

Appendix G.1: Percentages of Students with Mathematics Achievement Too Low for Estimation*

Country	eTIMSS		paperTIMSS		paperTIMSS Less Difficult Mathematics	
	Percentage of Students with Achievement Too Low for Estimation	Average Percent Correct	Percentage of Students with Achievement Too Low for Estimation	Average Percent Correct	Percentage of Students with Achievement Too Low for Estimation	Average Percent Correct
Albania	--	--	--	--	2 (0.3)	61 (0.8)
Armenia	--	--	4 (0.3)	42 (0.7)	--	--
Australia	--	--	4 (0.3)	48 (0.7)	--	--
Austria	1 (0.2)	50 (0.6)	--	--	--	--
Azerbaijan	--	--	4 (0.4)	48 (0.7)	--	--
Bahrain	--	--	9 (0.5)	39 (0.6)	--	--
Belgium (Flemish)	--	--	1 (0.2)	52 (0.5)	--	--
Bosnia and Herzegovina	--	--	--	--	2 (0.2)	49 (0.6)
Bulgaria	--	--	5 (0.8)	48 (1.0)	--	--
Canada	3 (0.2)	43 (0.5)	--	--	--	--
Chile	12 (0.7)	27 (0.5)	--	--	--	--
Chinese Taipei	0 (0.1)	67 (0.4)	--	--	--	--
Croatia	2 (0.3)	43 (0.5)	--	--	--	--
Cyprus	--	--	2 (0.3)	51 (0.7)	--	--
Czech Republic	2 (0.3)	49 (0.6)	--	--	--	--
Denmark	2 (0.3)	47 (0.5)	--	--	--	--
England	2 (0.3)	55 (0.8)	--	--	--	--
Finland	2 (0.2)	49 (0.5)	--	--	--	--
France	6 (0.6)	37 (0.7)	--	--	--	--
Georgia	7 (0.7)	36 (0.8)	--	--	--	--
Germany	2 (0.3)	46 (0.6)	--	--	--	--
Hong Kong SAR	0 (0.1)	67 (0.8)	--	--	--	--
Hungary	3 (0.4)	47 (0.7)	--	--	--	--
Iran, Islamic Rep. of	--	--	14 (0.9)	31 (0.7)	--	--
Ireland	--	--	2 (0.2)	56 (0.7)	--	--
Italy	2 (0.3)	44 (0.7)	--	--	--	--
Japan	--	--	0 (0.1)	68 (0.4)	--	--
Kazakhstan	--	--	2 (0.2)	45 (0.7)	--	--
Korea, Rep. of	0 (0.1)	67 (0.6)	--	--	--	--
Kosovo	--	--	--	--	2 (0.3)	49 (0.7)
Kuwait	--	--	--	--	8 (0.6)	39 (0.9)
Latvia	--	--	1 (0.3)	55 (0.7)	--	--
Lithuania	2 (0.2)	51 (0.7)	--	--	--	--
Malta	4 (0.3)	43 (0.3)	--	--	--	--
Montenegro	--	--	--	--	3 (0.3)	50 (0.4)
Morocco	--	--	--	--	6 (0.4)	38 (0.8)
Netherlands	1 (0.2)	50 (0.6)	--	--	--	--
New Zealand	--	--	6 (0.4)	40 (0.6)	--	--
North Macedonia	--	--	--	--	3 (0.5)	55 (1.1)
Northern Ireland	--	--	2 (0.3)	60 (0.7)	--	--
Norway (5)	2 (0.3)	52 (0.6)	--	--	--	--
Oman	--	--	14 (0.6)	30 (0.8)	--	--
ψ Pakistan	--	--	--	--	16 (2.1)	28 (1.9)
ψ Philippines	--	--	--	--	20 (1.2)	25 (0.8)
Poland	--	--	3 (0.3)	48 (0.7)	--	--
Portugal	2 (0.3)	47 (0.7)	--	--	--	--
Qatar	12 (0.8)	31 (0.7)	--	--	--	--
Russian Federation	1 (0.2)	58 (0.9)	--	--	--	--
Saudi Arabia	--	--	--	--	5 (0.6)	41 (0.7)
Serbia	--	--	5 (0.6)	45 (0.7)	--	--
Singapore	0 (0.1)	73 (0.9)	--	--	--	--
Slovak Republic	5 (0.7)	43 (0.8)	--	--	--	--
South Africa (5)	--	--	--	--	6 (0.4)	36 (0.6)
Spain	4 (0.4)	41 (0.4)	--	--	--	--
Sweden	3 (0.4)	46 (0.7)	--	--	--	--
Turkey (5)	5 (0.5)	48 (1.0)	--	--	--	--
United Arab Emirates	8 (0.3)	38 (0.3)	--	--	--	--
United States	3 (0.3)	50 (0.7)	--	--	--	--
Benchmarking Participants						
Ontario, Canada	3 (0.4)	44 (0.9)	--	--	--	--
Quebec, Canada	1 (0.2)	49 (0.6)	--	--	--	--
Moscow City, Russian Fed.	0 (0.1)	66 (0.6)	--	--	--	--
Madrid, Spain	2 (0.3)	45 (0.6)	--	--	--	--
Abu Dhabi, UAE	14 (0.5)	30 (0.4)	--	--	--	--
Dubai, UAE	2 (0.3)	52 (0.4)	--	--	--	--

* Students were considered to have achievement too low for estimation if their performance on the assessment was no better than could be achieved by simply guessing on the multiple-choice assessment items. However, such students were assigned scale scores (plausible values) by the achievement scaling procedure, despite concerns about their reliability.

ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

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

A dash (-) indicates comparable data not available.