

Exhibit P8.3: Physics Teachers Majored in Physics and Education

Reported by Physics Teachers

Country	Major in Physics and Physics Education		Major in Physics but No Major in Physics Education		Major in Physics Education but No Major in Physics		All Other Majors	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
France	25 (2.8)	371 (7.2)	71 (2.8)	376 (4.6)	0 (0.0)	~ ~	4 (1.2)	385 (7.5)
Italy	38 (2.9)	369 (12.4)	37 (3.0)	393 (9.2)	1 (0.5)	~ ~	24 (3.3)	379 (14.6)
Lebanon	51 (4.8)	406 (7.2)	48 (4.8)	419 (8.0)	1 (0.4)	~ ~	0 (0.0)	~ ~
Norway	10 (2.9)	513 (11.6)	88 (3.3)	506 (5.1)	1 (0.6)	~ ~	2 (1.0)	~ ~
Portugal	42 (4.5)	470 (7.1)	55 (4.4)	466 (6.4)	0 (0.0)	~ ~	2 (1.2)	~ ~
Russian Federation	64 (3.7)	513 (9.3)	34 (3.9)	498 (9.1)	1 (0.7)	~ ~	1 (0.6)	~ ~
Slovenia	41 (3.1)	531 (4.2)	44 (3.3)	526 (4.8)	14 (3.9)	541 (9.0)	1 (0.0)	~ ~
Sweden	71 (4.3)	463 (7.9)	21 (3.8)	446 (12.9)	6 (1.8)	456 (20.5)	2 (1.0)	~ ~
United States	24 (4.1)	444 (14.7)	31 (4.7)	429 (22.4)	6 (2.1)	457 (18.8)	39 (5.1)	448 (16.3)
International Avg.	41 (1.2)	453 (3.2)	48 (1.3)	451 (3.5)	3 (0.5)	485 (9.7)	8 (0.7)	404 (7.7)

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

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

A tilde (~) indicates insufficient data to report achievement.

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