

Exhibit E.4: 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
Australia	2 (0.3)	0 (0.1)	52 (0.6)	3 (0.2)
Austria	1 (0.2)	0 (0.0)	51 (0.4)	3 (0.1)
Azerbaijan	8 (0.7)	0 (0.1)	35 (0.5)	14 (0.6)
Bahrain	5 (0.4)	0 (0.0)	40 (0.4)	4 (0.1)
Brazil	6 (0.3)	0 (0.1)	35 (0.4)	8 (0.2)
Chile	3 (0.4)	0 (0.1)	41 (0.5)	8 (0.4)
Chinese Taipei	1 (0.1)	0 (0.0)	60 (0.5)	1 (0.1)
Ⓜ Cote d'Ivoire	60 (1.9)	13 (0.8)	17 (0.7)	41 (1.1)
Cyprus	3 (0.3)	0 (0.0)	42 (0.6)	6 (0.2)
Czech Republic	0 (0.1)	0 (0.0)	54 (0.4)	3 (0.1)
England	2 (0.3)	0 (0.1)	55 (0.8)	4 (0.3)
Finland	2 (0.3)	0 (0.1)	54 (0.5)	3 (0.2)
France	2 (0.3)	0 (0.1)	46 (0.6)	5 (0.2)
Georgia	3 (0.3)	0 (0.1)	40 (0.5)	9 (0.4)
Hong Kong SAR	2 (0.3)	0 (0.1)	54 (0.9)	4 (0.3)
Hungary	1 (0.2)	0 (0.0)	53 (0.6)	3 (0.2)
Iran, Islamic Rep. of	8 (0.7)	0 (0.1)	35 (0.5)	11 (0.4)
Ireland	1 (0.3)	0 (0.0)	53 (0.7)	2 (0.1)
Israel	3 (0.3)	0 (0.1)	45 (0.7)	5 (0.2)
Italy	1 (0.2)	0 (0.0)	49 (0.6)	5 (0.2)
Japan	1 (0.1)	0 (0.0)	57 (0.6)	3 (0.1)
Jordan	7 (0.5)	0 (0.1)	35 (0.5)	4 (0.2)
Kazakhstan	4 (0.3)	0 (0.0)	38 (0.5)	7 (0.2)
Korea, Rep. of	1 (0.2)	0 (0.0)	55 (0.4)	3 (0.1)
Kuwait	8 (0.8)	0 (0.1)	34 (0.9)	8 (0.4)
Lithuania	1 (0.2)	0 (0.0)	52 (0.5)	3 (0.1)
Malaysia	5 (0.4)	0 (0.1)	34 (0.6)	2 (0.1)
Malta	3 (0.3)	0 (0.1)	49 (0.3)	3 (0.1)
Ⓜ Morocco	17 (0.7)	1 (0.1)	24 (0.4)	10 (0.3)
New Zealand	2 (0.3)	0 (0.0)	49 (0.8)	3 (0.2)
Norway (9)	3 (0.3)	0 (0.1)	47 (0.5)	6 (0.2)
Oman	4 (0.3)	0 (0.0)	43 (0.4)	3 (0.1)
Palestinian Nat'l Auth.	9 (0.5)	0 (0.1)	32 (0.4)	4 (0.2)
Portugal	1 (0.1)	0 (0.0)	50 (0.4)	4 (0.2)
Qatar	3 (0.3)	0 (0.1)	45 (0.8)	3 (0.2)
Romania	4 (0.6)	0 (0.2)	43 (0.7)	6 (0.5)
Saudi Arabia	6 (0.5)	0 (0.1)	36 (0.5)	3 (0.1)
Singapore	1 (0.2)	0 (0.0)	65 (1.1)	1 (0.1)
Ⓜ South Africa (9)	18 (0.7)	0 (0.1)	25 (0.5)	6 (0.2)
Sweden	2 (0.2)	0 (0.1)	53 (0.6)	5 (0.2)
Türkiye	1 (0.3)	0 (0.0)	55 (0.7)	4 (0.2)
United Arab Emirates	4 (0.2)	0 (0.0)	48 (0.4)	4 (0.1)
United States	2 (0.2)	0 (0.0)	51 (0.7)	3 (0.3)
Uzbekistan	7 (0.5)	0 (0.1)	30 (0.5)	9 (0.3)
Benchmarking Participants				
Abu Dhabi, UAE	8 (0.4)	0 (0.1)	42 (0.6)	3 (0.1)
Dubai, UAE	1 (0.2)	0 (0.0)	58 (0.6)	3 (0.3)
Sharjah, UAE	2 (0.2)	0 (0.0)	49 (0.9)	4 (0.2)

* 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%.

Ⓜ 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.