

Chapter 6

SCHOOL ATMOSPHERE

Research has shown that schools with an atmosphere more conducive to academic achievement tend to have higher performance than their counterparts with more problems. As was anticipated, the TIMSS data also show higher achievement within countries with less absenteeism, more stability in their student body, and fewer problems. Chapter 6 presents the TIMSS results for these three indicators of a positive school environment.

WHAT WERE THE RATES OF ABSENTEEISM AND THE STABILITY OF THE STUDENT BODIES IN THE TIMSS COUNTRIES?

In some countries, many schools are confronted with high absentee rates and frequent turnovers of the student body. These problems can affect the continuity of instruction and can disrupt students' learning. In general, research has shown that a higher rate of truancy is related to less serious attitudes toward school, students from lower socio-economic backgrounds, and lower academic achievement. For whatever reasons, students who miss a number of their lessons are less likely to perform well in school.

To investigate absenteeism and stability of the student bodies, TIMSS asked the principals or headmasters of the participating schools about the percentage of students likely to be absent on a typical day and the percentage of students leaving before the end of the school year. Figures 6.1 through 6.3 present summary information about absenteeism and stability of the student body for the fourth-grade, eighth-grade, and final-year students, respectively.¹ For example, the first panel in Figure 6.1 shows, for the fourth grade, the percentage of students in each country attending schools where principals reported that 5% or more of the students typically would be absent on any given day. The second panel in Figure 6.1 shows the percentages of fourth-graders attending schools where 5% or more of the students beginning the year in the school left before the end of the school year.

Looking at the results across grades, several patterns become apparent. First, in general students around the world are attending school. Principals report that only 3%, 4%, and 7% of the students typically are absent, on average, at grades four, eight, and the final year of secondary school, respectively (see Tables B.10 – B.12 in Appendix B). As shown in Figures 6.1 through 6.3, however, the rates and patterns of absenteeism vary considerably across countries. At grade four, the majority of students in the Czech Republic, Ireland, and Latvia attended schools where at least 5% of the students typically are absent. In contrast, hardly any fourth-graders (5% or less)

¹ Additional information is presented in Tables B.10 – B.15 in Appendix B. These tables show the average reported percentage of students absent on a typical day and average reported percentage of students leaving school before the end of the school year as well as the relationship to achievement.

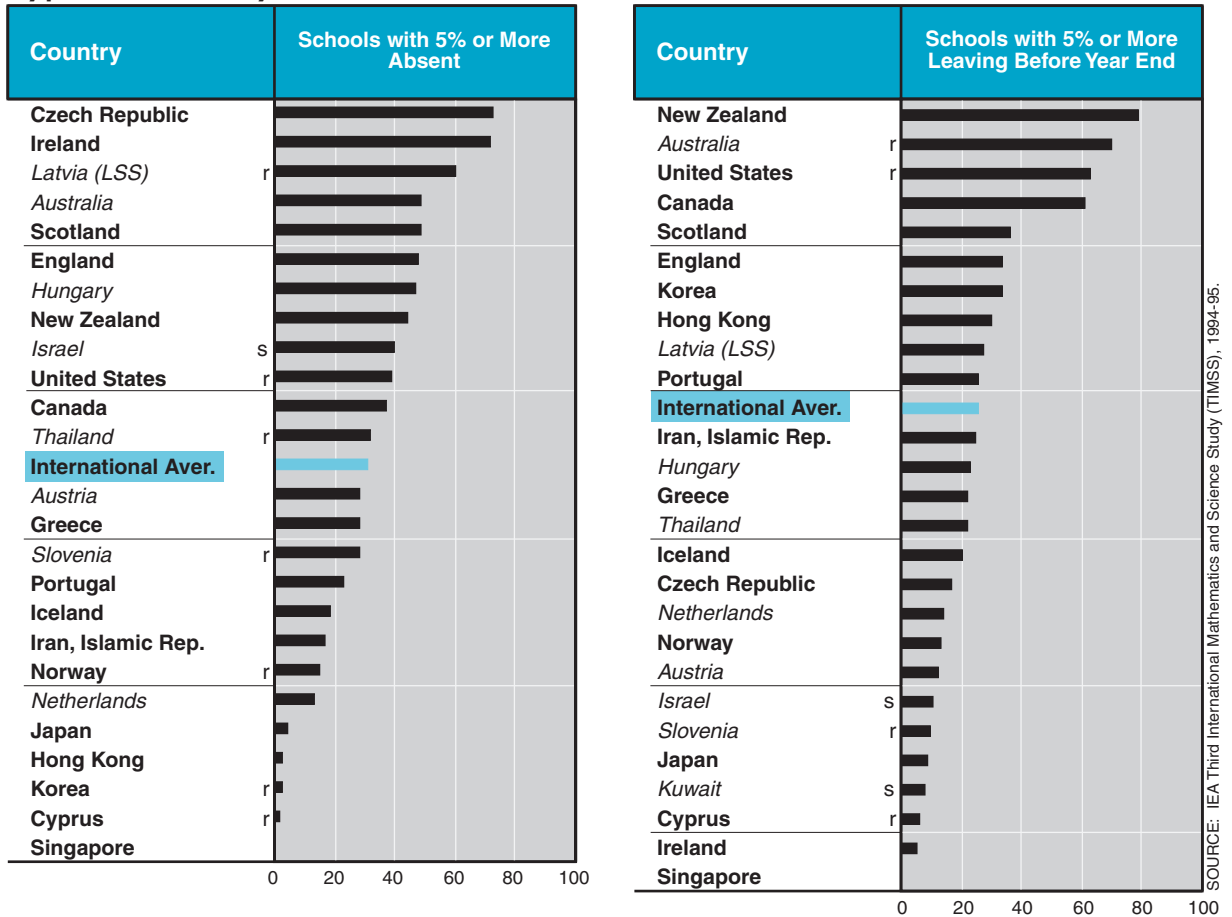
attended such schools in Singapore, Cyprus, Korea, Hong Kong, and Japan. This low rate of absenteeism continued at the eighth grade in high-performing Singapore, Hong Kong, Korea, and Japan (Figure 6.2).

As shown in the results presented in Appendix B (Tables B.10 – B.12), schools with poorer attendance rates often had students with lower average achievement in mathematics and science, particularly at the lower grades. In many of the participating countries for grades four and eight, performance was lower in schools with 5% or more of the students typically absent than in schools with less absenteeism. Interestingly, even though absenteeism increases as students progress through school, the relationship with achievement was found to be negligible during the final year of secondary school.

The TIMSS data also reveal substantial differences among countries in the percentages of students attending schools where 5% or more of the students beginning the year in the school left before the end of the school year. The countries with the highest rates of mobility at fourth grade (Figure 6.1) included New Zealand, Australia, the United States, and Canada. These four countries also were among the five with the greatest percentages of eighth-graders (Figure 6.2) attending schools where at least 5% of the student left before year end (the additional country was Colombia). Most countries reported substantially more mobility for students in their final year of secondary school than for those in the lower grades (Figure 6.3). This may be in part because some secondary-school students are participating in various types of vocational education and training programs. The results presented in Appendix B relating stability of the student body to achievement (Tables B.13 through B. 15) reveal considerable variation across countries. Nevertheless, within countries, particularly at grades four and eight, students in schools with more stable student bodies usually outperformed students in schools with less stability.

Figure 6.1

Percent of Students in Schools Reporting That At Least 5% of Students Are Absent on a Typical School Day or Leave School Before the End of the School Year¹ - Fourth Grade*



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

¹ Average reported percentages and relationship to achievement shown in Appendix B (Tables B.10 and B.13).

* 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).

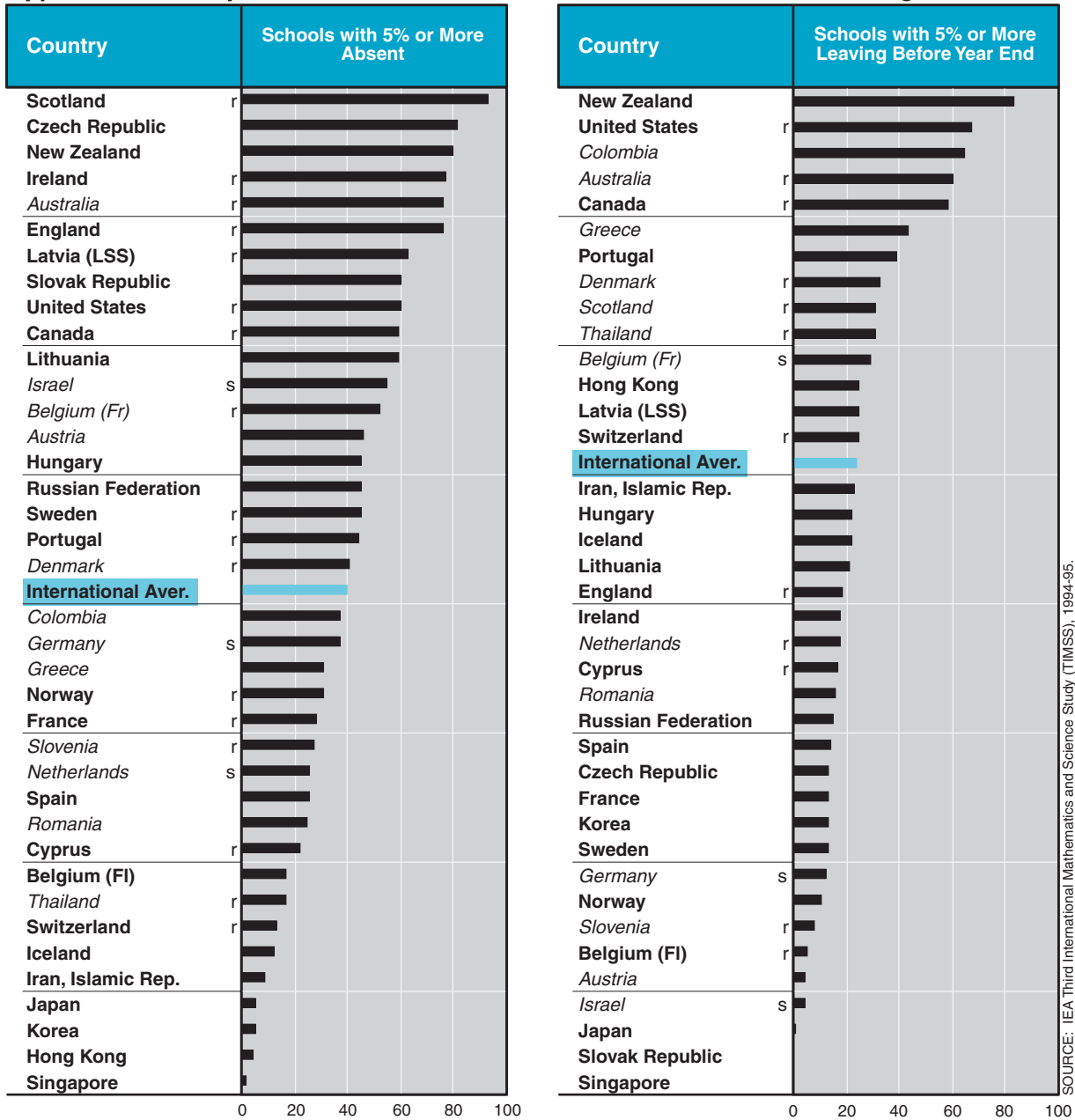
Because population coverage falls below 65%, Latvia is annotated LSS for Latvian Speaking Schools only.

Countries where data were available for <50% of students are omitted from the figure (Kuwait omitted from first panel).

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

Figure 6.2

Percent of Schools in Schools Reporting That At Least 5% of Students Are Absent on a Typical School Day or Leave School Before the End of the School Year¹ - Eighth Grade*



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

¹ Average reported percentages and relationship to achievement shown in Appendix B (Tables B.11 and B.14).

* 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).

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

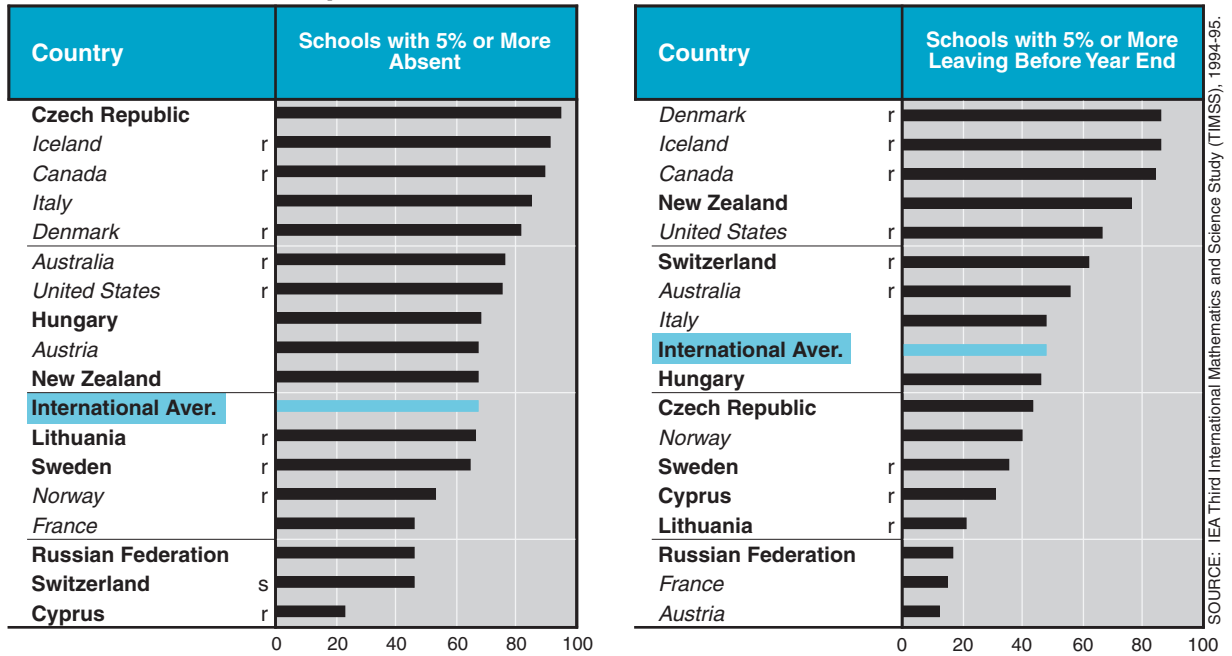
School background data for Bulgaria and South Africa are unavailable.

Countries where data were available for <50% of students are omitted from the figure (Kuwait omitted from both panels).

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

Figure 6.3

**Percent of Students in Schools Reporting That At Least 5% of Students Are Absent on a Typical School Day or Leave School Before the End of the School Year¹
Final Year of Secondary School***



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

¹ Average reported percentages and relationship to achievement shown in Appendix B (Tables B.12 and B.15).

* 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).

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

Countries where data were available for <50% of students are omitted from the figure (Germany, Slovenia, and South Africa omitted from both panels).

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

WHAT TYPES OF PROBLEMS DO SCHOOLS FACE?

TIMSS asked the head of each participating school about the frequency with which they had to deal with various problems. Tables 6.1 through 6.3 show, for the fourth grade, eighth grade, and final year of school, respectively, the percentages of principals or school heads reporting that they faced problems at least monthly. Looking at these tables in conjunction with Tables 3.1 through 3.3 (Chapter 3), which contain the percent of students in schools by total school enrollment for the fourth grade, eighth grade, and final year of secondary school, respectively, does confirm the common sense idea that larger schools tend to have more problems. Nevertheless, there is considerable variation across countries beyond that indicated by school size.

Table 6.1 shows that at grade four, the most prevalent school problem reported was students intimidating other students. On average across countries, 40% of the principals reported having to deal with such incidents at least once a month. There was quite a range across countries, however, from 86% of the principals so reporting in Israel to only 12% to 13% in Latvia (LSS) and Singapore. Apparently, intimidation can turn more serious on occasion, as the next most prevalent problem at grade four was physical injury to students. On average, about one-fourth of the principals of fourth-graders reported having to deal with this problem monthly. For the TIMSS participants, vandalism, theft, and intimidation of teachers did not seem to be very widespread problems at fourth grade.

At eighth grade (Table 6.2), the most prevalent school problem remained students intimidating other students. On average across countries, about half of the principals or school heads reported having to deal with this at least once a month. Unfortunately, compared to the reports for the fourth grade, other school problems increased for the principals of the eighth-graders. From 21% to 27% of the principals, on average, reported at least monthly incidences of vandalism, theft, and injury to students.

TIMSS has secondary-school results for fewer countries than for the fourth and eighth grades (Table 6.3). Interestingly, however, some of the problems faced by secondary-school principals seemed to reflect a change in character rather than an increased frequency of the problems prevalent at fourth and eighth grades. Vandalism and theft remained problems in the world's secondary schools that 19% to 21% of the principals or school heads needed to deal with at least monthly. According to principals, the amount of student-to-student intimidation and injury decreased in secondary school compared to middle school. Unfortunately, by the final year of secondary school illegal drug use and possession became a noticeable problem in some countries. On average, 7% of the principals reported having to deal with illegal drug use or possession on at least a monthly basis. Of the 12 countries reporting data in response to this question, illegal drug use and possession was not a problem in Denmark or Lithuania (0% of schools reporting at least monthly occurrence). In contrast, nearly one-fifth (18%) of the school principals in the United States reported having to deal with drug use or possession on at least a monthly basis.

Table 6.1**Schools' Reports on Dealing with Students' Problem Behaviors At Least Monthly
Fourth Grade***

Country	Percent of Schools by Problem Behavior				
	Vandalism	Theft	Physical Injury to Students	Intimidation of Students	Intimidation of Teachers
<i>Australia</i>	16 (3.5)	14 (3.3)	47 (6.0)	73 (4.1)	12 (3.0)
<i>Austria</i>	10 (3.7)	4 (1.7)	9 (3.4)	56 (7.7)	1 (0.7)
Canada	r 12 (2.8)	r 15 (3.3)	r 28 (3.6)	r 54 (4.5)	r 9 (2.8)
Cyprus	s 14 (3.2)	r 12 (3.0)	r 16 (2.7)	r 33 (3.4)	s 3 (0.9)
Czech Republic	6 (1.9)	3 (1.0)	19 (2.9)	18 (3.2)	0 (0.3)
England	--	--	--	--	--
Greece	s 4 (1.9)	s 3 (1.8)	r 40 (7.3)	r 38 (7.1)	s 5 (2.2)
Hong Kong	r 10 (4.4)	r 13 (4.5)	r 12 (4.5)	r 26 (5.8)	r 11 (4.5)
<i>Hungary</i>	--	--	--	--	--
Iceland	r 8 (1.1)	r 1 (0.0)	r 24 (0.7)	r 50 (0.6)	r 4 (0.0)
Iran, Islamic Rep.	r 7 (2.6)	r 8 (2.6)	r 16 (4.3)	35 (5.3)	r 3 (1.9)
Ireland	5 (1.2)	3 (1.2)	14 (3.0)	48 (3.8)	3 (1.3)
<i>Israel</i>	s 26 (5.6)	s 10 (4.5)	s 71 (10.4)	s 86 (9.8)	s 23 (7.9)
Japan	--	--	--	--	--
Korea	s 24 (6.9)	s 18 (6.2)	s 22 (6.5)	s 21 (6.4)	s 8 (2.8)
<i>Kuwait</i>	s 38 (0.9)	s 20 (0.4)	s 41 (0.9)	s 37 (1.1)	s 17 (0.3)
<i>Latvia (LSS)</i>	x x	s 8 (3.3)	s 39 (6.0)	s 12 (4.3)	x x
<i>Netherlands</i>	17 (3.8)	2 (1.3)	9 (2.8)	53 (4.4)	6 (2.5)
New Zealand	15 (3.8)	25 (4.8)	26 (5.0)	56 (7.6)	13 (4.7)
Norway	--	--	--	--	--
Portugal	r 9 (3.0)	r 3 (1.5)	r 32 (4.0)	r 26 (4.2)	r 2 (1.3)
Scotland	--	--	--	--	--
Singapore	6 (0.0)	4 (0.0)	5 (0.0)	13 (0.1)	1 (0.0)
<i>Slovenia</i>	r 14 (3.6)	r 4 (1.9)	r 51 (5.0)	r 37 (6.0)	r 4 (2.0)
<i>Thailand</i>	s 30 (5.0)	s 28 (5.7)	s 35 (5.1)	s 40 (4.8)	s 23 (5.1)
United States	9 (2.9)	11 (3.0)	15 (3.6)	32 (5.3)	9 (3.0)
International Average	14 (0.8)	10 (0.7)	27 (1.0)	40 (1.2)	8 (0.7)

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).

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

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 6.2**Schools' Reports on Dealing with Students' Problem Behaviors At Least Monthly
Eighth Grade***

Country	Percent of Schools by Problem Behavior				
	Vandalism	Theft	Physical Injury to Students	Intimidation of Students	Intimidation of Teachers
<i>Australia</i>	r 47 (4.9)	r 43 (5.1)	r 37 (4.5)	r 84 (3.8)	r 44 (5.9)
<i>Austria</i>	39 (5.3)	20 (3.6)	12 (3.1)	70 (5.0)	12 (4.3)
Belgium (FI)	31 (6.5)	25 (6.8)	37 (6.3)	76 (4.2)	24 (8.1)
<i>Belgium (Fr)</i>	r 32 (5.6)	r 30 (5.0)	r 36 (5.9)	r 51 (6.5)	s 17 (4.8)
Canada	r 23 (3.3)	r 19 (2.7)	r 26 (4.0)	r 64 (3.8)	r 22 (4.2)
<i>Colombia</i>	s 22 (4.4)	r 20 (4.6)	s 17 (4.1)	r 35 (6.2)	s 14 (3.9)
Cyprus	s 22 (0.0)	s 36 (0.0)	s 25 (0.0)	s 50 (0.0)	s 6 (0.0)
Czech Republic	32 (5.1)	10 (2.8)	23 (3.2)	33 (4.2)	3 (1.9)
<i>Denmark</i>	r 14 (3.6)	r 4 (2.0)	r 18 (4.1)	r 63 (5.0)	r 41 (4.6)
England	--	--	--	--	--
France	9 (2.5)	25 (7.1)	29 (8.2)	52 (6.0)	5 (1.6)
<i>Germany</i>	x x	x x	x x	s 61 (6.9)	x x
<i>Greece</i>	s 19 (3.6)	s 12 (3.4)	r 28 (5.3)	r 51 (5.5)	s 20 (6.7)
Hong Kong	33 (5.2)	23 (5.0)	13 (3.7)	r 48 (6.6)	r 13 (3.9)
Hungary	--	--	--	--	--
Iceland	r 19 (0.0)	r 9 (0.0)	23 (0.0)	49 (0.0)	r 8 (0.0)
Iran, Islamic Rep.	s 7 (3.0)	s 14 (4.7)	s 18 (3.8)	r 46 (5.7)	r 15 (4.7)
Ireland	38 (5.0)	30 (3.9)	10 (3.4)	47 (5.4)	16 (4.5)
<i>Israel</i>	s 41 (11.8)	s 14 (4.9)	s 53 (11.2)	s 94 (4.6)	s 21 (9.6)
Japan	--	--	--	--	--
Korea	28 (5.8)	20 (5.3)	26 (5.5)	24 (5.4)	r 16 (6.3)
<i>Kuwait</i>	x x	x x	x x	x x	x x
Latvia (LSS)	x x	s 7 (3.6)	r 30 (5.8)	s 18 (5.2)	x x
Lithuania	s 2 (1.0)	r 5 (3.6)	s 2 (1.0)	r 33 (10.0)	s 8 (5.4)
<i>Netherlands</i>	s 58 (8.3)	s 52 (7.5)	s 15 (5.4)	s 69 (6.9)	r 12 (4.4)
New Zealand	40 (5.0)	51 (6.3)	31 (6.1)	70 (7.6)	29 (4.8)
Norway	--	--	--	--	--
Portugal	r 20 (3.4)	r 29 (4.9)	39 (6.3)	39 (6.1)	r 10 (3.5)
<i>Romania</i>	x x	s 1 (1.2)	s 13 (3.4)	r 24 (4.6)	x x
Russian Federation	x x	s 16 (4.1)	s 6 (1.4)	r 29 (4.5)	s 1 (1.0)
<i>Scotland</i>	--	--	--	--	--
Singapore	18 (0.0)	17 (0.0)	4 (0.0)	30 (0.0)	8 (0.0)
Slovak Republic	r 26 (4.3)	r 12 (2.8)	r 21 (4.2)	r 30 (4.0)	s 4 (1.9)
<i>Slovenia</i>	r 35 (4.3)	s 20 (3.7)	s 45 (5.2)	s 63 (6.2)	s 13 (3.8)
Spain	r 12 (2.7)	r 4 (1.8)	16 (3.8)	33 (4.7)	r 5 (2.4)
Sweden	34 (4.9)	20 (3.2)	6 (1.8)	44 (5.1)	r 23 (4.3)
¹ Switzerland	--	--	--	--	--
<i>Thailand</i>	r 32 (4.9)	r 27 (4.8)	r 32 (4.6)	r 36 (4.6)	s 31 (4.7)
United States	r 20 (4.3)	r 27 (6.3)	r 33 (4.9)	r 62 (8.1)	r 18 (4.0)
International Average	27 (0.9)	21 (0.8)	23 (0.9)	49 (1.0)	16 (0.8)

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.

Table 6.3**Schools' Reports on Dealing with Students' Problem Behaviors At Least Monthly Final Year of Secondary School***

Country	Percent of Schools by Problem Behavior					
	Vandalism	Theft	Physical Injury to Students	Intimidation of Students	Intimidation of Teachers	Illegal Drug Use / Possession
<i>Australia</i>	15 (3.9)	25 (5.7)	10 (4.9)	29 (5.9)	14 (5.4)	10 (4.8)
¹ <i>Austria</i>	– –	– –	– –	– –	– –	– –
<i>Canada</i>	19 (2.3)	25 (3.2)	9 (1.5)	34 (4.6)	16 (6.4)	15 (3.3)
Cyprus	29 (0.0)	13 (0.0)	8 (0.0)	29 (0.0)	r 9 (0.0)	r 5 (0.0)
Czech Republic	25 (3.8)	16 (3.9)	6 (3.4)	10 (4.1)	0 (0.2)	5 (2.5)
<i>Denmark</i>	r 23 (4.7)	r 26 (5.0)	s 0 (0.0)	r 14 (3.7)	12 (3.6)	0 (0.0)
<i>France</i>	27 (6.3)	r 51 (7.3)	15 (5.5)	31 (6.8)	r 13 (5.1)	r 11 (5.1)
¹ <i>Germany</i>	– –	– –	– –	– –	– –	– –
Hungary	r 18 (3.3)	r 17 (3.8)	r 11 (3.2)	r 16 (4.0)	2 (1.1)	x x
<i>Iceland</i>	r 4 (0.0)	r 0 (0.0)	r 0 (0.0)	r 0 (0.0)	r 0 (0.0)	r 4 (0.0)
<i>Italy</i>	25 (5.9)	12 (3.8)	6 (3.2)	9 (3.6)	r 2 (1.1)	– –
Lithuania	s 5 (2.9)	s 2 (0.7)	s 0 (0.0)	r 13 (3.6)	0 (0.0)	0 (0.0)
New Zealand	28 (6.4)	25 (5.1)	9 (3.3)	41 (6.8)	16 (5.6)	6 (3.3)
<i>Norway</i>	18 (3.5)	22 (4.3)	0 (0.0)	6 (2.0)	2 (0.9)	r 3 (1.5)
Russian Federation	s 3 (1.9)	s 9 (4.2)	s 2 (1.4)	r 12 (3.6)	0 (0.0)	x x
<i>Slovenia</i>	x x	x x	x x	x x	x x	x x
<i>South Africa</i>	x x	x x	x x	x x	x x	x x
Sweden	r 22 (4.4)	r 27 (4.8)	r 0 (0.0)	r 17 (4.3)	r 5 (1.5)	r 2 (1.1)
¹ Switzerland	– –	– –	– –	– –	– –	– –
<i>United States</i>	r 30 (4.0)	r 38 (5.9)	r 20 (4.0)	r 48 (6.8)	r 13 (3.1)	r 18 (3.0)
International Average	19 (1.0)	21 (1.1)	6 (0.7)	21 (1.2)	7 (0.8)	7 (0.8)

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

¹ Percentages based on total school weights cannot be computed for Austria, Germany, and Switzerland; sampling 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.