

## CLASS SIZE AND RATIO OF STUDENTS TO TEACHING STAFF

*Key Findings: France, Germany, Italy, Japan, Russian Federation, United Kingdom, United States*

*The U.S. student/teacher ratio at the primary level (15) was lower than the ratio in all but one of the G-8 countries. At the secondary level, student/teacher ratios ranged from 10 in the Russian Federation to 16 in the United States.*

The issue of class size has received a great deal of attention in U.S. education policy, since it is commonly looked upon as a factor influencing the interaction between teachers and students. While smaller classes are generally valued because they may allow students to receive more individual attention from their teachers, evidence on the effects of variation in class size upon student performance is mixed (OECD 2006a). One factor that confounds the association between class size and student performance is the ratio of students to teaching staff. Unlike measures of class size, the ratio of students to teaching staff accounts for teaching staff in addition to classroom teachers, such as teachers who may be developing curriculum or have other indirect instructional roles. Hence, it is useful to jointly examine both class size and the student/teacher ratio as indicators of the resources devoted to education.

Figure 12a shows average class size in primary education for seven G-8 countries reporting data. In 2004, two countries had an average class size of less than 20 students—the Russian Federation (16 students) and Italy (18 students). Four countries had an average class size between 20 and 25 students—Germany, with 22 students;

France and the United States, both with 23 students; and the United Kingdom, with 24 students. Japan had the largest average class size in primary education, with 29 students.

Figure 12b shows the ratio of students to teaching staff for the G-8 countries, broken down by four levels of education: preprimary, primary, secondary (lower and upper secondary combined), and higher education. In the United States, student/teacher ratios were fairly consistent across education levels. In other countries, such as Japan, ratios tended to be higher at the lower education levels, but lower at the higher levels. On the other hand, in Italy, lower ratios were observed at the lower education levels, with a sharp increase at the higher education level. Specifically, in 2004, the U.S. student/teacher ratio at the preprimary level was 14, which was higher than the corresponding ratios in Italy (12) and the Russian Federation (7), but lower than those in the United Kingdom (18), Japan (18), and France (19). At the primary level, the student/teacher ratio in the United States was 15, which was higher than the corresponding ratio in Italy (11), but lower than those in the other G-8 countries (with ratios ranging from 17 to 21). At the secondary level, student/teacher ratios ranged from 10 in the Russian Federation to 16 in the United States. Finally, at the higher education level, the student/teacher ratio in the United States was 16, which was higher than the corresponding ratios in the Russian Federation (13), Germany (13), and Japan (11), but lower than those in the United Kingdom (18), France (18), and Italy (22).

### *Definition and Methodology*

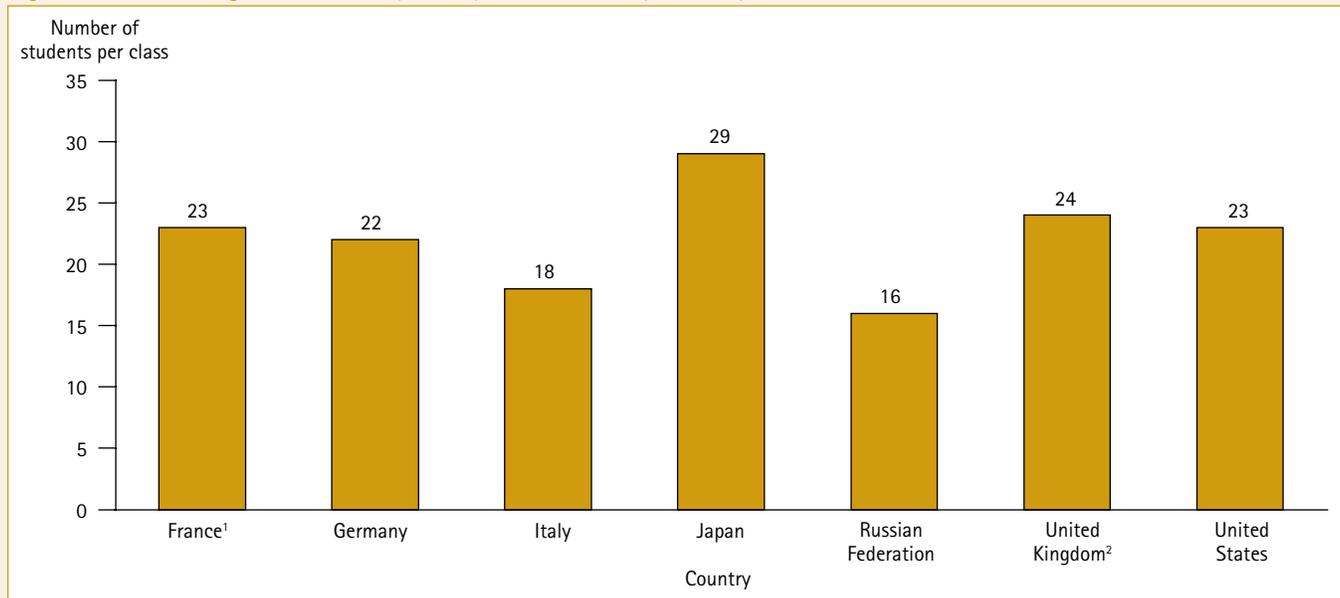
Average class size is calculated by dividing the number of students enrolled by the number of classes. Average class size refers to the division of students who are following a common course of study, based on the highest number of common courses (usually compulsory studies), and excludes teaching in subgroups outside the regular classroom setting. In order to ensure comparability among countries, the data include only regular programs at the primary level of education; special-needs programs have been excluded from the calculation.

Data on average class size are not available for the education levels of preprimary, lower and upper secondary combined, and higher education, and thus are not shown in this indicator as is done for the ratio of students to teaching staff.

The ratio of students to teaching staff is calculated by dividing the number of full-time-equivalent students at a given level of education by the number of full-time-equivalent teachers at that level. Teaching staff refers to professional personnel directly involved in teaching students. This includes classroom teachers; special education teachers; and other teachers who work with a whole class of students in a classroom, in small groups in a resource room, or in one-to-one teaching situations inside or outside a regular classroom. Teaching staff also includes department chairpersons whose duties include some teaching, but excludes paraprofessional personnel who support teachers in providing instruction to students, such as teacher aides.

As shown in the figures, education levels are defined according to the International Standard Classification of Education (ISCED). For more information on the ISCED levels, see appendix A.

Figure 12a. Average class size in primary education, by country: 2004



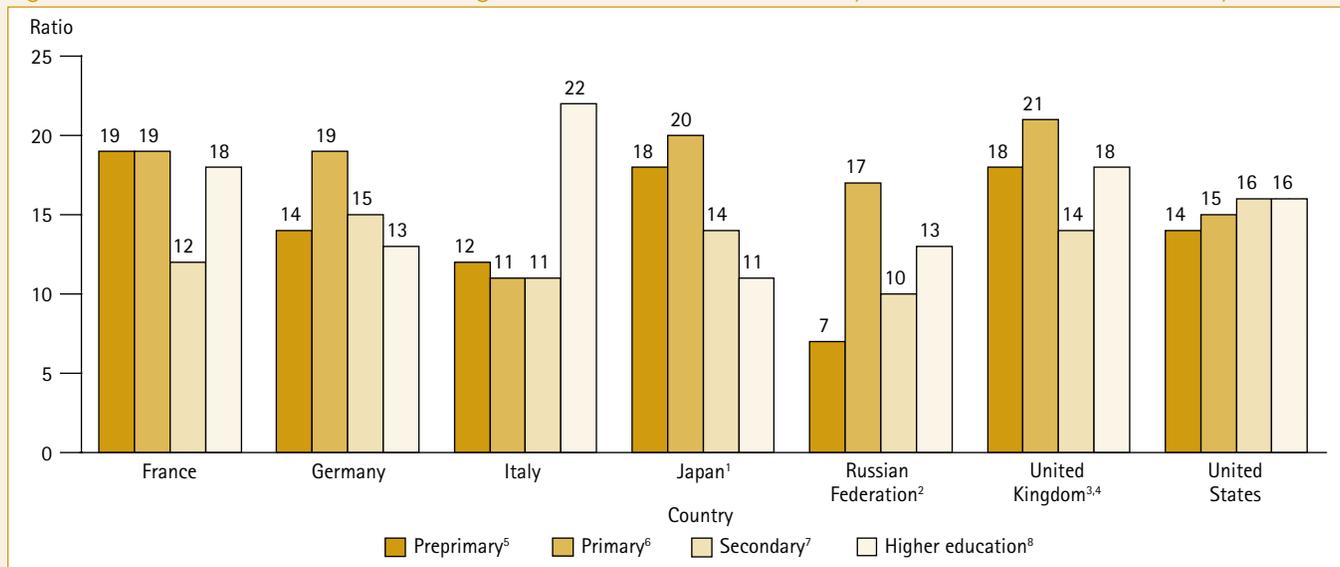
<sup>1</sup>Reference year is 2003 rather than 2004.

<sup>2</sup>The United Kingdom includes England, Northern Ireland, Scotland, and Wales.

NOTE: Data shown include public and private institutions, with calculations based on number of students and number of classes. In order to ensure comparability among countries, the data include only regular programs at the primary level of education; special needs programs have been excluded from the calculation. Education levels are defined according to the International Standard Classification of Education (ISCED). Primary education refers to ISCED level 1. For more information on the ISCED levels, see appendix A in this report.

SOURCE: Organization for Economic Cooperation and Development (OECD). (2005). *Education at a Glance: OECD Indicators 2005*, table D2.1. Paris: Author; and OECD. (2006). *Education at a Glance: OECD Indicators 2006*, table D2.1. Paris: Author.

Figure 12b. Ratio of students to teaching staff in education institutions, by level of education and country: 2004



<sup>1</sup>In Japan, the ratio of students to teaching staff at the secondary level and the higher education level include postsecondary nontertiary education data (ISCED level 4), as some ISCED level 4 teachers are included in ISCED level 3, while some others are included in ISCED level 5.

<sup>2</sup>Reference year for preprimary education is 2003 rather than 2004.

<sup>3</sup>Includes only general programs in upper secondary education.

<sup>4</sup>The United Kingdom includes England, Northern Ireland, Scotland, and Wales.

<sup>5</sup>Includes ISCED level 0 (preprimary education).

<sup>6</sup>Includes ISCED level 1 (primary education).

<sup>7</sup>Includes ISCED levels 2 (lower secondary education) and 3 (upper secondary education). In Japan, the Russian Federation, and the United Kingdom, ISCED level 4 (postsecondary nontertiary education) data are also included.

<sup>8</sup>Includes ISCED levels 5A (academic higher education below the doctoral level), 5B (vocational higher education), and 6 (doctoral level of academic higher education). In Japan, ISCED level 4 (postsecondary nontertiary education) data are also included.

NOTE: Data shown include public and private institutions, with calculations based on full-time equivalents. Education levels are defined according to the International Standard Classification of Education (ISCED). For more information on the ISCED levels, see appendix A in this report.

SOURCE: Organization for Economic Cooperation and Development (OECD). (2005). *Education at a Glance: OECD Indicators 2005*, table D2.2. Paris: Author; and OECD. (2006). *Education at a Glance: OECD Indicators 2006*, table D2.2. Paris: Author.