

Exhibit 8.9: Principals' Formal Education*

Principal Education Level Reported by Principals and Current Requirements Reported by National Research Coordinators

Country	Percent of Students by Principal Educational Level			Current Requirements	
	Completed Postgraduate University Degree**	Completed Bachelor's Degree or Equivalent but Not a Postgraduate Degree	Did Not Complete Bachelor's Degree	Teaching Experience	Completion of Specialized School Leadership Training Program
Australia	38 (3.9)	59 (4.1)	3 (1.4)	●	○
Bahrain	36 (0.2)	61 (0.2)	3 (0.0)	●	●
Belgium (Flemish)	4 (1.7)	96 (1.8)	0 (0.4)	●	Varies by educational network
Bulgaria	98 (1.1)	2 (1.1)	0 (0.0)	●	○
Canada	62 (2.7)	38 (2.7)	0 (0.0)	●	●
Chile	62 (4.6)	38 (4.6)	0 (0.0)	●	●
Chinese Taipei	88 (2.7)	12 (2.7)	0 (0.0)	●	●
Croatia	6 (2.1)	88 (3.0)	6 (2.1)	●	○
Cyprus	74 (4.0)	22 (3.6)	4 (2.3)	●	○
Czech Republic	100 (0.0)	0 (0.0)	0 (0.0)	●	●
Denmark	19 (3.0)	75 (3.6)	7 (2.1)	○	○
England	57 (4.3)	42 (4.2)	1 (1.0)	○	○
Finland	94 (2.0)	6 (2.0)	0 (0.0)	●	○
France	23 (3.5)	48 (4.3)	29 (3.5)	●	○
Georgia	98 (1.4)	2 (1.4)	0 (0.0)	○	○
Germany	88 (1.4)	1 (0.6)	12 (1.5)	●	○
Hong Kong SAR	71 (4.0)	28 (3.8)	2 (1.2)	●	●
Hungary	41 (4.5)	59 (4.5)	1 (0.8)	○	●
Indonesia	15 (2.6)	67 (3.6)	18 (2.4)	●	●
Iran, Islamic Rep. of	13 (2.5)	73 (3.3)	14 (2.8)	○	○
Ireland	37 (4.1)	61 (4.3)	2 (1.3)	●	○
Italy	24 (3.7)	70 (4.0)	7 (2.0)	●	○
Japan	9 (2.6)	91 (2.6)	0 (0.0)	●	○
Jordan	49 (4.0)	49 (3.9)	2 (1.1)	○	○
Kazakhstan	9 (2.0)	90 (2.2)	1 (0.8)	●	●
Korea, Rep. of	83 (2.9)	16 (2.7)	1 (1.0)	●	●
Kuwait	18 (2.5)	54 (4.3)	28 (3.8)	●	●
Lithuania	48 (3.6)	52 (3.6)	0 (0.0)	●	○
Morocco	5 (1.3)	54 (3.9)	41 (3.7)	●	●
Netherlands	19 (4.5)	61 (5.0)	20 (3.9)	○	●
New Zealand	44 (3.7)	37 (3.6)	19 (3.0)	●	○
Northern Ireland	83 (3.8)	16 (3.6)	1 (1.2)	●	○
Norway (5)	35 (4.3)	61 (4.4)	4 (1.6)	○	○
Oman	21 (2.2)	61 (2.9)	18 (2.2)	●	○
Poland	100 (0.0)	0 (0.0)	0 (0.0)	●	●
Portugal	33 (4.2)	65 (4.2)	2 (1.1)	●	○
Qatar	44 (2.9)	53 (2.9)	2 (1.4)	●	●
Russian Federation	83 (2.9)	17 (2.9)	0 (0.2)	●	○
Saudi Arabia	4 (1.8)	81 (3.2)	15 (2.8)	●	○
Serbia	29 (3.6)	70 (3.9)	2 (1.3)	●	○
Singapore	59 (0.0)	39 (0.0)	3 (0.0)	●	●
Slovak Republic	100 (0.0)	0 (0.0)	0 (0.0)	●	●
Slovenia	99 (0.8)	1 (0.8)	0 (0.0)	●	●
South Africa (5)	12 (2.2)	66 (3.3)	22 (2.8)	●	○
Spain	9 (1.8)	82 (2.6)	9 (2.3)	●	○
Sweden	32 (3.9)	60 (4.2)	8 (2.4)	○	●
Turkey	23 (3.0)	68 (3.5)	9 (2.0)	●	○
United Arab Emirates	54 (2.2)	45 (2.2)	1 (0.5)	●	●
United States	97 (1.2)	3 (1.2)	0 (0.0)	●	●
International Avg.	48 (0.4)	46 (0.5)	6 (0.3)		

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

● Yes
○ No

* Based on countries' categorizations according to UNESCO's International Standard Classification of Education (Operational Manual for ISCED-2011).
 ** For example, doctorate, master's, or other postgraduate degree.
 () 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.

Exhibit 8.9: Principals' Formal Education* (Continued)

Country	Percent of Students by Principal Educational Level			Current Requirements	
	Completed Postgraduate University Degree**	Completed Bachelor's Degree or Equivalent but Not a Postgraduate Degree	Did Not Complete Bachelor's Degree	Teaching Experience	Completion of Specialized School Leadership Training Program
Benchmarking Participants					
Buenos Aires, Argentina	12 (3.8)	72 (5.6)	16 (4.4)	●	○
Ontario, Canada	50 (4.1)	50 (4.1)	0 (0.0)	●	●
Quebec, Canada	68 (5.1)	32 (5.1)	0 (0.1)	●	○
Norway (4)	36 (4.5)	61 (4.5)	3 (1.5)	○	○
Abu Dhabi, UAE	45 (5.1)	53 (5.1)	1 (0.9)	●	●
Dubai, UAE	64 (0.3)	35 (0.3)	0 (0.0)	●	○
Florida, US	100 (0.0)	0 (0.0)	0 (0.0)	●	●

● Yes
 ○ No

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