Chapter 3

School Organization and Staffing

How to organize their schools and teaching staff to derive the maximum benefit for students is a challenge that every society has to meet. The physical size of the school and the level of staffing are questions that must be resolved within the geographic, demographic, and economic constraints of the country. TIMSS asked school principals to report on these and a range of related issues. In particular, principals were asked how big were their schools; how many teachers they had and what was the mix of full- and part-time teachers; what criteria were used in admitting students; how long students stay with their teachers; and whether there are policies and practices that promote teacher cooperation and collaboration.

How Do Countries Organize Their Schools to Accommodate Their Student Populations?

In choosing an optimal school size, policy makers have long grappled with two potentially conflicting criteria.[1] On the one hand, the school must not be so large that it is organizationally cumbersome or that children feel isolated, and on the other it must be large enough to be able to provide educational resources such as libraries, laboratories, and gymnasia. School size is greatly influenced by the demographic characteristics of a country, with highly urbanized countries finding it easier to organize students into large schools than countries with extensive sparsely populated areas.

Tables 3.1, 3.2, and 3.3 summarize student enrollment across the TIMSS countries at the fourth grade, eighth grade, and final year of secondary school, respectively. Internationally, there is a clear tendency for students in the lower grades to be in smaller schools that are less intimidating and that keep travel time to a minimum. The average total enrollment for fourth-grade was 346 students, compared with 538 for eighth-grade and 643 for the final-year secondary school. Korea and Singapore are remarkable for the very high percentage of fourth-grade students in large schools: 80% or more of fourth-grade students were in schools with an enrollment of more than 1000 students. No other countries had such high percentages, although in Hong Kong and Slovenia 14% and 12%, respectively, of fourth-grade students were in large schools. Many countries had substantial percentages of students in small schools (up to 200 students), which may reflect the distribution of the population in those countries. Certainly, of the countries with the greatest percentages of fourth-grade students in small schools (Austria, Greece, Ireland, the Netherlands, Norway, and Portugal – all with 40% or more), all but the Netherlands have a substantial proportion of their population living in areas of low population density.

[1] For a discussion of the issue of high-school size, see Lee, V.E. and Smith, J.B. (1997), "High School Size: Which Works Best and for Whom?", *Educational Evaluation and Policy Analysis*, Vol. 19, No. 3, pp. 205-227.

Table 3.1

Percent of Students in Schools by Total School Enrollment
Fourth Grade*

Country	Percent of Students in Schools by Total School Enrollment				Average Total Enrollment[1]
	0-200	201-500	501-1000	More than 1000	
Australia	r 21 (4.8)	42 (5.5)	37 (6.2)	0 (0.3)	r 291 (25.2)
Austria	r 66 (4.2)	34 (4.2)	0 (0.0)	0 (0.0)	r 111 (10.0)
Canada	10 (1.3)	68 (2.7)	22 (2.6)	0 (0.0)	308 (9.0)
Cyprus	r 20 (3.2)	79 (3.5)	1 (1.2)	1 (0.6)	r 269 (7.3)
Czech Republic	22 (2.8)	45 (3.7)	32 (2.6)	1 (0.7)	239 (19.5)
England	16 (2.4)	79 (3.2)	5 (2.1)	0 (0.0)	261 (8.0)
Greece	47 (4.1)	50 (4.2)	3 (1.3)	1 (0.6)	118 (13.7)
Hong Kong	3 (1.4)	22 (4.5)	62 (5.2)	14 (3.5)	568 (41.3)
Hungary	9 (2.4)	48 (4.4)	42 (3.9)	0 (0.4)	369 (12.5)
Iceland	18 (1.0)	49 (5.1)	33 (5.2)	0 (0.0)	249 (1.1)
Iran, Islamic Rep.	36 (3.9)	36 (4.4)	23 (3.4)	5 (2.2)	254 (15.8)
Ireland	43 (2.5)	37 (3.8)	20 (3.4)	0 (0.0)	159 (4.6)
Israel	x x	x x	x x	x x	x x
Japan	10 (0.8)	31 (3.0)	52 (3.8)	6 (2.6)	407 (11.6)
Korea	5 (1.5)	7 (2.2)	8 (2.0)	80 (2.2)	871 (57.2)
Kuwait	s 0 (0.4)	21 (3.8)	75 (4.2)	4 (2.5)	s 636 (5.4)
Latvia (LSS)	r 23 (3.5)	37 (4.5)	33 (3.8)	7 (2.4)	r 264 (19.2)
Netherlands	r 44 (4.4)	52 (4.6)	4 (1.5)	0 (0.0)	r 172 (9.2)
New Zealand	29 (1.9)	55 (2.8)	15 (2.1)	1 (0.8)	188 (8.6)
Norway	51 (3.5)	48 (3.6)	1 (1.0)	0 (0.0)	129 (7.7)
Portugal	65 (3.2)	29 (2.7)	6 (2.4)	0 (0.0)	r 155 (9.8)
Scotland	r 23 (2.4)	72 (2.8)	5 (1.4)	0 (0.0)	r 226 (6.3)
Singapore	0 (0.0)	3 (0.2)	15 (1.2)	82 (1.2)	1310 (3.9)
Slovenia	r 2 (1.4)	34 (3.3)	51 (3.8)	12 (1.4)	r 485 (22.6)
Thailand	34 (4.2)	39 (6.0)	26 (6.4)	1 (0.4)	199 (11.4)
United States	r 5 (2.8)	46 (5.8)	45 (5.9)	4 (1.3)	r 420 (38.2)
International Average	24 (0.6)	42 (0.8)	25 (0.7)	9 (0.3)	346 (4.0)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Computed as total school enrollment averaged across schools.

* See Table 1.2 for more information about the grades tested in each country.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

Because population coverage falls below 65%, Latvia is annotated LSS for Latvian Speaking Schools only.

An "r" indicates school data available for 70-84% of schools or students, as appropriate. An "s" indicates school data available for 50-69% of schools or students, as appropriate.

An "x" indicates school data available for <50% of schools or students, as appropriate.

Table 3.2

Percent of Students in Schools by Total School Enrollment
Eighth Grade*

Country	Percent of Students in Schools by Total School Enrollment				Average Total Enrollment[1]
	0-200	201-500	501-1000	More than 1000	
Australia	2 (1.3)	14 (2.8)	57 (5.0)	28 (4.9)	686 (36.0)
Austria	25 (4.9)	58 (5.3)	18 (2.2)	0 (0.0)	288 (11.3)
Belgium (Fl)	15 (4.5)	36 (3.9)	36 (4.2)	13 (2.8)	464 (28.1)
Belgium (Fr)	r 3 (3.1)	32 (5.1)	58 (5.9)	7 (1.9)	s 535 (35.3)
Canada	7 (2.2)	42 (3.9)	38 (3.7)	12 (1.8)	409 (12.6)
Colombia	r 11 (5.5)	24 (4.8)	34 (4.7)	31 (4.5)	s 541 (53.2)
Cyprus	s 1 (0.0)	35 (0.5)	64 (0.5)	0 (0.0)	s 521 (0.0)
Czech Republic	3 (1.0)	44 (4.7)	52 (4.6)	1 (0.7)	465 (17.2)
Denmark	r 4 (1.3)	66 (5.1)	29 (5.3)	0 (0.0)	r 372 (14.4)
England	r 3 (1.6)	7 (2.5)	54 (3.4)	36 (3.3)	r 692 (57.7)
France	4 (1.6)	34 (3.8)	57 (3.4)	5 (2.3)	474 (26.2)
Germany	s 0 (0.0)	43 (5.7)	51 (6.2)	6 (2.8)	s 509 (29.4)
Greece	18 (3.2)	76 (3.9)	6 (2.1)	0 (0.0)	r 249 (12.0)
Hong Kong	0 (0.0)	1 (1.2)	15 (4.3)	84 (4.4)	1056 (42.4)
Hungary	9 (1.9)	46 (3.9)	45 (3.7)	1 (0.7)	368 (12.6)
Iceland	17 (2.1)	40 (6.6)	42 (6.8)	0 (0.0)	251 (0.0)
Iran, Islamic Rep.	24 (3.7)	37 (4.5)	33 (4.5)	6 (1.4)	293 (18.7)
Ireland	s 3 (1.7)	41 (3.8)	52 (4.1)	5 (1.8)	s 454 (24.9)
Israel	s 4 (4.4)	23 (7.5)	53 (10.4)	19 (8.1)	x x
Japan	4 (0.8)	35 (2.2)	56 (2.8)	6 (2.5)	461 (10.7)
Korea	2 (1.2)	8 (2.1)	14 (3.2)	75 (3.4)	964 (64.5)
Kuwait	x x	x x	x x	x x	x x
Latvia (LSS)	r 26 (3.3)	22 (3.1)	42 (3.7)	10 (1.8)	286 (20.6)
Lithuania	16 (1.9)	15 (2.5)	43 (3.3)	26 (3.2)	335 (20.8)
Netherlands	r 0 (0.0)	20 (3.6)	40 (5.5)	40 (5.6)	r 774 (41.9)
New Zealand	2 (1.3)	15 (1.8)	43 (2.6)	41 (2.0)	649 (42.8)
Norway	r 29 (2.8)	70 (2.9)	1 (0.8)	0 (0.0)	182 (12.5)
Portugal	0 (0.0)	12 (2.7)	35 (3.8)	53 (3.6)	915 (48.5)
Romania	18 (1.7)	21 (2.3)	14 (2.6)	47 (2.8)	393 (25.5)
Russian Federation	4 (0.6)	16 (2.6)	38 (4.9)	42 (4.3)	663 (22.2)
Scotland	r 2 (1.6)	5 (2.2)	53 (3.5)	40 (3.1)	r 732 (33.4)
Singapore	0 (0.0)	0 (0.3)	18 (2.0)	81 (2.0)	1226 (0.0)
Slovak Republic	7 (1.0)	37 (3.1)	49 (3.4)	7 (2.1)	435 (12.7)
Slovenia	r 2 (1.3)	36 (3.2)	51 (3.5)	11 (1.1)	r 486 (22.2)
Spain	8 (2.0)	38 (3.4)	47 (3.7)	7 (2.2)	413 (16.1)
Sweden	7 (2.7)	65 (4.9)	26 (4.6)	2 (1.3)	r 392 (18.0)
[2] **Switzerland**	r 29 (3.4)	44 (3.8)	20 (2.2)	6 (2.3)	– –
Thailand	r 2 (1.1)	17 (3.0)	22 (4.0)	58 (5.1)	r 952 (77.6)
United States	r 3 (1.5)	27 (3.8)	54 (4.2)	16 (3.5)	r 498 (34.5)
International Average	8 (0.4)	32 (0.6)	38 (0.7)	22 (0.5)	538 (5.3)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Computed as total school enrollment averaged across schools.

2 Average Total Enrollment based on total school weights cannot be computed for Switzerland; sampling based on tracks within schools at grade 8.

* See Table 1.2 for more information about the grades tested in each country.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

Because population coverage falls below 65%, Latvia is annotated LSS for Latvian Speaking Schools only.

School background data for Bulgaria and South Africa are unavailable.

A dash (–) indicates data are not available.

An "r" indicates school data available for 70-84% of schools or students, as appropriate. An "s" indicates school data available for 50-69% of schools or students, as appropriate.

An "x" indicates school data available for <50% of schools or students, as appropriate.

Table 3.3

Percent of Students in Schools by Total School Enrollment Final Year of Secondary School*

Country	Percent of Students in Schools by Total School Enrollment				Average Total Enrollment[1]
	0-200	201-500	501-1000	More than 1000	
Australia	r 2 (2.4)	18 (9.3)	58 (7.0)	21 (6.3)	r 782 (41.9)
[2] *Austria*	17 (5.8)	37 (4.7)	38 (5.1)	7 (2.5)	– –
Canada	r 5 (3.0)	10 (2.7)	29 (2.5)	56 (2.3)	734 (42.4)
Cyprus	r 0 (0.0)	8 (0.7)	71 (0.8)	21 (0.6)	699 (0.0)
Czech Republic	3 (2.1)	38 (7.5)	53 (8.7)	6 (2.5)	476 (34.3)
Denmark	s 1 (0.2)	22 (4.8)	77 (4.9)	0 (0.4)	s 570 (19.4)
France	0 (0.2)	9 (2.7)	26 (6.5)	64 (7.6)	848 (72.0)
[2] *Germany*	x x	x x	x x	x x	– –
Hungary	2 (1.0)	24 (3.0)	51 (4.0)	23 (3.2)	r 618 (29.2)
Iceland	s 8 (0.1)	24 (0.4)	68 (0.4)	0 (0.0)	s 453 (0.0)
Italy	4 (2.0)	22 (4.7)	51 (5.4)	23 (4.1)	602 (44.9)
Lithuania	r 11 (3.7)	13 (3.1)	54 (5.5)	22 (3.6)	r 605 (40.2)
New Zealand	3 (2.2)	13 (3.9)	41 (6.3)	44 (6.2)	670 (43.6)
Norway	r 8 (2.6)	38 (5.3)	52 (5.1)	3 (1.5)	r 466 (39.4)
Russian Federation	4 (0.9)	19 (2.8)	40 (3.6)	37 (4.1)	688 (31.0)
Slovenia	x x	x x	x x	x x	x x
South Africa	x x	x x	x x	x x	x x
Sweden	r 6 (2.4)	4 (1.9)	35 (4.9)	55 (5.1)	r 736 (85.0)
[2] **Switzerland**	r 13 (4.0)	25 (4.7)	32 (5.2)	30 (6.2)	– –
United States	r 6 (2.7)	17 (3.0)	19 (3.3)	59 (3.7)	r 691 (64.2)
International Average	5 (0.6)	20 (1.1)	47 (1.2)	28 (1.0)	643 (11.7)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Computed as total school enrollment averaged across schools.

2 Average Total Enrollment based on total school weights cannot be computed for Austria, Germany, and Switzerland; sampling was based on tracks within schools.

* See Table 1.2 for more information about the grades tested in each country.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

The Netherlands did not administer the school questionnaire at the final year of secondary school.

A dash (–) indicates data are not available.

An "r" indicates school data available for 70-84% of schools or students, as appropriate. An "s" indicates school data available for 50-69% of schools or students, as appropriate.

An "x" indicates school data available for <50% of schools or students, as appropriate.

With an international average of just 8% of students in schools with up to 200 students at the eighth grade, it is clear that relatively few students at this grade level attend small schools (Table 3.2). However, there are a few countries, including Austria, Latvia (LSS), Norway, and Switzerland, where 25% or more of eighth-grade students attend such schools. In more than half of the countries that participated in TIMSS at the eighth grade, most students were in schools with an enrollment of more than 500, and in three of them (Hong Kong, Korea, and Singapore) 75% or more of eighth-grade students were in schools with more than 1000.

From Table 3.3 it is clear that all of the countries that participated in TIMSS at this grade favor larger schools for students at the end of secondary school. Because of the need for more sophisticated laboratories, workshops, and libraries at this grade level there is more impetus for consolidation into larger schools, and students at this age level are generally considered better equipped to deal with the larger and more impersonal organizational structures. In all countries except Austria, most students were in schools with an enrollment of more than 500, and in four of these – Canada, France, Sweden, and the United States – the majority were in schools of more than 1000 students.[2]

How Do Countries Allocate Their Teaching Force?

Larger schools generally have more teachers than smaller schools, of course, but the important issue for policymakers has been the optimal allocation of teachers to students. The student-teacher ratio is an important indicator of human resource allocation in schools and reduction of this ratio has been a major policy goal in many countries over the years. Tables 3.4 through 3.6 present, in addition to average total student enrollment, the average number of full- and part-time teachers and the average student-teacher ratio for countries participating in TIMSS.

Looking first at trends across Tables 3.4 through 3.6 two things become apparent. The first is that although the students in the earlier grades are on average in smaller schools, the student-teacher ratio in these schools is less favorable, i.e., there are fewer teachers per student. The average student-teacher ratio for fourth-grade schools was 20, compared with 16 for eighth-grade and 13 for the upper secondary schools. While that ratio does not translate directly into class size, there is generally a strong correlation between them, and systems with low student-teacher ratios also often have small class sizes.[3]

[2] Hong Kong, Korea, and Singapore, which reported the highest percentage of students in large schools at the eighth grade, did not participate in the final-year assessment of TIMSS.

[3] Class size data reported by teachers are presented for fourth and eighth grade mathematics and science classes in the main TIMSS reports (see references in Chapter 1).

Within grades there was considerable variation in student-teacher ratios across countries. At fourth grade (Table 3.4), it ranged from a low of 10 in Latvia (LSS) to a high of 37 in Iran. Countries with the most favorable ratios (15 or less) included Austria, Greece, Hungary, Kuwait, Latvia (LSS), Norway, and Slovenia. Higher ratios (25 or more) were found in Hong Kong, Iran, Ireland, and Korea. At eighth grade there was a narrower range of ratios, from 9 to 25. Countries with the most favorable ratios (11 or less) included Austria, Belgium (Flemish), Belgium (French), Latvia (LSS), Lithuania, Norway, and Sweden, while less favorable ratios (21 or more) were found in Canada, Colombia, Hong Kong, Iran, Korea, and Romania. Student-teacher ratios at the final year of secondary school had an even more restricted range, from 9 to 19. Countries with the lowest ratios (10 or less) included Denmark, Italy, and Norway, while those with the highest (16 or more) included Canada, the Czech Republic, and New Zealand.

The second noticeable trend across grades is that while elementary schools are mostly staffed by full-time teachers, reliance on part-time teachers becomes progressively greater from fourth to eighth grade, and from eighth grade to the final year of secondary school. The ratio of part-time to full-time staff was, on average, 2:17 for countries at the fourth grade, increasing to 7:31 by eighth grade and to 9:46 by the final year of secondary school. Countries with a high ratio of part-time to full-time teachers at the fourth grade (Iceland, Iran, Israel,[4] the Netherlands, New Zealand, Norway, and Scotland) all had an average student enrollment that was below the international average. It may be that at the elementary school level, part-time teachers are most often used to supplement full-time teachers in smaller schools.

Although, on average across all countries, there was a higher ratio of part-time to full-time teachers at the eighth grade (Table 3.5), this was principally the result of high reliance on part-time teachers in a few countries. In the five countries with the highest ratio, Belgium (Flemish), Belgium (French), Cyprus, Israel, and the Netherlands, there was about one or more part-time teachers for every two full-time teachers. The Netherlands had the highest ratio, with almost one part-time teacher for every full-time teacher. Part-time teachers are common at the final year of secondary school (Table 3.6) in nearly all of the participating countries. Those with the greatest reliance on part-time teachers included Cyprus, Iceland, Norway, and Sweden.

[4] The enrollment data for Israel are not reported because of a high proportion of missing data.

Table 3.4

Total School Enrollment and Staffing[1] Fourth Grade*

Country	Average Total Enrollment	Average Number of Full-time Teachers	Average Number of Part-time Teachers	Average Student-Teacher Ratio[2]
Australia	r 291 (25.2)	12 (0.9)	2 (0.3)	r 23 (0.5)
Austria	r 111 (10.0)	7 (0.5)	2 (0.2)	r 15 (0.6)
Canada	308 (9.0)	13 (0.4)	3 (0.2)	22 (0.3)
Cyprus	r 269 (7.3)	r 11 (0.3)	r 3 (0.1)	r 20 (0.3)
Czech Republic	239 (19.5)	12 (1.0)	2 (0.2)	17 (0.3)
England	261 (8.0)	11 (0.5)	2 (0.2)	23 (0.5)
Greece	118 (13.7)	7 (0.7)	r 1 (0.1)	r 15 (0.6)
Hong Kong	568 (41.3)	22 (1.1)	0 (0.1)	r 25 (1.8)
Hungary	369 (12.5)	32 (1.1)	2 (0.3)	12 (0.6)
Iceland	249 (1.1)	9 (0.0)	5 (0.0)	r 21 (0.1)
Iran, Islamic Rep.	254 (15.8)	6 (0.4)	r 2 (0.4)	r 37 (2.3)
Ireland	159 (4.6)	6 (0.1)	0 (0.0)	25 (0.3)
Israel	x x	s 23 (1.3)	s 10 (1.1)	x x
Japan	407 (11.6)	16 (0.4)	0 (0.1)	24 (0.4)
Korea	871 (57.2)	26 (1.2)	0 (0.0)	28 (1.9)
Kuwait	s 636 (5.4)	s 54 (0.9)	s 0 (0.0)	s 12 (0.1)
Latvia (LSS)	r 264 (19.2)	22 (1.4)	5 (0.9)	r 10 (0.4)
Netherlands	r 172 (9.2)	5 (0.3)	4 (0.3)	r 22 (0.7)
New Zealand	188 (8.6)	7 (0.4)	3 (0.2)	21 (0.5)
Norway	129 (7.7)	8 (0.5)	5 (0.2)	r 11 (0.3)
Portugal	r 155 (9.8)	8 (0.4)	1 (0.3)	r 17 (0.4)
Scotland	r 226 (6.3)	8 (0.3)	4 (0.2)	r 21 (0.6)
Singapore	1310 (3.9)	55 (0.1)	0 (0.0)	23 (0.0)
Slovenia	r 485 (22.6)	31 (1.4)	1 (0.4)	r 15 (0.2)
Thailand	199 (11.4)	10 (0.5)	s 0 (0.1)	s 18 (0.6)
United States	r 420 (38.2)	20 (1.8)	2 (0.3)	s 20 (0.9)
International Average	346 (4.0)	17 (0.2)	2 (0.1)	20 (0.2)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Reported total enrollment and number of teachers averaged across schools.

2 Average Student-Teacher Ratio computed as a ratio of the number of students enrolled in school to the number of full-time and part-time teachers in school (one full-time teacher = 1; one part-time teacher = .5).

*See Table 1.2 for more information about the grades tested in each country.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

Because population coverage falls below 65%, Latvia is annotated LSS for Latvian Speaking Schools only.

An "r" indicates school data available for 70-84% of schools. An "s" indicates school data available for 50-69% of schools.

An "x" indicates school data available for <50% of schools.

Table 3.5

Total School Enrollment and Staffing [1]
Eighth Grade*

Country	Average Total Enrollment	Average Number of Full-time Teachers	Average Number of Part-time Teachers	Average Student-Teacher Ratio[2]
Australia	686 (36.0)	44 (2.2)	5 (0.5)	15 (0.3)
Austria	288 (11.3)	27 (0.9)	5 (0.4)	10 (0.2)
Belgium (Fl)	464 (28.1)	r 36 (2.6)	23 (2.0)	r 9 (0.3)
Belgium (Fr)	s 535 (35.3)	r 46 (3.1)	r 22 (1.9)	s 9 (0.3)
Canada	409 (12.6)	19 (0.8)	3 (0.2)	21 (0.4)
Colombia	s 541 (53.2)	23 (1.8)	r 4 (0.7)	s 22 (1.2)
Cyprus	s 521 (0.0)	r 26 (0.0)	r 15 (0.0)	s 15 (0.0)
Czech Republic	465 (17.2)	24 (0.8)	3 (0.3)	18 (0.3)
Denmark	r 372 (14.4)	r 30 (1.2)	r 4 (0.4)	r 12 (0.1)
England	r 692 (57.7)	42 (3.4)	9 (1.1)	r 14 (0.7)
France	474 (26.2)	30 (1.8)	8 (1.0)	14 (0.4)
Germany	s 509 (29.4)	s 26 (1.8)	s 10 (1.0)	s 17 (0.5)
Greece	r 249 (12.0)	16 (0.8)	2 (0.3)	r 14 (0.6)
Hong Kong	1056 (42.4)	50 (1.8)	1 (0.1)	r 21 (0.4)
Hungary	368 (12.6)	32 (1.1)	2 (0.3)	12 (0.6)
Iceland	251 (0.0)	9 (0.0)	5 (0.0)	r 20 (0.0)
Iran, Islamic Rep.	293 (18.7)	8 (0.7)	7 (0.6)	r 25 (1.0)
Ireland	s 454 (24.9)	27 (0.9)	4 (0.3)	s 16 (0.3)
Israel	x x	s 32 (3.7)	s 15 (1.9)	x x
Japan	461 (10.7)	22 (0.6)	1 (0.1)	18 (0.3)
Korea	964 (64.5)	36 (1.9)	0 (0.0)	24 (0.9)
Kuwait	x x	x x	x x	x x
Latvia (LSS)	286 (20.6)	23 (1.4)	5 (0.3)	r 10 (0.4)
Lithuania	335 (20.8)	26 (1.4)	5 (0.3)	10 (0.4)
Netherlands	r 774 (41.9)	r 30 (2.5)	r 29 (1.8)	s 18 (0.7)
New Zealand	649 (42.8)	35 (2.1)	9 (0.6)	16 (0.4)
Norway	182 (12.5)	16 (0.9)	5 (0.4)	r 9 (0.3)
Portugal	915 (48.5)	70 (3.5)	8 (1.2)	12 (0.3)
Romania	393 (25.5)	14 (0.7)	3 (0.3)	23 (1.2)
Russian Federation	663 (22.2)	40 (1.4)	3 (0.3)	15 (0.4)
Scotland	r 732 (33.4)	r 56 (2.2)	r 9 (0.5)	s 13 (0.3)
Singapore	1226 (0.0)	60 (0.0)	0 (0.0)	20 (0.0)
Slovak Republic	435 (12.7)	24 (0.6)	1 (0.1)	17 (0.3)
Slovenia	r 486 (22.2)	r 31 (1.5)	1 (0.4)	r 15 (0.3)
Spain	413 (16.1)	20 (0.6)	2 (0.2)	r 20 (0.5)
Sweden	r 392 (18.0)	31 (1.7)	9 (0.6)	r 11 (0.2)
[3] **Switzerland**	– –	– –	– –	– –
Thailand	r 952 (77.6)	s 37 (5.7)	s 2 (0.8)	x x
United States	r 498 (34.5)	27 (2.5)	r 4 (0.4)	r 18 (1.1)
International Average	538 (5.3)	31 (0.3)	7 (0.1)	16 (0.1)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Reported total enrollment and number of teachers averaged across schools.

2 Average Student-Teacher Ratio computed as a ratio of the number of students enrolled in school to the number of full-time and part-time teachers in school (one full-time teacher = 1; one part-time teacher = .5).

3 Averages based on total school weights cannot be computed for Switzerland; sampling based on tracks within schools at grade 8.

* See Table 1.2 for more information about the grades tested in each country.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Because population coverage falls below 65%, Latvia is annotated LSS for Latvian Speaking Schools only.

School background data for Bulgaria and South Africa are unavailable.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

A dash (–) indicates data are not available.

An "r" indicates school data available for 70-84% of schools. An "s" indicates school data available for 50-69% of schools.

An "x" indicates school data available for <50% of schools.

Table 3.6

Total School Enrollment and Staffing[1] Final Year of Secondary School*

Country	Average Total Enrollment	Average Number of Full-time Teachers	Average Number of Part-time Teachers	Average Student-Teacher Ratio[2]
Australia	r 782 (41.9)	52 (3.4)	7 (0.8)	r 14 (0.5)
[3] *Austria*	– –	– –	– –	– –
Canada	734 (42.4)	44 (2.7)	5 (0.4)	16 (0.3)
Cyprus	699 (0.0)	42 (0.0)	21 (0.0)	r 14 (0.0)
Czech Republic	476 (34.3)	23 (1.7)	8 (0.6)	19 (0.8)
Denmark	s 570 (19.4)	r 59 (3.2)	r 8 (0.6)	s 10 (0.1)
France	848 (72.0)	69 (6.1)	12 (1.4)	11 (0.4)
[3] *Germany*	– –	– –	– –	– –
Hungary	r 618 (29.2)	43 (1.9)	8 (0.8)	r 13 (0.5)
Iceland	s 453 (0.0)	r 26 (0.0)	r 10 (0.0)	s 14 (0.0)
Italy	602 (44.9)	62 (4.4)	4 (0.7)	10 (0.5)
Lithuania	r 605 (40.2)	46 (2.2)	8 (0.6)	r 12 (0.5)
New Zealand	670 (43.6)	38 (2.2)	8 (0.6)	r 16 (0.5)
Norway	r 466 (39.4)	46 (3.2)	14 (1.8)	r 9 (0.3)
Russian Federation	688 (31.0)	42 (1.8)	4 (0.5)	15 (0.4)
Slovenia	x x	x x	x x	x x
South Africa	x x	x x	x x	x x
Sweden	r 736 (85.0)	r 58 (5.9)	s 17 (1.3)	s 11 (0.5)
[3] **Switzerland**	– –	– –	– –	– –
United States	r 691 (64.2)	44 (3.4)	4 (0.5)	r 14 (0.7)
International Average	643 (11.7)	46 (0.9)	9 (0.2)	13 (0.1)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Reported total enrollment and number of teachers averaged across schools.

2 Average Student-Teacher Ratio computed as a ratio of the number of students enrolled in school to the number of full-time and part-time teachers in school (one full-time teacher = 1; one part-time teacher = .5).

3 Averages based on total school weights cannot be computed for Austria, Germany, and Switzerland; sampling was based on tracks within schools.

* See Table 1.2 for more information about the grades tested in each country.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

The Netherlands did not administer the school questionnaire at the final year of secondary school.

A dash (–) indicates data are not available.

An "r" indicates school data available for 70-84% of schools. An "s" indicates school data available for 50-69% of schools.

An "x" indicates school data available for <50% of schools.

Which Criteria Do Schools Use in Admitting Students?

Principals of schools with fourth- and eighth-grade students were asked about the criteria used to admit students. For schools serving the younger students, the predominant criterion for admission in all countries was residence in the catchment area of the school (Table 3.7). Academic criteria play no role at this grade level in most schools in most countries, although in several countries, including the Czech Republic, Hungary, Israel, Latvia (LSS), Slovenia, Thailand, and the United States, 10% or more of schools reported employing such criteria for fourth-grade students. Next to student residence, school principals reported that they most often gave preference to applicants who had older siblings in the school, were children of former students, or came from a particular school. This "legacy/tradition" approach was particularly prevalent in England and Hungary, where it is customary in more than half of the schools. Equally common, on average across countries, is the practice of student or parent interviews before admission. Substantial percentages of schools in most countries subscribe to this practice, with the largest in the Czech Republic and Latvia (LSS).

At eighth grade, place of residence remains the main criterion for student admission in most countries, but principals reported greater reliance on the other criteria than at fourth grade, in line with greater emphasis on selective entry requirements (Table 3.8). The greatest additional emphasis was on academic criteria for admissions, particularly for some of the countries with tracked secondary education systems (such as Germany and the Netherlands), or with very selective secondary systems (such as Colombia and Thailand). Use of interviews and the legacy/tradition approach also were more commonly reported at the eighth grade. Most schools reported using the legacy/tradition approach in Australia, England, Hungary, Portugal, and Spain. Student or parent interviews were reported by at least half of the schools in Australia, Colombia, the Czech Republic, Germany, Latvia (LSS), the Netherlands, New Zealand, and the Russian Federation.

Table 3.7

Percent of Schools Using Various Criteria to Admit Students to School[1] Fourth Grade*

Country	Academic Criteria[2]	Interviews[3]	Legacy / Tradition[4]	Residence in a Particular Area
Australia	1 (0.6)	40 (5.2)	31 (4.2)	65 (6.2)
Austria	– –	– –	– –	– –
Canada	x x	x x	x x	x x
Cyprus	r 0 (0.0)	r 6 (2.1)	r 25 (2.9)	r 97 (1.5)
Czech Republic	12 (2.7)	52 (4.6)	24 (3.0)	86 (3.1)
England	6 (1.8)	21 (4.2)	66 (4.3)	90 (2.6)
Greece	2 (0.8)	3 (0.9)	22 (3.7)	96 (1.4)
Hong Kong	– –	– –	– –	– –
Hungary	18 (3.0)	40 (3.1)	82 (3.8)	60 (4.3)
Iceland	2 (0.0)	14 (0.2)	5 (0.1)	98 (0.0)
Iran, Islamic Rep.	– –	– –	– –	– –
Ireland	3 (0.9)	25 (3.8)	19 (3.1)	82 (3.2)
Israel	s 13 (5.3)	s 24 (6.3)	s 21 (5.7)	s 94 (6.2)
Japan	– –	– –	– –	– –
Korea	1 (0.6)	6 (3.2)	0 (0.3)	56 (6.9)
Kuwait	– –	– –	– –	– –
Latvia (LSS)	28 (5.3)	71 (4.8)	32 (4.3)	94 (2.3)
Netherlands	– –	– –	– –	– –
New Zealand	2 (1.1)	25 (5.7)	21 (4.1)	77 (4.4)
Norway	– –	– –	– –	– –
Portugal	6 (1.9)	15 (3.1)	36 (4.6)	91 (3.0)
Scotland	– –	– –	– –	– –
Singapore	– –	– –	– –	– –
Slovenia	r 17 (4.2)	r 31 (5.0)	r 17 (3.0)	r 99 (0.9)
Thailand	22 (3.8)	20 (3.7)	24 (4.0)	69 (4.4)
United States	14 (4.2)	20 (5.4)	28 (4.6)	87 (5.3)
International Average	9 (0.7)	26 (1.0)	28 (0.9)	84 (1.0)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Reported as percent of schools reporting that one or more of the criteria/factors included in a category is used to admit students to the school.

2 Academic Criteria: Student's academic performance, Performance on a standardized test, Performance on an entrance examination, Performance on an oral examination, Recommendations from previous teachers.

3 Interviews: Interview with student, Interview with parents.

4 Legacy/Tradition: Preference given to students with older brothers or sisters in the school, Preference given to students from a particular school, Preference given to children of former students.

* See Table 1.2 for more information about the grades tested in each country.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

Because population coverage falls below 65%, Latvia is annotated LSS for Latvian Speaking Schools only.

A dash (–) indicates data are not available.

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An "x" indicates school data available for <50% of schools.

Table 3.8

Percent of Schools Using Various Criteria to Admit Students to School[1]
Eighth Grade*

Country	Academic Criteria[2]	Interviews[3]	Legacy / Tradition[4]	Residence in a Particular Area
Australia	r 36 (5.1)	70 (4.7)	61 (4.7)	65 (4.3)
Austria	– –	– –	– –	– –
Belgium (Fl)	– –	– –	– –	– –
Belgium (Fr)	– –	– –	– –	– –
Canada	– –	– –	– –	– –
Colombia	r 80 (4.8)	63 (6.4)	r 34 (6.6)	23 (3.9)
Cyprus	r 0 (0.0)	r 0 (0.0)	r 33 (0.0)	r 100 (0.0)
Czech Republic	27 (4.4)	64 (4.8)	49 (4.5)	82 (3.8)
Denmark	– –	– –	– –	– –
England	34 (6.9)	37 (7.3)	54 (6.2)	71 (5.9)
France	– –	– –	– –	– –
Germany	s 52 (5.9)	s 51 (6.0)	s 36 (6.2)	s 82 (4.9)
Greece	10 (5.9)	8 (6.1)	46 (5.4)	86 (5.9)
Hong Kong	– –	– –	– –	– –
Hungary	18 (3.0)	40 (3.1)	82 (3.8)	60 (4.3)
Iceland	3 (0.0)	12 (0.0)	7 (0.0)	96 (0.0)
Iran, Islamic Rep.	17 (3.2)	21 (4.6)	39 (5.0)	94 (2.1)
Ireland	11 (2.9)	32 (5.3)	39 (4.2)	74 (3.9)
Israel	s 16 (7.5)	s 30 (12.2)	s 19 (5.6)	s 97 (3.0)
Japan	– –	– –	– –	– –
Korea	4 (1.5)	7 (3.1)	3 (1.3)	64 (6.1)
Kuwait	– –	– –	– –	– –
Latvia (LSS)	33 (5.0)	75 (5.5)	32 (4.1)	96 (1.2)
Lithuania	24 (5.2)	49 (6.5)	33 (5.3)	98 (1.2)
Netherlands	r 94 (2.1)	r 59 (5.8)	r 8 (2.1)	r 43 (7.1)
New Zealand	19 (3.4)	50 (5.1)	37 (5.1)	62 (5.2)
Norway	– –	– –	– –	– –
Portugal	20 (4.7)	19 (6.0)	65 (6.4)	86 (6.0)
Romania	33 (5.9)	34 (5.3)	26 (4.1)	97 (1.3)
Russian Federation	32 (4.6)	71 (4.6)	30 (3.8)	95 (2.2)
Scotland	– –	– –	– –	– –
Singapore	– –	– –	– –	– –
Slovak Republic	– –	– –	– –	– –
Slovenia	r 19 (4.2)	r 31 (4.9)	r 17 (2.9)	r 99 (0.9)
Spain	5 (2.3)	15 (3.1)	80 (3.3)	70 (4.3)
Sweden	2 (1.3)	7 (4.0)	28 (5.2)	93 (3.9)
[5] **Switzerland**	– –	– –	– –	– –
Thailand	69 (3.6)	37 (4.3)	33 (4.4)	86 (2.9)
United States	28 (5.8)	30 (5.5)	26 (5.7)	88 (5.6)
International Average	27 (0.9)	36 (1.1)	37 (0.9)	80 (0.8)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Reported as percent of schools reporting that one or more of the criteria/factors included in a category is used to admit students to the school.

* See Table 1.2 for more information about the grades tested in each country.

2 Academic Criteria: Student's academic performance, Performance on a standardized test, Performance on an entrance examination, Performance on an oral examination, Recommendations from previous teachers.

3 Interviews: Interview with student, Interview with parents.

4 Legacy/Tradition: Preference given to students with older brothers or sisters in the school, Preference given to students from a particular school, Preference given to children of former students.

5 Percentages based on total school weights cannot be computed for Switzerland; sampling based on tracks within schools at grade 8.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

Because population coverage falls below 65%, Latvia is annotated LSS for Latvian Speaking Schools only.

School background data for Bulgaria and South Africa are unavailable.

A dash (–) indicates data are not available.

An "r" indicates school data available for 70-84% of schools. An "s" indicates school data available for 50-69% of schools.

How Long Do Students Stay with the Same Teacher?

One of the pedagogic approaches that varies across countries is the number of years students stay with the same teacher. At fourth grade, it is common in many countries for a teacher to stay with the same class of students all day, and to teach all subjects in the curriculum. When that continues over several years, students and teachers can get to know each other very well and can develop a close relationship that may enhance the teaching and learning process. It is evident from Table 3.9 that schools in almost every country differ greatly in how they address this issue, which implies that the decision may often be made at the school level.

A range of countries, including Austria, the Czech Republic, Hungary, Iceland, Latvia (LSS), Norway, and Portugal, seem to favor an extended student-teacher relationship, since most schools in these countries reported that students stay with their teachers for three to four or more years. In contrast, in countries such Cyprus, England, Iran, Korea, Thailand, and the United States the regular reassignment of students and teachers is more the norm; more than 80% of their schools reported that students and teachers spend just one year together. In many countries it seems that a range of practices prevails, with one-year and two-year periods particularly common. In a few countries such as Ireland and New Zealand all configurations are reported.

In many countries, eighth-grade students are not taught all subjects by a single teacher, but instead have specialist teachers for individual subjects. These teachers are more likely to stay with their students for extended periods. In Ireland, for example, eighth-grade students[5] are in the middle of a three- or four-year cycle and frequently have the same specialist teacher for the entire cycle. Table 3.10 reveals a great variety of practices across countries. Teachers stay with students for just one year in almost all schools (80% or more) in the United States and Canada, for two years in Singapore, for three in Norway and Sweden, and for four or more in Austria, Denmark, Latvia (LSS), Lithuania, Romania, and the Russian Federation. Teachers stay with students mostly for one or two years in Australia, Belgium (Flemish), Cyprus, France, Greece, Hong Kong, Iran, Korea, the Netherlands, New Zealand, and Scotland. Two or three years is most common in Germany, Iceland, Israel, and Spain, while three years or more is typical in the Czech Republic, Hungary, the Slovak Republic, and Slovenia. One to three years is prevalent in Japan, Portugal, and Thailand, and two to four years or more in Ireland. In Colombia teachers stay with the same students for anything from one to four years or more.

[5] "Eighth grade" as used by TIMSS is known as Second Year in Ireland.

Table 3.9

Percent of Schools by the Number of Years Students Typically Stay with the Same Teacher - Fourth Grade*

Country		One School Year	Two School Years	Three School Years	Four or More School Years
Australia		73 (6.3)	23 (6.4)	3 (2.2)	0 (0.2)
Austria		0 (0.0)	52 (7.2)	2 (1.8)	46 (7.4)
Canada		54 (3.8)	41 (4.2)	5 (2.3)	0 (0.1)
Cyprus	r	83 (3.2)	17 (3.2)	0 (0.0)	0 (0.0)
Czech Republic		4 (2.0)	45 (5.2)	26 (3.7)	25 (4.0)
England		84 (4.7)	16 (4.7)	0 (0.0)	0 (0.0)
Greece		37 (7.2)	47 (6.8)	15 (3.9)	1 (0.6)
Hong Kong		54 (6.5)	42 (6.7)	3 (1.6)	0 (0.0)
Hungary		0 (0.0)	11 (2.5)	33 (3.7)	56 (4.2)
Iceland		4 (0.0)	20 (0.2)	57 (0.6)	19 (0.7)
Iran, Islamic Rep.		93 (2.7)	2 (1.4)	0 (0.0)	5 (1.9)
Ireland		30 (2.7)	37 (3.0)	15 (3.4)	19 (2.7)
Israel	s	0 (0.0)	100 (0.0)	0 (0.0)	0 (0.0)
Japan		43 (5.2)	52 (4.8)	5 (2.3)	0 (0.0)
Korea		98 (1.3)	2 (1.3)	0 (0.0)	0 (0.3)
Kuwait	s	37 (1.8)	53 (1.9)	8 (0.1)	3 (0.0)
Latvia (LSS)		3 (2.8)	0 (0.0)	21 (5.5)	76 (6.0)
Netherlands		46 (4.9)	39 (4.1)	15 (4.6)	1 (0.7)
New Zealand		42 (2.6)	28 (4.5)	20 (7.4)	10 (6.0)
Norway		0 (0.0)	8 (2.6)	42 (5.0)	50 (5.5)
Portugal		6 (1.9)	9 (2.9)	3 (1.3)	82 (3.7)
Scotland	r	66 (4.0)	31 (4.9)	2 (1.8)	1 (0.8)
Singapore		38 (0.3)	62 (0.3)	0 (0.0)	0 (0.0)
Slovenia	r	58 (5.5)	35 (5.4)	1 (0.7)	6 (1.7)
Thailand		82 (3.4)	9 (2.3)	1 (1.1)	8 (2.6)
United States		87 (7.3)	13 (7.3)	0 (0.0)	0 (0.4)
International Average		43 (0.8)	30 (0.8)	11 (0.6)	16 (0.6)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

* See Table 1.2 for more information about the grades tested in each country.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

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An "r" indicates school data available for 70-84% of schools. An "s" indicates school data available for 50-69% of schools.

Table 3.10

Percent of Schools by the Number of Years Students Typically Stay with the Same Teacher - Eighth Grade*

Country	One School Year	Two School Years	Three School Years	Four or More School Years
Australia	r 53 (5.3)	42 (5.2)	4 (2.2)	1 (1.0)
Austria	0 (0.0)	6 (2.7)	7 (2.5)	87 (3.5)
Belgium (Fl)	25 (4.0)	71 (4.5)	4 (2.5)	0 (0.0)
Belgium (Fr)	– –	– –	– –	– –
Canada	89 (3.4)	9 (3.3)	1 (0.6)	0 (0.0)
Colombia	21 (4.0)	39 (5.7)	19 (4.1)	21 (5.0)
Cyprus	r 33 (0.0)	67 (0.0)	0 (0.0)	0 (0.0)
Czech Republic	1 (0.5)	17 (3.2)	44 (4.6)	38 (4.8)
Denmark	r 0 (0.0)	0 (0.0)	4 (1.9)	96 (1.9)
England	– –	– –	– –	– –
France	26 (5.9)	69 (6.1)	5 (2.6)	1 (0.5)
Germany	s 3 (1.7)	42 (5.3)	38 (5.8)	17 (4.7)
Greece	56 (5.6)	36 (5.2)	7 (1.8)	1 (0.8)
Hong Kong	46 (6.2)	44 (6.1)	11 (3.4)	0 (0.0)
Hungary	0 (0.0)	11 (2.5)	33 (3.7)	56 (4.2)
Iceland	4 (0.0)	25 (0.0)	58 (0.0)	14 (0.0)
Iran, Islamic Rep.	63 (4.5)	21 (3.6)	16 (4.3)	0 (0.0)
Ireland	2 (1.7)	20 (3.6)	56 (4.6)	22 (5.2)
Israel	s 0 (0.0)	70 (10.4)	30 (10.4)	0 (0.0)
Japan	42 (5.2)	23 (4.0)	35 (5.5)	0 (0.0)
Korea	49 (6.2)	42 (6.0)	9 (3.6)	0 (0.0)
Kuwait	x x	x x	x x	x x
Latvia (LSS)	1 (0.7)	1 (0.8)	15 (4.2)	84 (4.3)
Lithuania	0 (0.0)	0 (0.1)	8 (3.2)	92 (3.2)
Netherlands	s 43 (7.1)	43 (6.8)	9 (4.5)	5 (3.7)
New Zealand	69 (6.7)	15 (7.1)	9 (4.3)	6 (4.1)
Norway	0 (0.0)	11 (7.6)	84 (7.8)	5 (2.4)
Portugal	42 (5.5)	31 (5.2)	21 (5.0)	5 (2.5)
Romania	2 (1.7)	1 (1.0)	6 (3.9)	91 (4.3)
Russian Federation	1 (1.2)	1 (0.9)	13 (4.0)	84 (3.3)
Scotland	r 40 (8.6)	51 (4.6)	5 (4.2)	4 (4.0)
Singapore	20 (0.0)	80 (0.0)	0 (0.0)	0 (0.0)
Slovak Republic	0 (0.0)	12 (3.5)	26 (4.3)	62 (4.4)
Slovenia	r 0 (0.0)	7 (2.7)	56 (6.6)	37 (6.2)
Spain	3 (1.6)	71 (4.6)	20 (4.1)	6 (2.5)
Sweden	0 (0.0)	1 (0.9)	99 (0.9)	0 (0.0)
[1] **Switzerland**	– –	– –	– –	– –
Thailand	r 57 (4.6)	15 (3.3)	27 (3.7)	1 (0.8)
United States	88 (5.4)	3 (2.0)	4 (3.4)	4 (4.2)
International Average	25 (0.7)	29 (0.8)	22 (0.7)	24 (0.5)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Percentages based on total school weights cannot be computed for Switzerland; sampling based on tracks within schools at grade 8.

* See Table 1.2 for more information about the grades tested in each country.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

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School background data for Bulgaria and South Africa are unavailable.

A dash (–) indicates data are not available.

An "r" indicates school data available for 70-84% of schools. An "s" indicates school data available for 50-69% of schools.

An "x" indicates school data available for <50% of schools.

What Do Schools Do to Promote Cooperation and Collaboration among Teachers?

Cooperation and collaboration among teachers is an effective way to improve teaching. In order for teachers to have an opportunity to meet and share ideas, schools need to support this type of activity. Table 3.11 summarizes principals' reports of relevant school policies and practices. In general, the situation in the fourth and eighth grades is very similar. Internationally more than three-quarters of schools indicated that they had an official policy of promoting cooperation and collaboration among their teaching staff. Countries where this was true of fewer than half of the schools included Australia, Canada, New Zealand, Portugal, and the United States at fourth grade, and Australia, Canada, and New Zealand at eighth grade.

Teachers meeting regularly to discuss goals and issues was reported to be very common at both grade levels also. At fourth grade, 80% or more of schools reported regular meetings in most countries, the exceptions being Austria, Greece, Korea, and the Netherlands. At eighth grade a high level of regular meetings also was reported.

[4] The enrollment data for Israel are not reported because of a high proportion of missing data.

Table 3.11

Percent of Schools Having Policies and Practices Related to Cooperation and Collaboration Among Teachers - Fourth and Eighth Grade*

Country	Fourth Grade		Eighth Grade	
	School Has Official Policy Related to Promoting Cooperation and Collaboration Among Teachers	Teachers Meet Regularly to Discuss Goals and Issues	School Has Official Policy Related to Promoting Cooperation and Collaboration Among Teachers	Teachers Meet Regularly to Discuss Goals and Issues
Australia	44 (5.9)	91 (2.5)	45 (5.3)	96 (1.7)
Austria	r 56 (7.8)	52 (8.4)	r 57 (5.9)	r 78 (4.3)
Belgium (Fl)	– –	– –	80 (6.2)	57 (7.3)
Belgium (Fr)	– –	– –	r 60 (6.1)	r 79 (5.6)
Canada	39 (4.4)	82 (3.8)	38 (3.9)	78 (3.8)
Colombia	– –	– –	80 (4.7)	86 (3.5)
Cyprus	r 97 (1.7)	r 90 (2.2)	r 95 (0.0)	r 100 (0.0)
Czech Republic	74 (4.1)	84 (3.2)	91 (2.0)	76 (4.5)
Denmark	– –	– –	r 89 (2.8)	r 74 (4.1)
England	– –	– –	– –	– –
France	– –	– –	98 (0.6)	77 (5.3)
Germany	– –	– –	s 96 (2.8)	x x
Greece	75 (6.6)	64 (6.4)	75 (5.1)	78 (4.1)
Hong Kong	82 (4.7)	92 (3.0)	80 (4.8)	90 (3.0)
Hungary	98 (1.5)	97 (1.4)	98 (1.5)	97 (1.4)
Iceland	98 (0.0)	82 (0.2)	97 (0.0)	80 (0.0)
Iran, Islamic Rep.	88 (3.2)	85 (3.3)	81 (3.9)	75 (3.7)
Ireland	81 (3.3)	80 (3.1)	61 (5.5)	59 (5.7)
Israel	s 100 (0.0)	s 98 (1.8)	s 100 (0.0)	s 88 (8.9)
Japan	71 (4.2)	85 (3.2)	76 (4.0)	93 (2.9)
Korea	91 (4.3)	71 (6.4)	90 (3.2)	67 (4.8)
Kuwait	s 98 (0.0)	s 99 (0.0)	x x	x x
Latvia (LSS)	100 (0.0)	96 (2.1)	97 (1.8)	84 (4.4)
Lithuania	– –	– –	93 (3.8)	92 (4.6)
Netherlands	89 (3.1)	75 (4.7)	r 95 (2.6)	r 87 (4.8)
New Zealand	35 (6.4)	89 (5.2)	39 (7.1)	97 (2.0)
Norway	– –	– –	– –	– –
Portugal	r 49 (4.7)	94 (2.1)	59 (5.8)	91 (3.4)
Romania	– –	– –	85 (3.1)	100 (.1)
Russian Federation	– –	– –	100 (0.0)	97 (1.6)
Scotland	– –	– –	– –	– –
Singapore	72 (0.2)	97 (.0)	67 (0.0)	94 (.0)
Slovak Republic	– –	– –	98 (1.4)	100 (.3)
Slovenia	93 (4.1)	80 (5.3)	r 94 (4.0)	79 (5.3)
Spain	– –	– –	74 (4.1)	96 (2.1)
Sweden	– –	– –	58 (5.7)	90 (3.3)
[1] **Switzerland**	– –	– –	– –	– –
Thailand	99 (0.8)	88 (2.7)	98 (1.3)	87 (2.9)
United States	40 (4.5)	93 (3.2)	52 (6.3)	88 (4.3)
International Average	77 (0.8)	85 (.8)	79 (0.7)	85 (.7)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1994-95.

1 Percentages based on total school weights cannot be computed for Switzerland; sampling based on tracks within schools at grade 8.

* See Table 1.2 for more information about the grades tested in each country.

( ) Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

Countries shown in italics did not satisfy one or more guidelines for sample participation rates, age/grade specifications, or classroom sampling procedures (see Appendix A).

Because population coverage falls below 65%, Latvia is annotated LSS for Latvian Speaking Schools only.

School background data for Bulgaria and South Africa are unavailable.

A dash (–) indicates data are not available.

An "r" indicates school data available for 70-84% of schools. An "s" indicates school data available for 50-69% of schools.

An "x" indicates school data available for <50% of schools.