

Exhibit E.2: Percentages of Students with Science Achievement Too Low for Estimation

Country	Percentage of Students with Achievement Too Low for Estimation*	Percentage of Students with Zero Score Points**	Average Percent Correct Across Items	Average Percent Missing Across Items
Albania	2 (0.4)	0 (0.1)	50 (0.9)	8 (0.8)
Armenia	4 (0.4)	0 (0.1)	49 (0.5)	24 (0.5)
Australia	1 (0.2)	0 (0.0)	60 (0.5)	2 (0.2)
Azerbaijan	6 (0.5)	1 (0.2)	39 (0.4)	13 (0.5)
Bahrain	5 (0.4)	0 (0.1)	48 (0.7)	6 (0.3)
Belgium (Flemish)	1 (0.2)	0 (0.1)	48 (0.5)	3 (0.2)
Belgium (French)	2 (0.3)	0 (0.1)	49 (0.4)	7 (0.3)
Bosnia & Herzegovina	4 (0.5)	0 (0.2)	43 (0.5)	12 (0.4)
Brazil	9 (0.4)	2 (0.1)	40 (0.6)	14 (0.4)
Bulgaria	2 (0.5)	0 (0.1)	60 (0.8)	7 (0.6)
Canada	1 (0.1)	0 (0.0)	55 (0.4)	4 (0.2)
Chile	3 (0.3)	0 (0.1)	48 (0.4)	7 (0.3)
Chinese Taipei	0 (0.1)	0 (0.0)	63 (0.4)	2 (0.1)
Cyprus	4 (0.4)	0 (0.1)	52 (0.5)	11 (0.5)
Czech Republic	1 (0.1)	0 (0.0)	57 (0.4)	4 (0.1)
Denmark	1 (0.2)	0 (0.1)	56 (0.5)	4 (0.3)
England	1 (0.1)	0 (0.0)	62 (0.5)	2 (0.2)
Finland	1 (0.2)	0 (0.1)	60 (0.5)	3 (0.2)
France	2 (0.3)	0 (0.0)	51 (0.5)	8 (0.3)
Georgia	3 (0.4)	0 (0.1)	47 (0.6)	11 (0.4)
Germany	2 (0.3)	0 (0.1)	55 (0.4)	6 (0.2)
Hong Kong SAR	1 (0.2)	0 (0.0)	60 (0.7)	3 (0.2)
Hungary	2 (0.4)	0 (0.1)	55 (0.6)	3 (0.2)
Iran, Islamic Rep. of	12 (0.8)	2 (0.2)	45 (0.6)	17 (0.7)
Ireland	1 (0.3)	0 (0.1)	57 (0.6)	2 (0.2)
Italy	1 (0.2)	0 (0.0)	55 (0.4)	7 (0.3)
Japan	0 (0.1)	0 (0.1)	60 (0.5)	4 (0.3)
Jordan	8 (0.6)	0 (0.1)	41 (0.9)	7 (0.3)
Kazakhstan	3 (0.3)	0 (0.1)	45 (0.6)	5 (0.2)
Korea, Rep. of	0 (0.2)	0 (0.0)	64 (0.5)	2 (0.2)
Kosovo	6 (0.6)	1 (0.1)	37 (0.5)	8 (0.4)
Ψ Kuwait	18 (1.0)	2 (0.3)	36 (0.7)	16 (0.7)
Latvia	1 (0.2)	0 (0.1)	56 (0.5)	3 (0.2)
Lithuania	0 (0.1)	0 (0.0)	58 (0.5)	2 (0.1)
Macao SAR	1 (0.1)	0 (0.0)	59 (0.3)	3 (0.1)
Montenegro	4 (0.3)	0 (0.1)	46 (0.3)	12 (0.3)
Morocco	14 (0.8)	1 (0.2)	37 (0.7)	13 (0.6)
Netherlands	1 (0.3)	0 (0.0)	54 (0.4)	3 (0.2)
New Zealand	2 (0.2)	0 (0.1)	54 (0.4)	3 (0.2)
North Macedonia	6 (0.5)	1 (0.2)	43 (0.6)	14 (0.4)
Norway (5)	1 (0.1)	0 (0.1)	57 (0.4)	3 (0.2)
Oman	7 (0.5)	1 (0.1)	43 (0.7)	7 (0.3)
Poland	0 (0.1)	0 (0.0)	61 (0.4)	3 (0.1)
Portugal	2 (0.2)	0 (0.1)	54 (0.5)	5 (0.2)
Qatar	5 (0.4)	1 (0.1)	47 (0.6)	5 (0.3)
Romania	2 (0.4)	0 (0.0)	57 (0.9)	4 (0.4)
Saudi Arabia	6 (0.4)	0 (0.1)	42 (0.7)	4 (0.2)
Serbia	1 (0.3)	0 (0.1)	54 (0.6)	5 (0.3)
Singapore	0 (0.1)	0 (0.0)	69 (0.5)	0 (0.0)
Slovak Republic	2 (0.3)	0 (0.1)	55 (0.6)	3 (0.2)
Slovenia	1 (0.1)	0 (0.0)	56 (0.4)	4 (0.2)
Ⓜ South Africa (5)	27 (0.9)	2 (0.2)	28 (0.6)	7 (0.4)
Spain	1 (0.1)	0 (0.0)	53 (0.4)	6 (0.2)
Sweden	1 (0.2)	0 (0.1)	58 (0.6)	4 (0.2)
Türkiye (5)	1 (0.1)	0 (0.0)	65 (0.7)	1 (0.1)
United Arab Emirates	5 (0.2)	0 (0.0)	52 (0.2)	4 (0.1)
United States	2 (0.2)	0 (0.1)	58 (0.5)	4 (0.2)
Uzbekistan	6 (0.5)	1 (0.2)	36 (0.5)	8 (0.4)
Benchmarking Participants				
Ontario, Canada	1 (0.2)	0 (0.1)	56 (0.6)	4 (0.3)
Quebec, Canada	1 (0.2)	0 (0.1)	52 (0.5)	4 (0.2)
Abu Dhabi, UAE	8 (0.4)	1 (0.1)	46 (0.3)	4 (0.2)
Dubai, UAE	1 (0.1)	0 (0.0)	63 (0.3)	2 (0.1)
Sharjah, UAE	3 (0.4)	0 (0.1)	53 (0.7)	5 (0.3)

* 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.

** Students who received zero score points did not answer any assessment items correctly and have achievement too low for estimation.

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

Ψ Average achievement not reliably measured because the percentage of students with achievement too low for estimation exceeds 25%.

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