

Exhibit 9.10: Computer Activities During Science Lessons

Reported by Teachers

Country	Computers Available for Students to Use in Science Lessons			Percent of Students Whose Teachers Have Them Use Computers at Least Monthly				
	Percent of Students	Average Achievement		To Practice Skills and Procedures	To Look Up Ideas and Information	To Do Scientific Procedures or Experiments	To Study Natural Phenomena Through Simulations	To Process and Analyze Data
	Yes	Yes	No					
Sweden	80 (3.1)	520 (3.9)	533 (6.2)	42 (4.0)	74 (3.5)	30 (3.7)	28 (3.4)	52 (4.2)
Kazakhstan	74 (3.0)	534 (5.2)	531 (8.3)	73 (3.1)	74 (3.1)	70 (3.2)	70 (3.1)	72 (3.0)
Australia	r 66 (3.0)	519 (3.0)	509 (5.1)	r 53 (3.3)	r 65 (3.0)	r 47 (3.5)	r 49 (3.2)	r 55 (3.1)
Russian Federation	64 (2.2)	547 (4.6)	539 (6.3)	54 (2.3)	60 (2.5)	46 (2.2)	40 (2.4)	50 (2.5)
Egypt	61 (3.5)	377 (5.7)	362 (6.7)	54 (3.7)	58 (3.6)	50 (3.6)	50 (3.8)	42 (3.9)
New Zealand	60 (4.0)	517 (4.7)	514 (7.3)	38 (4.3)	56 (4.4)	26 (3.3)	40 (4.6)	35 (4.0)
Canada	r 58 (2.6)	531 (2.6)	521 (3.6)	r 41 (3.1)	r 55 (2.9)	r 37 (3.1)	r 38 (3.2)	r 40 (3.1)
Georgia	57 (2.5)	446 (3.2)	440 (4.5)	50 (2.6)	54 (2.5)	40 (2.7)	44 (2.4)	50 (2.6)
Chile	r 56 (4.2)	459 (5.3)	454 (5.4)	r 36 (3.8)	r 51 (4.3)	r 30 (3.5)	r 33 (3.8)	r 42 (4.1)
Japan	55 (4.2)	571 (3.0)	570 (3.2)	8 (2.1)	19 (3.2)	11 (2.4)	18 (3.1)	12 (2.7)
Norway (9)	53 (4.1)	511 (3.7)	508 (4.7)	39 (4.4)	46 (4.2)	36 (4.4)	31 (4.2)	34 (4.1)
Lithuania	53 (2.5)	519 (3.3)	519 (3.6)	42 (2.3)	48 (2.4)	36 (2.4)	29 (2.1)	36 (2.2)
Singapore	52 (2.3)	592 (4.9)	602 (4.4)	31 (2.2)	41 (2.2)	27 (1.8)	34 (2.2)	27 (1.9)
United States	r 51 (3.4)	541 (4.4)	527 (4.3)	r 40 (2.9)	r 49 (3.3)	r 41 (3.2)	r 40 (3.0)	r 41 (3.0)
Korea, Rep. of	50 (3.9)	554 (3.3)	557 (2.7)	25 (3.2)	30 (3.4)	28 (3.5)	28 (3.3)	26 (3.2)
United Arab Emirates	r 50 (2.7)	486 (4.4)	472 (5.5)	r 44 (2.7)	r 48 (2.7)	r 43 (2.7)	r 41 (2.6)	r 44 (2.8)
Thailand	49 (4.1)	468 (6.4)	445 (5.8)	40 (4.2)	47 (4.2)	42 (4.0)	45 (4.3)	40 (4.3)
Italy	48 (3.9)	499 (4.2)	498 (3.7)	30 (3.4)	44 (3.8)	28 (3.5)	26 (3.0)	32 (3.4)
England	r 48 (3.3)	543 (5.8)	534 (6.3)	r 23 (2.6)	r 44 (3.4)	r 18 (2.3)	r 24 (2.7)	r 28 (2.7)
Jordan	44 (4.0)	438 (4.9)	417 (5.0)	39 (3.8)	44 (4.1)	36 (3.7)	36 (3.9)	33 (3.4)
Chinese Taipei	44 (3.8)	574 (4.1)	566 (2.8)	17 (2.7)	23 (3.0)	26 (3.4)	19 (2.8)	19 (2.6)
Qatar	42 (2.7)	452 (5.5)	459 (5.1)	39 (2.6)	41 (2.7)	35 (2.4)	38 (2.5)	36 (2.9)
Hungary	42 (2.5)	522 (5.1)	529 (4.4)	34 (2.3)	38 (2.4)	29 (2.0)	32 (2.3)	30 (2.2)
Israel	41 (3.3)	522 (7.5)	499 (5.3)	36 (3.1)	38 (3.1)	33 (3.1)	33 (3.0)	32 (3.0)
Iran, Islamic Rep. of	39 (3.9)	477 (5.3)	443 (6.0)	31 (3.3)	36 (3.6)	33 (3.7)	28 (3.3)	24 (2.9)
Saudi Arabia	38 (4.1)	413 (7.7)	386 (5.6)	31 (4.1)	32 (4.2)	31 (4.1)	30 (4.0)	28 (4.1)
Kuwait	38 (4.3)	410 (10.9)	408 (6.3)	36 (4.1)	38 (4.3)	36 (4.2)	34 (4.1)	32 (4.1)
Bahrain	36 (2.1)	463 (4.9)	467 (3.3)	27 (2.5)	34 (2.2)	31 (2.5)	31 (2.4)	26 (2.7)
Slovenia	32 (2.6)	551 (3.4)	551 (2.6)	23 (2.4)	29 (2.5)	19 (2.3)	25 (2.5)	25 (2.5)
Turkey	30 (3.4)	528 (6.9)	480 (4.4)	27 (3.4)	28 (3.4)	27 (3.2)	25 (3.3)	25 (3.3)
Ireland	26 (3.1)	533 (4.3)	538 (3.3)	12 (2.5)	17 (2.8)	10 (2.2)	12 (2.1)	11 (2.4)
Morocco	23 (2.2)	401 (5.2)	391 (2.5)	13 (1.6)	19 (2.0)	13 (1.5)	18 (1.9)	16 (1.7)
Hong Kong SAR	21 (3.6)	555 (8.9)	542 (4.6)	12 (2.9)	17 (3.4)	12 (3.1)	15 (3.1)	14 (2.8)
Oman	15 (2.2)	458 (6.2)	455 (3.1)	13 (2.2)	14 (2.1)	13 (2.0)	13 (2.1)	12 (1.9)
Lebanon	12 (2.6)	427 (13.9)	393 (5.7)	8 (2.3)	10 (2.6)	10 (2.6)	9 (2.6)	10 (2.6)
Malaysia	10 (1.8)	493 (8.7)	467 (4.8)	5 (1.3)	9 (1.8)	3 (0.9)	7 (1.4)	4 (1.2)
South Africa (9)	9 (1.7)	419 (17.4)	352 (5.9)	5 (1.5)	6 (1.4)	5 (1.5)	5 (1.4)	5 (1.6)
Botswana (9)	7 (2.4)	368 (10.1)	396 (3.0)	2 (1.3)	5 (1.9)	2 (1.1)	4 (1.7)	2 (1.1)
Malta	7 (0.3)	477 (4.5)	481 (1.7)	5 (0.3)	5 (0.2)	5 (0.3)	5 (0.3)	5 (0.2)
International Avg.	42 (0.5)	493 (1.0)	483 (0.8)	30 (0.5)	37 (0.5)	28 (0.5)	29 (0.5)	29 (0.5)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

Benchmarking Participants

Ontario, Canada	r 75 (3.9)	529 (3.0)	519 (4.8)	r 51 (4.6)	r 72 (4.6)	r 52 (4.7)	r 51 (4.9)	r 52 (4.7)
Dubai, UAE	r 68 (2.5)	528 (3.7)	515 (4.7)	r 58 (2.6)	r 68 (2.5)	r 56 (2.5)	r 63 (2.6)	r 61 (3.8)
Norway (8)	52 (4.2)	490 (3.2)	490 (4.0)	43 (4.0)	47 (4.1)	29 (3.8)	36 (4.3)	38 (3.5)
Florida, US	s 47 (8.1)	509 (14.9)	527 (10.3)	s 43 (7.8)	s 46 (8.0)	s 43 (8.4)	s 45 (8.0)	s 42 (7.7)
Abu Dhabi, UAE	r 31 (5.0)	469 (13.2)	449 (9.5)	r 28 (5.0)	r 30 (5.0)	r 27 (4.9)	r 24 (4.4)	r 26 (4.9)
Quebec, Canada	26 (4.1)	541 (5.9)	522 (5.7)	21 (3.9)	23 (4.1)	13 (3.1)	16 (3.7)	16 (3.7)
Buenos Aires, Argentina	x x	x x	x x	x x	x x	x x	x x	x x

() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

An "r" indicates data are available for at least 70% but less than 85% of the students. An "s" indicates data are available for at least 50% but less than 70% of the students. An "x" indicates data are available for less than 50% of students.