)                                      | 22.4 (2.00)                    | 1.5 † (0.56)            | 20.5 (2.47)               | 71.9 (2.62)  |
| \$50,001 to \$75,000 .....   | 46.6 (2.03)                                  | 52.0 (0.94) | 55.1 (1.80) | 55.7 (1.48) | 47.7 (1.74)  | 0.4 † (0.19)  | ‡ (†)                                      | 5.8 (0.69)                                      | 33.0 (1.37)                    | 0.9 † (0.36)            | 20.5 (1.67)               | 70.6 (2.15)  |
| More than \$75,000 .....   | 48.7 (3.15)                                  | 58.0 (1.27) | 56.9 (1.66) | — (†)       | — (†)        | — (†)   | — (†)                                      | — (†)   | — (†)                          | — (†)                   | — (†)                     | — (†)  |
| \$75,001 to \$100,000 .....  | — (†)  | — (†)       | — (†)       | 59.7 (1.91) | 56.4 (2.28)  | ‡ (†)   | ‡ (†)                                      | 7.5 (0.89)                                      | 38.6 (2.26)                    | 1.8 † (0.64)            | 25.3 (1.51)               | 75.0 (1.97)  |
| More than \$100,000 .....  | — (†)  | — (†)       | — (†)       | 59.3 (1.82) | 58.4 (2.11)  | ‡ (†)   | ‡ (†)                                      | 6.1 (0.70)                                      | 39.4 (1.80)                    | ‡ (†)                   | 28.2 (1.62)               | 81.2 (1.68)  |

—Not available.

†Not applicable.

!Interpret data with caution. The coefficient of variation (CV) for this estimate is between 30 and 50 percent.

‡Reporting standards not met. Either there are too few cases for a reliable estimate or the coefficient of variation (CV) is 50 percent or greater.

<sup>1</sup>Includes college and university degree programs, post-degree certificate programs, and vocational certificate programs.<sup>2</sup>For 2005, figures include "Production workers" occupations data.

NOTE: Adult education is defined as all education activities, except full-time enrollment in higher education credential programs. Data do not include persons enrolled in high school or below. Race categories exclude persons of Hispanic ethnicity. SOURCE: U.S. Department of Education, National Center for Education Statistics, Adult Education Survey (AE-NHES:1991, AE-NHES:1995, AE-NHES:1999, and AE-NHES:2005) and Adult Education and Lifelong Learning Survey (AELL-NHES:2001) of the National Household Education Surveys Program. (This table was prepared November 2010.)