CHAPTER 7

School Contexts for Learning and Instruction

Chapter 7 presents findings about the school contexts for learning and instruction in science, including school characteristics, policies, and practices. Information is presented about the percentage of students eligible for free or reduced-price lunch for each Benchmarking participant, and about the extent of school resources, including computers and Internet access, for the Benchmarking participants and for selected reference countries. Data are also provided on the role of the school principal and on issues related to school climate and environment, including attendance problems and school safety.

Exhibit 7.1 Students Eligible to Receive Free/Reduced Price Lunch

8th Grade Science

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by schools.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

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

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

What School Resources Are Available to Support Science Learning?

TIMSS collected data on a range of school resources, including those of a general nature such as buildings and infrastructure, as well as laboratory equipment and other materials specifically related to science learning. To measure the extent of school resources in each participating entity, TIMSS created an index of availability of school resources for science instruction (ASRSI). As described in Exhibit 7.2, the index is based on schools' average response to five questions about shortages that affect their general capacity to provide instruction and six questions about shortages that affect science instruction in particular.

science instruction. In contrast, in other high-performing countries such as Belgium (Flemish), the Czech Republic, England, Japan, the Netherlands, and Singapore, five percent or less of the students were in schools with low availability of resources.

Exhibit R4.1 in the reference section shows the results for each of the types of facilities and materials summarized in the general capacity part of the index. There was substantial variation across countries, but internationally on average, nearly half the students were in schools where science instruction was negatively affected by shortages or inadequacies in instructional materials, the budget for supplies, school buildings, and instructional space. Generally, the Benchmarking participants reported fewer students in schools where science instruction was negatively affected by resource shortages, but again the situation varied widely across jurisdictions. Shortage of instructional space was a problem in Oregon, the Fremont/Lincoln/Westside Public Schools, Jersey City, Miami-Dade, and Montgomery County, where more than half of the eighth-grade students were affected. Inadequate school buildings or grounds were also a problem in Miami-Dade, and Oregon had more than half its students in schools that reported shortages of instructional materials and budget for supplies.

Exhibit R4.2, also in the reference section, shows the results for each of the types of equipment and materials summarized in the science instructional capacity part of the index. About 60 percent of the students, on average across all the TIMSS 1999 countries, were in schools where shortages or inadequacies in computers and computer software affected the capacity to provide science instruction. Although the Benchmarking entities generally reported fewer students affected by such shortages, Idaho, North Carolina, Oregon, the Delaware Science Coalition, and Rochester were similar to dents,ic, Engleal (n075students afaR9tbJT9N-mahDj in computers and computer s schox. About 50. o0 r4e4t e h s u, m o d t s a g e l ,

were in schools with fewer than 15 students per computer. Internet access was also widespread across Benchmarking entities. In all states except Indiana, Missouri, and Pennsylvania, more than 90 percent of students were in schools with Internet access. School districts with relatively low levels of Internet access were those in Rochester (69 percent) and Chicago (just 44 percent).

Index of Availability of School Resources for Science Instruction

Index based on schools' average response to five questions about shortages that affect general capacity to provide instruction (instructional materials; budget for supplies; school buildings and grounds; heating/cooling and lighting systems; instructional space), and the average response to six questions about shortages that affect science instruction (laboratory equipment and materials; computers; computer software; calculators; library materials; audio-visual resources) (see reference exhibits R4.1-R4.2). High level indicates that both shortages, on average, affect instructional capacity none or a little. Medium level indicates that one shortage affects instructional capacity none or a little and the other shortage affects instructional capacity some or a lot. Low level indicates that both shortages affect instructional capacity some or a lot.

		High ASRSI		Medium ASRSI		Low ASRSI	
		Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Academy School Dist. #20, CO		83 (0.4)	561 (2.1)	17 (0.4)	546 (7.0)	0 (0.0)	~ ~
First in the World Consort., IL	r	79 (1.0)	565 (6.4)	21 (1.0)	539 (11.9)	0 (0.0)	~ ~
Naperville Sch. Dist. #203, IL		76 (1.5)	581 (5.0)	24 (1.5)	594 (5.7)	0 (0.0)	~ ~
Belgium (Flemish)		60 (4.5)	531 (4.8)	40 (4.5)	538 (8.1)	0 (0.0)	~ ~
Singapore		56 (3.9)	569 (11.8)	40 (4.1)	569 (9.8)	4 (1.4)	554 (25.1)
Connecticut	s	53 (11.0)	547 (18.2)	42 (10.8)	532 (10.4)	6 (3.9)	532 (18.9)
Miami-Dade County PS, FL	s	50 (13.9)	466 (9.6)	42 (13.8)	417 (18.7)	8 (7.4)	398 (12.2)
Montgomery County, MD	s	48 (13.6)	532 (7.4)	52 (13.6)	527 (7.8)	0 (0.0)	~ ~
Illinois		47 (6.5)	537 (9.1)	49 (6.8)	518 (8.6)	4 (2.8)	520 (24.0)
SW Math/Sci. Collaborative, PA		45 (9.0)	550 (10.5)	50 (9.3)	541 (13.2)	5 (3.4)	521 (6.9)
Czech Republic		43 (4.3)	542 (6.5)	57 (4.3)	538 (4.9)	0 (0.1)	~ ~
Rochester City Sch. Dist., NY	r	40 (1.6)	485 (13.7)	44 (1.6)	425 (12.9)	16 (0.5)	433 (15.3)
Michigan		40 (7.2)	574 (9.5)	55 (7.8)	544 (8.5)	6 (3.5)	537 (15.8)
Project SMART Consortium, OH		39 (1.5)	552 (15.4)	57 (1.5)	527 (10.7)	4 (0.5)	542 (34.7)
Indiana		39 (7.9)	535 (10.9)	58 (7.8)	534 (8.5)	3 (2.3)	539 (14.8)
Pennsylvania		39 (7.0)	545 (8.7)	60 (7.0)	529 (10.0)	1 (0.7)	~ ~
Fremont/Lincoln/WestSide PS, NE	r	36 (1.8)	529 (11.1)	52 (1.7)	491 (5.3)	11 (1.3)	577 (22.1)
Maryland	r	35 (6.5)	480 (12.4)	47 (7.2)	525 (10.1)	18 (5.8)	495 (16.6)
United States	r	34 (3.3)	531 (8.5)	60 (3.2)	508 (6.2)	6 (2.4)	512 (12.0)
Texas	r	33 (7.6)	498 (25.0)	63 (8.3)	521 (11.7)	4 (3.9)	478 (11.2)
Netherlands	r	33 (6.5)	542 (9.7)	66 (6.5)	547 (11.8)	1 (0.7)	~ ~
Delaware Science Coalition, DE	r	32 (1.5)	464 (8.3)	59 (1.9)	508 (13.3)	9 (1.8)	518 (54.9)
Massachusetts	s	31 (6.4)	552 (19.7)	68 (6.6)	534 (7.8)	2 (0.1)	~ ~
Japan		30 (3.7)	556 (3.5)	65 (4.1)	547 (3.1)	5 (1.9)	545 (6.6)
Idaho	r	28 (8.2)	524 (11.7)	65 (9.3)	534 (8.1)	7 (4.2)	487 (17.8)
Canada		28 (2.0)	542 (3.9)	66 (2.4)	529 (3.1)	6 (1.3)	540 (10.5)
England	r	27 (4.2)	572 (10.6)	68 (4.6)	530 (6.3)	5 (2.1)	547 (11.6)
Missouri		26 (6.3)	529 (7.9)	70 (6.6)	520 (8.6)	4 (2.4)	536 (22.5)
Michigan Invitational Group, MI		26 (1.3)	569 (14.0)	69 (1.5)	568 (6.6)	5 (1.2)	509 (19.8)
Jersey City Public Schools, NJ		25 (0.8)	438 (21.0)	63 (1.2)	444 (14.4)	12 (0.7)	437 (9.0)
Guilford County, NC	r	24 (1.2)	532 (11.6)	76 (1.2)	538 (11.3)	0 (0.0)	~ ~
Italy		23 (3.2)	495 (9.4)	71 (3.8)	494 (4.5)	7 (2.0)	483 (8.5)
Chicago Public Schools, IL	s	22 (10.9)	489 (21.5)	68 (10.2)	432 (8.6)	10 (6.7)	452 (51.5)
Hong Kong, SAR		19 (3.3)	524 (12.2)	73 (3.5)	533 (4.5)	8 (2.3)	521 (11.6)
South Carolina		15 (6.0)	505 (23.4)	79 (7.2)	507 (7.4)	6 (4.3)	542 (24.9)
Oregon		11 (5.0)	546 (15.5)	74 (7.9)	539 (7.4)	15 (6.2)	528 (15.3)
North Carolina	r	9 (4.3)	490 (6.5)	84 (5.9)	511 (6.4)	6 (4.3)	532 (16.2)
Korea, Rep. of		7 (2.2)	555 (12.1)	76 (3.7)	550 (2.7)	17 (3.2)	542 (5.5)
Chinese Taipei		5 (2.1)	567 (14.5)	78 (3.4)	571 (5.0)	17 (2.9)	562 (9.3)
Russian Federation		1 (0.9)	~ ~	46 (4.6)	539 (8.3)	52 (4.6)	521 (7.6)
International Avg. (All Countries)		18 (0.5)	498 (2.6)	63 (0.6)	487 (1.0)	20 (0.5)	476 (2.4)

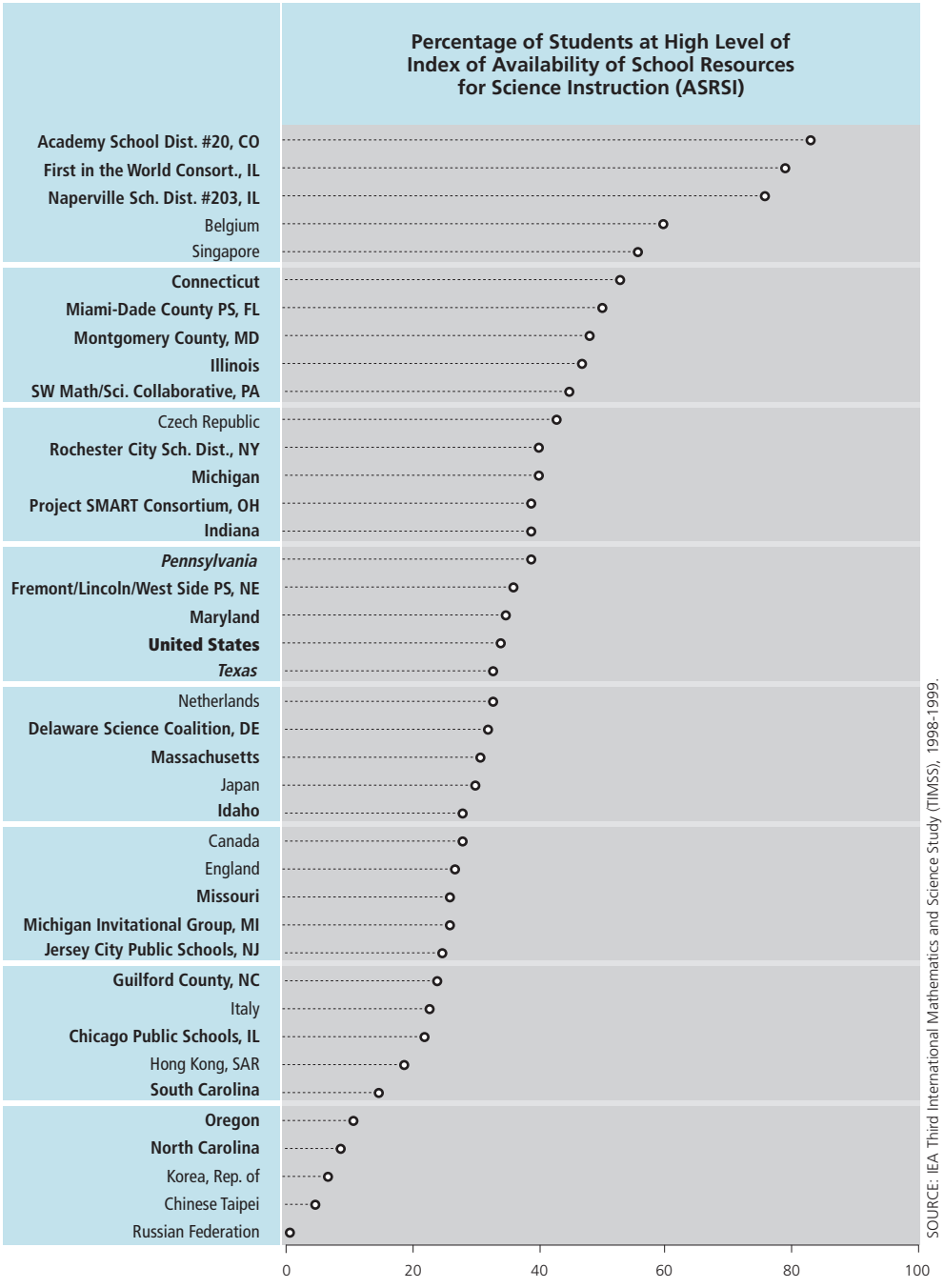
SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

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

A tilde (~) indicates insufficient data to report achievement.

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



SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

What Is the Role of the School Principal?

To better understand the roles and responsibilities of schools across countries, TIMSS asked school principals how much time per month they spend on various school-related activities. Specifically, they were asked how much time they spend on instructional leadership activities, including discussing educational objectives with teachers, initiating curriculum revisions and planning, training teachers, and engaging in professional development activities. They were also asked how much time they spend talking with parents, counseling and disciplining students, and responding to requests from local, regional, or national education officials. Further, they responded to questions about how much time they spend on administrative duties, including hiring teachers, representing the school in the community and at official meetings, and doing internal tasks (e.g., regulations, school budget, timetable). Finally, they were asked how much time they spend teaching.

The results presented in Exhibit 7.3 show that principals reported spending per month, on average across all the TIMSS 1999 countries, 51 hours on administrative duties, 35 hours communicating with various constituents, 33 hours on instructional leadership activities, and 16 hours teaching.[4] Compared with the international profile, principals in the United States reported spending more time communicating with students, parents, and education officials (over 50 hours per month, on average), and very little time teaching. Reports from principals in the Benchmarking jurisdictions generally resembled those of the United States overall. It is interesting to note that principals in Jersey City and Rochester reported spending 72 hours per month communicating with students, parents, and education officials, while principals in Indiana and the Michigan Invitational Group reported spending 74 hours per month on administrative duties.

A number of the comparison countries, such as Canada, Chinese Taipei, Hong Kong, and Singapore, have patterns of principals' use of time similar to that of the United States. For example, unlike in most European countries (e.g., the Czech Republic and Russian Federation among comparison countries), principals in these countries spend relatively little time teaching, and most of it on administrative duties, communicating with constituents, and engaging in instructional leadership activities.

4 Activities reported by principals are not necessarily exclusive; principals may have reported engaging in more than one activity at the same time.

Exhibit 7.3 Time Principal Spends on Various School-Related Activities

8th Grade Science

	Average Total Hours Per Month Spent on Activities[1]			
	Instructional Leadership Activities[2]	Communicating with Students, Parents, and Education Officials[3]	Administrative Duties[4]	Teaching (including preparation)
Countries				
United States	r 34 (1.9)	r 52 (2.4)	r 56 (3.2)	r 3 (0.6)
Belgium (Flemish)	29 (2.3)	27 (2.1)	56 (2.5)	0 (0.1)
Canada	25 (1.1)	54 (1.4)	54 (2.1)	5 (0.9)
Chinese Taipei	24 (1.4)	34 (1.7)	86 (4.1)	4 (0.6)
Czech Republic	32 (1.9)	33 (1.8)	44 (2.4)	36 (1.8)
England	– –	– –	– –	– –
Hong Kong, SAR	r 43 (3.2)	r 29 (1.8)	r 75 (4.2)	r 3 (0.6)
Italy	36 (1.4)	44 (2.1)	45 (1.7)	– –
Japan	33 (2.0)	19 (1.3)	69 (3.6)	1 (0.8)
Korea, Rep. of	30 (2.1)	22 (1.6)	46 (3.6)	3 (0.5)
Netherlands	r 42 (4.0)	r 20 (2.0)	r 49 (5.6)	r 7 (1.7)
Russian Federation	r 44 (1.9)	r 33 (1.7)	r 65 (3.1)	r 46 (2.1)
Singapore	45 (2.2)	46 (1.9)	56 (3.1)	3 (0.6)
States				
Connecticut	s 38 (5.6)	s 55 (4.9)	s 51 (6.0)	s 1 (0.4)
Idaho	r 33 (2.2)	r 41 (3.3)	r 53 (6.1)	r 2 (0.9)
Illinois	r 36 (2.1)	r 49 (3.5)	r 61 (4.9)	r 2 (1.0)
Indiana	37 (3.9)	53 (5.8)	74 (6.0)	3 (1.0)
Maryland	r 38 (2.8)	r 60 (4.0)	r 56 (3.9)	r 1 (0.3)
Massachusetts	s 32 (3.1)	s 48 (4.1)	s 56 (6.6)	s 1 (0.4)
Michigan	35 (2.8)	53 (4.8)	61 (5.2)	3 (1.4)
Missouri	34 (3.3)	55 (4.9)	57 (4.9)	1 (0.5)
North Carolina	r 43 (3.7)	r 66 (6.5)	r 54 (5.0)	r 2 (0.8)
Oregon	38 (4.3)	51 (5.1)	58 (5.2)	2 (0.7)
Pennsylvania	r 27 (2.1)	r 57 (4.1)	r 59 (6.0)	r 2 (0.6)
South Carolina	r 35 (3.6)	r 62 (4.8)	r 53 (5.3)	r 2 (1.1)
Texas	s 35 (4.5)	s 57 (5.3)	s 64 (6.0)	s 2 (0.6)
Districts and Consortia				
Academy School Dist. #20, CO	25 (0.1)	45 (0.1)	46 (0.1)	1 (0.0)
Chicago Public Schools, IL	s 46 (9.0)	s 51 (5.5)	s 58 (8.9)	s 2 (0.8)
Delaware Science Coalition, DE	s 37 (1.2)	s 60 (1.3)	s 53 (2.4)	s 0 (0.0)
First in the World Consort., IL	r 32 (0.5)	r 48 (0.3)	r 47 (0.9)	r 1 (0.1)
Fremont/Lincoln/WestSide PS, NE	s 27 (0.3)	s 56 (0.5)	s 42 (0.5)	s 1 (0.1)
Guilford County, NC	r 41 (0.4)	r 65 (0.5)	r 56 (0.7)	r 1 (0.0)
Jersey City Public Schools, NJ	r 34 (0.7)	r 72 (0.6)	r 36 (0.7)	r 3 (0.1)
Miami-Dade County PS, FL	x x	x x	x x	x x
Michigan Invitational Group, MI	31 (0.5)	63 (1.0)	74 (1.4)	1 (0.0)
Montgomery County, MD	s 35 (6.2)	s 46 (4.3)	s 48 (6.4)	s 1 (0.4)
Naperville Sch. Dist. #203, IL	36 (0.7)	37 (0.7)	67 (0.8)	0 (0.0)
Project SMART Consortium, OH	r 31 (0.6)	r 58 (1.0)	r 54 (1.2)	r 1 (0.1)
Rochester City Sch. Dist., NY	r 35 (0.4)	r 72 (0.8)	r 51 (0.7)	r 8 (0.4)
SW Math/Sci. Collaborative, PA	33 (3.6)	62 (5.8)	40 (4.6)	4 (1.6)
International Avg. (All Countries)	33 (0.3)	35 (0.3)	51 (0.5)	16 (0.2)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by schools.

1 Total hours reported for activities in each category averaged across schools. Activities are not necessarily exclusive; principals may have reported engaging in more than one activity at the same time.

2 Includes discussing educational objectives with teachers; initiating curriculum revision and/or planning; training teachers; and professional development activities.

3 Includes talking with parents, counseling and disciplining of students and responding to requests from local, regional, or national education officials.

4 Includes hiring teachers; representing the school in the community; representing the school at official meetings; internal administrative tasks (e.g., regulations, school budget, timetable).

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

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

A dash (–) indicates data are not available.

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

Exhibit 7.4 Schools' Expectations for Parental Involvement

8th Grade Science

	Percentage of Students Whose Schools Reported That They Expect Parents to Be Involved in the School-Related Activity				
	Be Sure Child Completes Homework	Serve as Teacher Aides in Classroom	Volunteer for School Projects, Programs, or Field Trips	Raise Funds for the School	Serve on Committees[1]
Countries					
United States	r 99 (0.7)	r 15 (3.0)	r 94 (1.7)	r 55 (4.7)	r 68 (4.1)
Belgium (Flemish)	94 (2.1)	19 (3.7)	39 (4.3)	9 (2.7)	10 (2.7)
Canada	99 (0.6)	15 (1.7)	82 (2.2)	52 (3.4)	55 (2.7)
Chinese Taipei	97 (1.3)	58 (4.2)	90 (2.5)	41 (4.2)	56 (4.4)
Czech Republic	91 (3.1)	7 (2.7)	80 (3.8)	32 (4.7)	35 (4.9)
England	– –	– –	– –	– –	– –
Hong Kong, SAR	96 (1.8)	30 (4.2)	77 (3.8)	60 (4.6)	21 (3.7)
Italy	91 (2.3)	9 (2.2)	70 (3.4)	25 (3.1)	42 (3.7)
Japan	43 (4.4)	5 (2.0)	81 (2.8)	6 (2.0)	8 (2.2)
Korea, Rep. of	64 (3.9)	33 (4.1)	71 (3.8)	31 (3.8)	44 (4.2)
Netherlands	r 81 (5.6)	r 46 (6.2)	r 61 (6.2)	r 16 (5.2)	r 46 (6.5)
Russian Federation	78 (3.1)	36 (3.3)	91 (1.7)	59 (2.8)	59 (4.1)
Singapore	95 (1.8)	6 (2.2)	44 (4.5)	51 (4.3)	41 (4.3)
States					
Connecticut	s 100 (0.0)	s 7 (4.4)	s 83 (6.6)	s 54 (8.6)	s 42 (8.9)
Idaho	r 97 (0.3)	r 7 (4.2)	r 86 (5.3)	r 20 (6.9)	r 43 (8.8)
Illinois	97 (2.5)	13 (4.4)	85 (6.5)	41 (6.8)	47 (6.9)
Indiana	100 (0.0)	8 (4.1)	87 (4.3)	50 (7.6)	42 (6.9)
Maryland	r 95 (3.5)	r 16 (5.4)	r 93 (4.0)	r 68 (7.8)	r 60 (7.8)
Massachusetts	s 100 (0.0)	s 8 (4.5)	s 91 (5.3)	s 65 (7.9)	s 86 (6.2)
Michigan	98 (1.8)	13 (5.0)	98 (1.6)	47 (7.6)	63 (6.6)
Missouri	96 (3.1)	5 (3.5)	73 (7.7)	33 (8.2)	50 (8.5)
North Carolina	r 100 (0.0)	r 22 (7.5)	r 95 (3.2)	r 76 (7.4)	r 61 (7.8)
Oregon	98 (2.3)	22 (8.0)	91 (3.4)	58 (7.6)	72 (6.1)
Pennsylvania	100 (0.0)	14 (6.3)	84 (5.3)	52 (6.5)	34 (6.2)
South Carolina	100 (0.0)	27 (7.5)	100 (0.0)	77 (7.2)	91 (4.4)
Texas	r 97 (2.7)	r 9 (5.1)	r 94 (3.9)	r 36 (8.7)	r 65 (6.9)
Districts and Consortia					
Academy School Dist. #20, CO	100 (0.0)	0 (0.0)	100 (0.0)	46 (0.4)	75 (0.3)
Chicago Public Schools, IL	r 100 (0.0)	r 34 (8.8)	r 94 (6.0)	r 68 (11.8)	r 80 (8.9)
Delaware Science Coalition, DE	r 98 (0.1)	r 9 (0.5)	r 90 (0.5)	r 53 (1.9)	r 60 (2.0)
First in the World Consort., IL	r 100 (0.0)	r 20 (1.5)	r 98 (0.1)	r 56 (1.2)	r 37 (1.3)
Fremont/Lincoln/WestSide PS, NE	r 100 (0.0)	r 0 (0.0)	r 72 (1.9)	r 33 (1.2)	r 48 (1.6)
Guilford County, NC	r 100 (0.0)	s 0 (0.0)	r 100 (0.0)	r 88 (1.0)	r 77 (0.7)
Jersey City Public Schools, NJ	100 (0.0)	6 (0.2)	90 (0.6)	54 (1.4)	77 (0.8)
Miami-Dade County PS, FL	x x	x x	x x	x x	x x
Michigan Invitational Group, MI	85 (1.5)	4 (0.3)	73 (1.2)	34 (1.3)	76 (1.4)
Montgomery County, MD	s 100 (0.0)	s 20 (11.3)	s 100 (0.0)	s 88 (2.3)	s 59 (12.3)
Naperville Sch. Dist. #203, IL	100 (0.0)	0 (0.0)	81 (0.6)	36 (1.8)	36 (1.8)
Project SMART Consortium, OH	93 (1.0)	14 (0.5)	80 (1.4)	45 (1.4)	52 (1.4)
Rochester City Sch. Dist., NY	r 100 (0.0)	r 19 (1.3)	r 90 (0.9)	r 57 (1.6)	r 100 (0.0)
SW Math/Sci. Collaborative, PA	100 (0.0)	7 (4.0)	88 (6.2)	48 (8.0)	41 (8.2)
International Avg. (All Countries)	85 (0.5)	28 (0.6)	79 (0.5)	51 (0.6)	47 (0.6)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by schools.

1 Serve on committees which select school personnel or review school finances.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

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

A dash (–) indicates data are not available.

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

How Serious Are School Attendance Problems?

In some countries, schools are confronted with high rates of absenteeism, which can influence instructional continuity and reduce the time for learning. In general, research has shown that greater truancy is related to less serious attitudes towards school and lower academic achievement. To examine this issue, TIMSS developed an index of good school and class attendance (SCA) based on schools' responses to three questions about the seriousness of students' absenteeism, arriving late at school, and skipping class. The high index level indicates that schools reported that all three types of behavior are not a problem. The low level indicates that two or more are a serious problem, or that two are minor problems and one a serious problem. The medium category includes all other combinations of responses.

The results of the index are presented in Exhibit 7.5. Sixty percent of students on average across all the TIMSS 1999 countries were in the medium category, where principals had judged their schools to have a moderate attendance problem. Exactly one-fifth of the students were in schools at the high level of the index, and another 19 percent were in schools at the low level. Although countries varied considerably, there was a modest positive relationship between good attendance and science achievement on average across countries.

The results for the United States resemble the international averages, and also show a positive relationship between attendance and science achievement. Across the Benchmarking entities, the situation varied considerably. Participants with the highest percentages of students in schools with good attendance included Naperville and the Academy School District, with more than 40 percent of the students in this category. Jurisdictions with less than 10 percent of students in this category included Pennsylvania, Jersey City, Oregon, the Delaware Science Coalition, and Rochester.

The information used to compute this index appears in Exhibit 7.6, together with data showing the percentages of students in schools where the behavior occurs at least weekly. Arriving late and absenteeism were more common in the United States than in the TIMSS 1999 countries generally, but were not usually considered to be serious problems. Among Benchmarking participants, Naperville had the fewest students in schools that reported attendance problems. In contrtT

Index of Good School and Class Attendance

Index based on schools' responses to three questions about the seriousness of attendance problems in school: arriving late at school; absenteeism; skipping class (see exhibit 7.6). High level indicates that all three behaviors are reported to be not a problem. Low level indicates that two or more behaviors are reported to be a serious problem, or two behaviors are reported to be minor problems and the third a serious problem. Medium level includes all other possible combinations of responses.

		High SCA		Medium SCA		Low SCA	
		Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Naperville Sch. Dist. #203, IL		55 (1.5)	576 (5.4)	45 (1.5)	593 (5.7)	0 (0.0)	~ ~
Belgium (Flemish)		52 (4.4)	550 (5.2)	45 (4.5)	520 (6.6)	3 (1.0)	539 (10.1)
Academy School Dist. #20, CO		42 (0.4)	551 (4.5)	58 (0.4)	565 (2.9)	0 (0.0)	~ ~
Czech Republic		36 (5.8)	544 (6.7)	56 (6.0)	538 (5.6)	8 (2.3)	555 (17.7)
Michigan Invitational Group, MI		34 (1.4)	567 (9.2)	66 (1.4)	564 (8.1)	0 (0.0)	~ ~
Italy		33 (3.3)	508 (5.0)	58 (3.6)	494 (5.4)	9 (2.4)	442 (14.3)
Singapore		32 (4.1)	599 (15.4)	64 (4.0)	553 (8.9)	3 (1.6)	552 (22.5)
Korea, Rep. of		31 (3.7)	547 (3.7)	61 (4.0)	549 (3.2)	9 (2.4)	557 (7.5)
Netherlands	r	30 (7.3)	531 (10.2)	46 (7.3)	560 (6.2)	24 (7.5)	519 (28.3)
First in the World Consort., IL	r	28 (1.4)	577 (14.5)	72 (1.4)	551 (6.9)	0 (0.0)	~ ~
Chinese Taipei		28 (3.7)	591 (8.3)	61 (3.6)	558 (4.1)	11 (2.7)	576 (9.1)
Michigan	r	28 (6.7)	563 (11.8)	69 (6.2)	554 (9.7)	3 (2.5)	510 (95.6)
Chicago Public Schools, IL	s	27 (13.5)	484 (20.2)	65 (13.2)	431 (11.2)	8 (1.2)	436 (15.9)
Indiana		27 (7.8)	564 (11.4)	66 (8.4)	525 (8.7)	7 (3.7)	525 (8.2)
Hong Kong, SAR		25 (3.9)	540 (7.9)	68 (4.3)	531 (5.6)	7 (2.5)	500 (10.8)
Project SMART Consortium, OH	s	25 (1.2)	553 (22.6)	71 (1.2)	530 (11.0)	4 (0.2)	504 (12.3)
Illinois		22 (6.5)	534 (13.5)	73 (6.7)	521 (7.0)	5 (0.4)	555 (5.7)
Connecticut	s	22 (6.6)	559 (30.4)	78 (6.6)	530 (13.0)	0 (0.0)	~ ~
United States	r	19 (3.0)	553 (10.2)	68 (3.4)	512 (6.5)	13 (2.5)	480 (11.8)
Fremont/Lincoln/WestSide PS, NE	s	18 (0.6)	526 (9.2)	69 (1.5)	499 (7.9)	13 (1.5)	577 (22.1)
Canada		18 (2.2)	536 (5.7)	73 (3.0)	533 (2.5)	9 (2.0)	535 (11.8)
Texas	s	15 (7.0)	538 (20.2)	81 (7.3)	510 (13.2)	4 (2.8)	430 (18.9)
Montgomery County, MD	s	15 (11.0)	558 (10.3)	85 (11.0)	523 (5.2)	0 (0.0)	~ ~
Massachusetts	s	14 (5.1)	559 (11.9)	74 (6.2)	536 (9.8)	11 (5.4)	536 (10.6)
Idaho	r	14 (6.7)	537 (10.9)	78 (7.6)	528 (7.4)	8 (3.6)	510 (25.8)
SW Math/Sci. Collaborative, PA		13 (3.6)	563 (8.7)	78 (6.2)	551 (8.0)	9 (4.6)	463 (19.3)
Guilford County, NC	r	13 (0.6)	580 (14.0)	79 (1.0)	538 (9.8)	8 (0.9)	459 (39.4)
South Carolina	r	11 (4.0)	490 (20.0)	75 (5.4)	516 (6.6)	13 (4.0)	489 (29.4)
Maryland	r	11 (4.5)	534 (10.4)	80 (6.1)	504 (9.2)	10 (5.1)	481 (24.6)
Russian Federation		10 (1.7)	538 (16.1)	70 (3.8)	535 (7.4)	20 (3.4)	505 (8.5)
Missouri		10 (5.0)	553 (8.2)	80 (7.0)	527 (8.0)	10 (5.1)	451 (31.4)
North Carolina	r	10 (4.2)	513 (14.6)	84 (5.7)	513 (5.6)	6 (4.0)	454 (9.5)
Pennsylvania		9 (5.1)	538 (11.5)	83 (6.6)	540 (6.1)	8 (4.1)	474 (11.2)
Japan		7 (2.4)	560 (5.0)	47 (4.1)	551 (4.1)	46 (3.9)	546 (2.7)
Jersey City Public Schools, NJ	r	7 (0.3)	463 (15.6)	90 (0.4)	437 (11.9)	3 (0.1)	409 (13.2)
Oregon		4 (3.0)	500 (9.9)	84 (5.9)	537 (7.0)	12 (4.8)	521 (15.4)
Delaware Science Coalition, DE	r	0 (0.0)	~ ~	88 (2.0)	488 (10.0)	12 (2.0)	519 (35.7)
Rochester City Sch. Dist., NY	s	0 (0.0)	~ ~	50 (1.5)	463 (13.4)	50 (1.5)	431 (13.0)
Miami-Dade County PS, FL		x x	x x	x x	x x	x x	x x
England		– –	– –	– –	– –	– –	– –
International Avg. (All Countries)		20 (0.6)	498 (2.5)	60 (0.7)	487 (1.0)	19 (0.5)	474 (2.0)

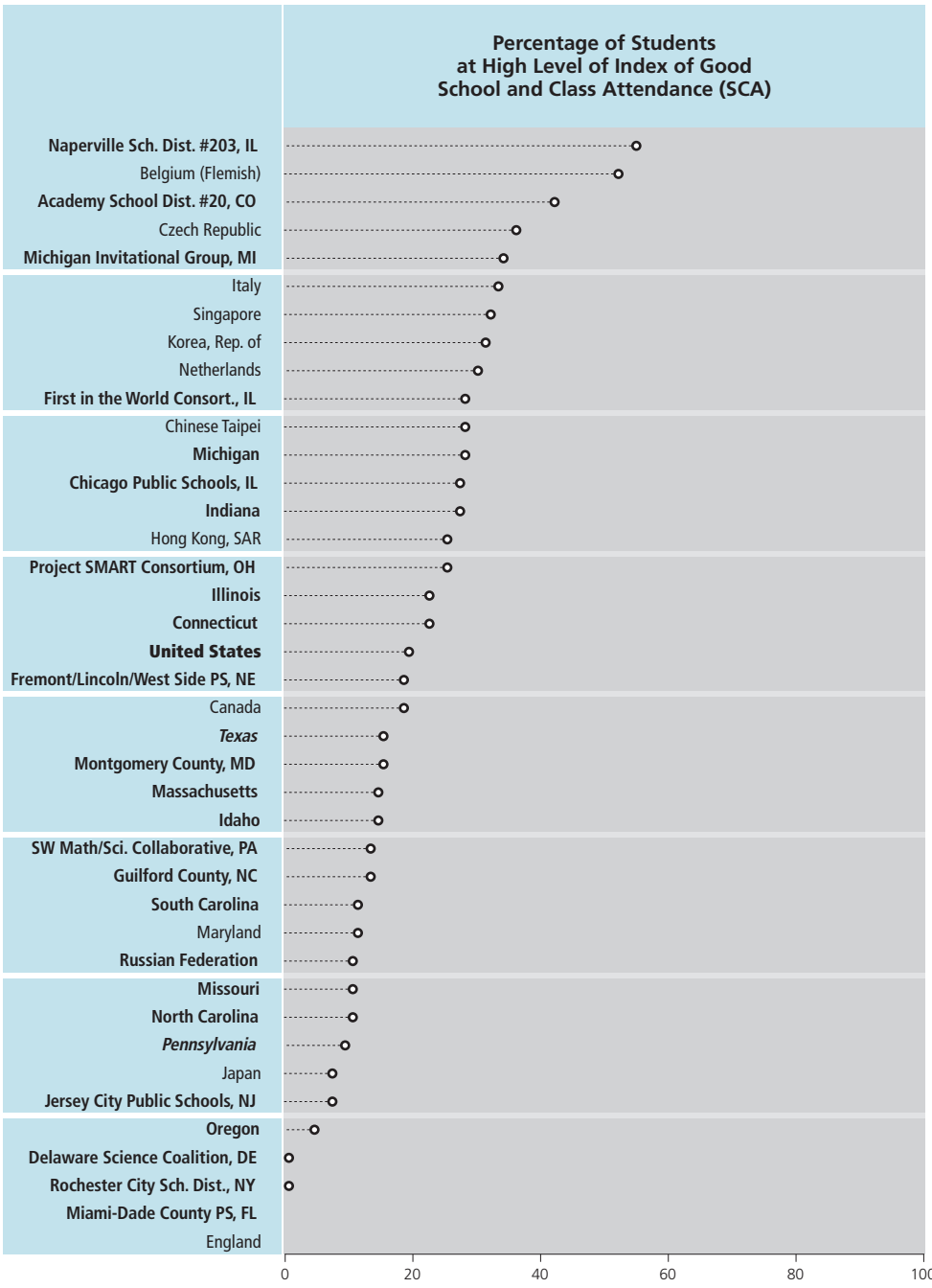
SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

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

A dash (–) indicates data are not available. A tilde (~) indicates insufficient data to report achievement

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



SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

	Percentage of Students Whose Schools Reported the Behavior					
	Arriving Late		Absenteeism		Skipping Class	
	Occurs at Least Weekly	Is a Serious Problem	Occurs at Least Weekly	Is a Serious Problem	Occurs at Least Weekly	Is a Serious Problem
Countries						
United States	r 71 (3.7)	r 12 (2.3)	r 60 (4.2)	r 12 (2.7)	r 29 (3.6)	r 4 (1.8)
Belgium (Flemish)	44 (4.7)	3 (1.4)	11 (2.4)	4 (1.8)	4 (1.3)	2 (1.0)
Canada	58 (2.7)	7 (1.7)	45 (3.1)	7 (1.6)	22 (2.3)	3 (1.0)
Chinese Taipei	43 (4.1)	2 (1.1)	32 (4.0)	10 (2.7)	30 (3.8)	11 (2.8)
Czech Republic	21 (3.8)	0 (0.3)	9 (2.8)	8 (2.5)	5 (2.2)	8 (2.4)
England	– –	– –	– –	– –	– –	– –
Hong Kong, SAR	r 61 (4.8)	9 (2.8)	r 34 (4.5)	3 (1.6)	r 10 (2.8)	r 1 (0.9)
Italy	32 (3.6)	4 (1.6)	11 (2.2)	9 (2.3)	8 (2.2)	7 (2.0)
Japan	55 (4.1)	20 (3.4)	63 (4.1)	76 (3.9)	14 (3.2)	27 (3.8)
Korea, Rep. of	32 (4.0)	1 (1.0)	31 (4.1)	12 (2.9)	21 (3.6)	5 (1.8)
Netherlands	r 76 (4.9)	r 18 (6.8)	r 35 (5.9)	r 12 (6.4)	r 44 (6.5)	r 15 (7.1)
Russian Federation	41 (3.8)	14 (3.5)	22 (2.9)	12 (2.2)	32 (4.2)	10 (2.2)
Singapore	51 (4.8)	3 (1.6)	40 (4.4)	3 (1.5)	23 (4.0)	0 (0.0)
States						
Connecticut	s 67 (9.4)	s 0 (0.0)	s 48 (9.5)	s 4 (0.5)	s 20 (6.7)	s 0 (0.0)
Idaho	r 72 (8.9)	r 5 (2.7)	r 67 (8.5)	r 8 (3.6)	r 31 (7.3)	r 1 (0.1)
Illinois	57 (8.4)	5 (3.0)	42 (7.4)	7 (1.2)	r 9 (4.0)	0 (0.0)
Indiana	64 (7.9)	7 (3.5)	55 (7.9)	9 (4.2)	20 (4.5)	0 (0.0)
Maryland	r 63 (7.1)	r 10 (5.1)	r 51 (6.9)	r 10 (5.1)	r 21 (6.0)	r 0 (0.0)
Massachusetts	s 59 (8.9)	s 16 (7.5)	s 62 (7.6)	s 14 (6.1)	s 17 (6.6)	s 0 (0.0)
Michigan	48 (7.1)	r 1 (1.0)	37 (7.3)	r 5 (3.4)	11 (4.5)	r 0 (0.0)
Missouri	76 (6.0)	2 (1.7)	69 (6.7)	13 (5.6)	33 (6.5)	r 9 (5.0)
North Carolina	r 54 (8.3)	r 3 (0.2)	r 52 (9.0)	r 11 (5.0)	r 16 (6.2)	r 0 (0.0)
Oregon	81 (6.5)	r 8 (3.0)	75 (7.6)	19 (5.3)	43 (8.1)	5 (1.8)
Pennsylvania	73 (7.2)	8 (4.1)	50 (6.7)	8 (4.1)	17 (5.0)	1 (0.0)
South Carolina	r 73 (6.5)	r 10 (4.9)	r 67 (7.8)	r 20 (5.1)	16 (4.4)	r 0 (0.0)
Texas	r 81 (7.3)	s 4 (2.8)	r 68 (7.6)	s 1 (1.4)	r 39 (6.1)	s 0 (0.0)
Districts and Consortia						
Academy School Dist. #20, CO	54 (0.4)	0 (0.0)	29 (0.4)	0 (0.0)	46 (0.4)	0 (0.0)
Chicago Public Schools, IL	s 66 (8.3)	s 8 (1.2)	s 49 (11.4)	s 10 (7.8)	s 14 (6.1)	r 0 (0.0)
Delaware Science Coalition, DE	r 84 (2.0)	r 0 (0.0)	r 90 (0.6)	r 12 (2.0)	s 54 (1.7)	r 0 (0.0)
First in the World Consort., IL	r 62 (1.4)	r 0 (0.0)	r 15 (0.4)	r 0 (0.0)	r 0 (0.0)	r 0 (0.0)
Fremont/Lincoln/WestSide PS, NE	r 68 (1.1)	s 0 (0.0)	r 58 (1.4)	s 13 (1.5)	r 48 (1.7)	s 0 (0.0)
Guilford County, NC	r 77 (0.9)	r 0 (0.0)	r 88 (0.6)	r 8 (0.9)	r 36 (1.1)	r 0 (0.0)
Jersey City Public Schools, NJ	66 (1.0)	r 12 (0.8)	50 (1.4)	r 0 (0.0)	0 (0.0)	r 0 (0.0)
Miami-Dade County PS, FL	x x	x x	x x	x x	x x	x x
Michigan Invitational Group, MI	48 (1.5)	9 (0.8)	40 (1.6)	0 (0.0)	31 (1.5)	0 (0.0)
Montgomery County, MD	s 83 (9.6)	s 0 (0.0)	s 61 (12.2)	s 0 (0.0)	s 12 (7.2)	s 0 (0.0)
Naperville Sch. Dist. #203, IL	39 (1.9)	0 (0.0)	15 (2.1)	0 (0.0)	0 (0.0)	0 (0.0)
Project SMART Consortium, OH	r 73 (1.1)	s 4 (0.2)	r 47 (1.6)	s 4 (0.2)	r 33 (1.6)	s 0 (0.0)
Rochester City Sch. Dist., NY	r 100 (0.0)	s 19 (0.6)	r 100 (0.0)	s 19 (0.6)	r 84 (0.5)	s 30 (1.5)
SW Math/Sci. Collaborative, PA	68 (7.7)	9 (4.6)	62 (6.2)	7 (4.3)	26 (8.7)	3 (2.9)
International Avg. (All Countries)	49 (0.6)	11 (0.4)	38 (0.6)	17 (0.5)	27 (0.6)	13 (0.5)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by schools.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

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

A dash (–) indicates data are not available.

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

generally low in most countries. The exception was intimidation or verbal abuse of other students. Some countries had relatively high percentages of students in schools where this occurs at least weekly; in Canada, the Netherlands, and the United States, more than 40 percent of the students were in such schools. Among Benchmarking participants, intimidation or verbal abuse of other students was a frequent and serious problem in Idaho, Maryland, Oregon, Pennsylvania, the Delaware Science Coalition, the Fremont/Lincoln/Westside Public Schools, the Project SMART

	Percentage of Students Whose Schools Reported the Behavior					
	Violating Dress Code		Classroom Disturbance		Cheating	
	Occurs at Least Weekly	Is a Serious Problem	Occurs at Least Weekly	Is a Serious Problem	Occurs at Least Weekly	Is a Serious Problem
Countries						
United States	r 42 (4.0)	r 3 (1.2)	r 69 (4.3)	r 11 (2.6)	r 12 (2.8)	r 1 (0.0)
Belgium (Flemish)	6 (2.1)	0 (0.0)	40 (5.4)	7 (2.5)	14 (2.7)	1 (0.0)
Canada	22 (1.8)	2 (0.8)	60 (2.6)	21 (2.3)	4 (1.4)	2 (0.9)
Chinese Taipei	41 (4.1)	3 (1.5)	30 (3.8)	4 (1.6)	9 (2.1)	8 (2.3)
Czech Republic	3 (1.7)	0 (0.0)	63 (4.7)	21 (4.4)	9 (4.3)	11 (3.5)
England	– –	– –	– –	– –	– –	– –
Hong Kong, SAR	r 42 (4.6)	r 7 (2.5)	36 (4.7)	r 9 (2.9)	4 (1.7)	r 4 (1.9)
Italy	– –	– –	47 (4.0)	32 (3.6)	13 (2.7)	5 (1.4)
Japan	30 (4.0)	18 (3.5)	5 (1.5)	23 (3.7)	2 (1.1)	13 (2.8)
Korea, Rep. of	37 (4.3)	3 (1.4)	43 (4.2)	7 (1.8)	3 (1.3)	8 (2.5)
Netherlands	r 10 (4.2)	r 0 (0.0)	r 76 (5.5)	r 14 (5.4)	r 60 (6.5)	r 1 (0.8)
Russian Federation	7 (2.2)	0 (0.0)	13 (2.8)	4 (1.6)	1 (0.5)	2 (1.2)
Singapore	36 (4.8)	2 (1.3)	32 (3.9)	3 (1.7)	3 (1.4)	0 (0.0)
States						
Connecticut	s 22 (7.5)	s 0 (0.0)	s 71 (10.3)	s 11 (5.8)	s 8 (4.9)	s 7 (4.6)
Idaho	r 21 (8.2)	r 0 (0.0)	r 76 (6.8)	r 8 (3.9)	r 15 (5.4)	r 0 (0.0)
Illinois	16 (5.9)	2 (1.1)	65 (8.0)	6 (3.4)	10 (3.9)	0 (0.0)
Indiana	19 (6.2)	3 (0.2)	70 (5.5)	11 (4.8)	12 (5.0)	1 (1.2)
Maryland	r 36 (7.4)	r 4 (3.0)	r 84 (5.8)	r 26 (7.9)	r 9 (4.3)	r 0 (0.0)
Massachusetts	s 15 (5.5)	s 0 (0.0)	s 73 (8.4)	s 11 (4.4)	s 8 (4.8)	s 3 (2.6)
Michigan	16 (6.2)	r 2 (0.2)	68 (6.7)	r 7 (3.6)	5 (2.8)	r 0 (0.0)
Missouri	33 (7.6)	r 0 (0.0)	83 (5.1)	r 13 (4.7)	12 (4.1)	r 0 (0.0)
North Carolina	r 31 (8.6)	r 0 (0.0)	r 86 (5.7)	r 15 (6.3)	r 8 (4.4)	r 0 (0.0)
Oregon	21 (6.3)	0 (0.0)	77 (6.3)	6 (3.7)	4 (2.9)	0 (0.0)
Pennsylvania	34 (5.2)	6 (5.9)	82 (4.7)	15 (7.5)	5 (2.2)	1 (0.1)
South Carolina	r 47 (8.8)	r 5 (3.3)	86 (6.5)	r 10 (4.6)	13 (5.8)	r 1 (1.4)
Texas	r 79 (3.7)	s 11 (6.6)	r 79 (6.0)	s 8 (5.2)	r 12 (6.1)	s 0 (0.0)
Districts and Consortia						
Academy School Dist. #20, CO	0 (0.0)	0 (0.0)	100 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Chicago Public Schools, IL	r 40 (9.7)	r 10 (7.5)	s 62 (9.0)	s 0 (0.0)	s 19 (10.2)	s 0 (0.0)
Delaware Science Coalition, DE	r 39 (2.0)	r 6 (0.5)	r 96 (0.4)	r 23 (1.8)	r 18 (0.8)	r 0 (0.0)
First in the World Consort., IL	r 0 (0.0)	r 0 (0.0)	r 44 (1.1)	r 0 (0.1)	r 0 (0.1)	r 0 (0.0)
Fremont/Lincoln/WestSide PS, NE	r 43 (1.8)	s 0 (0.0)	r 65 (1.3)	s 9 (0.5)	r 13 (0.9)	s 0 (0.0)
Guilford County, NC	r 42 (1.2)	r 0 (0.0)	r 88 (1.0)	r 17 (0.9)	r 19 (1.2)	s 0 (0.0)
Jersey City Public Schools, NJ	r 19 (1.1)	r 6 (0.9)	44 (1.6)	r 9 (0.8)	11 (1.0)	r 0 (0.0)
Miami-Dade County PS, FL	x x	x x	x x	x x	x x	x x
Michigan Invitational Group, MI	31 (1.5)	0 (0.0)	84 (1.4)	15 (1.5)	25 (1.2)	2 (0.1)
Montgomery County, MD	s 38 (12.6)	s 0 (0.0)	s 86 (9.8)	s 13 (8.1)	s 7 (1.1)	s 0 (0.0)
Naperville Sch. Dist. #203, IL	0 (0.0)	0 (0.0)	15 (2.1)	0 (0.0)	21 (1.0)	0 (0.0)
Project SMART Consortium, OH	r 27 (1.3)	s 0 (0.0)	r 65 (1.4)	s 14 (0.8)	r 0 (0.0)	s 0 (0.0)
Rochester City Sch. Dist., NY	r 59 (1.5)	s 0 (0.0)	r 100 (0.0)	s 50 (1.7)	s 0 (0.0)	s 0 (0.0)
SW Math/Sci. Collaborative, PA	47 (9.1)	2 (2.1)	67 (7.2)	11 (5.4)	7 (2.9)	0 (0.0)
International Avg. (All Countries)	24 (0.6)	6 (0.3)	39 (0.6)	13 (0.5)	11 (0.4)	7 (0.3)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by schools.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

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

A dash (–) indicates data are not available.

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

	Percentage of Students Whose Schools Reported the Behavior											
	Vandalism				Theft				Physical Injury to Other Students			
	Occurs at Least Weekly		Is a Serious Problem		Occurs at Least Weekly		Is a Serious Problem		Occurs at Least Weekly		Is a Serious Problem	
Countries												
United States	r	11 (2.3)	r	1 (0.8)	r	10 (2.5)	r	2 (1.1)	r	10 (2.4)	r	3 (1.8)
Belgium (Flemish)		8 (2.4)		9 (2.6)		7 (2.2)		9 (2.5)		8 (1.9)		6 (2.1)
Canada		15 (1.5)		6 (2.0)		7 (1.4)		6 (1.9)		6 (1.8)		4 (1.5)
Chinese Taipei		14 (3.1)		11 (2.5)		7 (2.2)		16 (2.9)		8 (2.3)		21 (3.2)
Czech Republic		13 (2.7)		21 (3.6)		3 (1.9)		17 (3.8)		2 (1.7)		17 (3.7)
England		– –		– –		– –		– –		– –		– –
Hong Kong, SAR		18 (3.7)	r	6 (2.3)		8 (2.6)	r	5 (2.2)		5 (2.1)	r	3 (1.6)
Italy		7 (1.9)		18 (2.8)		4 (1.4)		16 (2.8)		9 (2.1)		19 (3.0)
Japan		3 (1.3)		23 (3.5)		1 (0.9)		25 (3.7)		1 (0.9)		22 (3.6)
Korea, Rep. of		12 (2.8)		10 (2.5)		9 (2.5)		13 (3.0)		10 (2.6)		9 (2.6)
Netherlands	r	45 (7.6)	r	28 (7.4)	r	22 (5.9)	r	19 (6.4)	r	2 (1.3)	r	4 (2.0)
Russian Federation		0 (0.4)		3 (1.5)		1 (0.5)		6 (2.0)		2 (1.1)		4 (1.3)
Singapore		5 (1.8)		2 (1.3)		5 (2.0)		2 (1.4)		1 (0.7)		0 (0.0)
States												
Connecticut	s	12 (6.0)	s	0 (0.0)	s	12 (6.0)	s	0 (0.0)	s	25 (8.2)	s	13 (6.1)
Idaho	r	15 (5.6)	r	0 (0.0)	r	17 (5.9)	r	4 (3.2)	r	25 (8.2)	r	0 (0.0)
Illinois		3 (0.9)		2 (0.1)		5 (2.4)		0 (0.0)		9 (3.8)		4 (3.0)
Indiana		2 (0.1)		0 (0.0)		6 (3.7)		2 (2.2)		8 (4.0)		2 (2.2)
Maryland	r	7 (3.7)	r	3 (0.2)	r	6 (3.4)	r	0 (0.0)	r	33 (8.3)	r	9 (5.1)
Massachusetts	s	6 (3.5)	s	0 (0.0)	s	6 (3.8)	s	3 (2.4)	s	9 (4.5)	s	0 (0.0)
Michigan		6 (3.2)	r	2 (0.2)		3 (2.1)	r	2 (0.1)		6 (2.7)	r	4 (2.7)
Missouri		9 (5.0)	r	2 (2.2)		7 (3.9)	r	7 (3.9)		8 (4.9)	r	5 (3.6)
North Carolina	r	20 (7.3)	r	0 (0.0)	r	20 (7.1)	r	3 (2.5)	r	8 (4.4)	r	0 (0.0)
Oregon		7 (3.9)		2 (1.7)		12 (4.9)		0 (0.0)		7 (4.4)		2 (2.3)
Pennsylvania		7 (2.9)	r	1 (0.9)		6 (2.9)	r	2 (1.8)		9 (3.6)		5 (3.1)
South Carolina		5 (3.6)	r	0 (0.0)		18 (5.9)	r	0 (0.0)		8 (4.6)	r	3 (2.5)
Texas	r	12 (6.2)	s	0 (0.0)	r	16 (7.3)	s	0 (0.0)	r	9 (5.1)	s	0 (0.0)
Districts and Consortia												
Academy School Dist. #20, CO		0 (0.0)		0 (0.0)		0 (0.0)		0 (0.0)		0 (0.0)	r	0 (0.0)
Chicago Public Schools, IL	s	6 (1.0)	s	0 (0.0)	s	6 (1.0)	s	0 (0.0)	s	6 (1.0)	s	0 (0.0)
Delaware Science Coalition, DE	r	6 (0.5)	r	6 (0.5)	r	5 (2.1)	r	0 (0.0)	s	28 (2.6)	r	6 (0.5)
First in the World Consort., IL	r	13 (0.4)	r	0 (0.0)	r	13 (0.4)	r	0 (0.0)	r	0 (0.0)	r	0 (0.0)
Fremont/Lincoln/WestSide PS, NE	r	0 (0.0)	s	0 (0.0)	r	25 (1.4)	s	0 (0.0)	r	25 (1.4)	s	13 (1.5)
Guilford County, NC	r	0 (0.0)	r	0 (0.0)	r	0 (0.0)	s	0 (0.0)	r	7 (0.4)	s	0 (0.0)
Jersey City Public Schools, NJ		11 (0.9)	r	0 (0.0)		0 (0.0)	r	6 (0.4)		10 (0.3)	r	9 (0.8)
Miami-Dade County PS, FL		x x		x x		x x		x x		x x		x x
Michigan Invitational Group, MI		19 (1.3)		0 (0.0)		0 (0.0)		0 (0.0)		11 (0.8)		0 (0.0)
Montgomery County, MD	s	12 (7.2)	s	0 (0.0)	s	7 (1.1)	s	0 (0.0)	s	0 (0.0)	s	0 (0.0)
Naperville Sch. Dist. #203, IL		0 (0.0)		0 (0.0)		0 (0.0)		0 (0.0)		0 (0.0)		0 (0.0)
Project SMART Consortium, OH	r	16 (1.2)	s	0 (0.0)	r	23 (1.5)	s	0 (0.0)	r	16 (0.8)	s	10 (0.8)
Rochester City Sch. Dist., NY	r	60 (1.6)	s	36 (1.7)	r	19 (1.8)	s	0 (0.0)	r	30 (1.3)	s	0 (0.0)
SW Math/Sci. Collaborative, PA		14 (5.8)		4 (0.4)		14 (4.7)		4 (0.4)		17 (6.7)		2 (2.1)
International Avg. (All Countries)		11 (0.4)		13 (0.5)		6 (0.3)		12 (0.5)		6 (0.3)		10 (0.4)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by schools.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

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

A dash (–) indicates data are not available.

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

	Percentage of Students Whose Schools Reported the Behavior			
	Intimidation or Verbal Abuse of Other Students		Intimidation or Verbal Abuse of Teachers or Staff	
	Occurs at Least Weekly	Is a Serious Problem	Occurs at Least Weekly	Is a Serious Problem
Countries				
United States	r 46 (4.3)	r 16 (3.6)	r 7 (2.0)	r 3 (1.5)
Belgium (Flemish)	23 (3.4)	15 (3.7)	5 (1.5)	3 (1.2)
Canada	42 (3.0)	22 (2.5)	4 (1.2)	3 (1.1)
Chinese Taipei	11 (2.7)	18 (3.1)	1 (1.0)	17 (3.0)
Czech Republic	5 (1.5)	17 (3.6)	0 (0.0)	9 (2.6)
England	– –	– –	– –	– –
Hong Kong, SAR	r 8 (2.7)	r 4 (1.8)	r 3 (1.5)	r 2 (1.3)
Italy	14 (2.3)	23 (3.0)	4 (1.7)	13 (2.7)
Japan	3 (1.5)	25 (3.8)	2 (1.2)	23 (3.7)
Korea, Rep. of	12 (2.9)	12 (2.8)	8 (2.3)	9 (2.5)
Netherlands	r 49 (7.3)	r 23 (6.9)	r 17 (6.6)	r 16 (6.4)
Russian Federation	3 (1.3)	7 (2.1)	1 (0.5)	1 (0.6)
Singapore	7 (2.3)	2 (1.2)	1 (0.7)	1 (0.9)
States				
Connecticut	s 53 (11.3)	s 14 (6.2)	s 5 (3.9)	s 6 (4.5)
Idaho	r 62 (9.7)	r 29 (7.3)	r 13 (3.5)	r 2 (0.1)
Illinois	42 (7.2)	11 (4.6)	6 (3.3)	3 (2.6)
Indiana	35 (7.1)	7 (2.0)	2 (0.1)	0 (0.0)
Maryland	r 66 (7.1)	r 25 (7.3)	r 36 (6.5)	r 16 (6.1)
Massachusetts	s 52 (9.2)	s 15 (7.2)	s 9 (4.4)	s 4 (2.7)
Michigan	46 (5.1)	r 16 (5.4)	0 (0.0)	r 2 (0.1)
Missouri	49 (7.7)	r 13 (3.9)	21 (5.9)	r 5 (3.4)
North Carolina	r 49 (6.8)	r 18 (5.8)	r 12 (5.1)	r 0 (0.1)
Oregon	67 (7.8)	23 (7.9)	4 (2.7)	2 (2.3)
Pennsylvania	53 (8.2)	21 (7.3)	13 (4.0)	9 (4.9)
South Carolina	47 (8.9)	r 9 (4.3)	8 (4.6)	r 3 (2.5)
Texas	r 43 (5.1)	s 12 (6.3)	r 2 (2.5)	s 0 (0.0)
Districts and Consortia				
Academy School Dist. #20, CO	25 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Chicago Public Schools, IL	s 30 (12.5)	s 0 (0.0)	s 0 (0.0)	s 0 (0.0)
Delaware Science Coalition, DE	r 83 (0.9)	r 13 (0.7)	r 16 (1.9)	r 10 (0.6)
First in the World Consort., IL	r 37 (1.0)	r 0 (0.1)	r 0 (0.1)	r 0 (0.1)
Fremont/Lincoln/WestSide PS, NE	r 51 (1.6)	s 24 (1.1)	r 43 (1.8)	s 0 (0.0)
Guilford County, NC	r 46 (1.2)	s 6 (0.5)	r 9 (0.4)	s 10 (0.5)
Jersey City Public Schools, NJ	36 (1.3)	r 19 (1.0)	35 (1.3)	r 9 (0.8)
Miami-Dade County PS, FL	x x	x x	x x	x x
Michigan Invitational Group, MI	50 (1.5)	14 (0.7)	12 (0.8)	0 (0.0)
Montgomery County, MD	s 48 (8.8)	s 23 (11.1)	s 28 (14.9)	x x
Naperville Sch. Dist. #203, IL	21 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)
Project SMART Consortium, OH	r 61 (1.6)	s 26 (1.0)	r 16 (0.8)	s 18 (0.9)
Rochester City Sch. Dist., NY	r 100 (0.0)	s 36 (1.7)	r 50 (1.7)	s 0 (0.0)
SW Math/Sci. Collaborative, PA	52 (9.4)	14 (6.3)	22 (7.7)	4 (3.3)
International Avg. (All Countries)	16 (0.5)	14 (0.5)	4 (0.3)	9 (0.4)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.