

Exhibit 12.4: Percentages of Students Taught the TIMSS Mathematics Topics

Students' Results based on Teachers' Reports

About the Scale

Exhibit 12.5 reports the percentage of students whose teachers responded “mostly taught before this year” or “mostly taught this year,” averaged across topics.

Choose the response that best describes when students in this class have been taught each topic.

	Mostly taught before this year	Mostly taught this year	Not yet taught or just introduced
A. Number			
1) Concepts of whole numbers, including place value and ordering -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) Adding, subtracting, multiplying, and dividing with whole numbers -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) Concepts of multiples and factors; odd and even numbers -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) Number sentences (finding the missing number, representing problem situations with number sentences) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) Number patterns (extending number patterns and finding missing terms) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) Concepts of fractions, including representing, comparing and ordering, adding and subtracting simple fractions -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) Concepts of decimals, including place value and ordering, adding and subtracting with decimals -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Measurement and Geometry			
1) Solving problems involving length, including measuring and estimating -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) Solving problems involving mass, volume, and time ----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) Finding and estimating perimeter, area, and volume ----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) Parallel and perpendicular lines -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) Comparing and drawing angles -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6) Elementary properties of common geometric shapes ---	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7) Three-dimensional shapes, including relationships with their two-dimensional representations -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. Data			
1) Reading and interpreting data from tables, pictographs, bar graphs, line graphs, and pie charts ----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) Organizing and representing data to help answer questions -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) Drawing conclusions from data displays -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SOURCE: IEA's Trends in International Mathematics and Science Study - TIMSS 2019
 Downloaded from <http://timss2019.org/download>



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Students' Results based on Teachers' Reports

The exhibit reports the percentage of students whose teachers responded “mostly taught before this year” or “mostly taught this year,” averaged across topics.

Country	All Mathematics (17 Topics)	Number (7 Topics)	Measurement and Geometry (7 Topics)	Data (3 Topics)
Albania	84 (1.0)	87 (0.6)	86 (1.4)	73 (2.9)
Armenia	81 (1.3)	83 (0.8)	78 (1.8)	82 (2.9)
Australia	89 (0.9)	93 (0.9)	84 (1.4)	92 (1.5)
Austria	78 (0.9)	79 (1.0)	75 (1.4)	84 (2.0)
Azerbaijan	97 (0.4)	97 (0.5)	96 (0.6)	98 (0.8)
Bahrain	89 (0.6)	90 (0.7)	87 (0.7)	90 (1.2)
Belgium (Flemish)	78 (1.0)	93 (0.9)	63 (1.3)	76 (2.4)
Bosnia and Herzegovina	65 (0.9)	70 (0.9)	66 (1.2)	51 (3.0)
Bulgaria	67 (0.8)	71 (0.4)	66 (1.1)	60 (3.2)
Canada	r 82 (0.8)	r 86 (0.9)	r 76 (1.0)	r 89 (1.3)
Chile	81 (1.1)	88 (1.0)	78 (1.8)	73 (3.4)
Chinese Taipei	84 (1.0)	83 (1.1)	84 (1.3)	88 (1.9)
Croatia	71 (1.1)	71 (0.8)	81 (1.4)	46 (3.5)
Cyprus	89 (1.1)	92 (0.8)	86 (1.8)	87 (1.9)
Czech Republic	71 (0.9)	79 (0.6)	67 (1.0)	60 (3.0)
Denmark	r 77 (1.1)	r 84 (1.3)	r 75 (1.5)	r 62 (2.8)
Finland	77 (1.0)	93 (0.8)	69 (1.5)	58 (2.5)
France	79 (1.0)	81 (0.9)	78 (1.2)	74 (2.7)
Georgia	74 (1.3)	75 (1.2)	65 (2.1)	92 (1.9)
Germany	77 (1.0)	75 (1.1)	75 (1.3)	86 (2.2)
Hong Kong SAR	89 (0.8)	95 (0.8)	84 (1.3)	89 (2.6)
Hungary	81 (1.0)	82 (0.6)	82 (1.4)	79 (2.7)
Iran, Islamic Rep. of	80 (1.1)	94 (0.8)	74 (1.5)	61 (3.1)
Ireland	88 (0.8)	94 (0.9)	81 (1.4)	92 (1.9)
Italy	79 (0.9)	89 (0.9)	63 (1.3)	90 (1.8)
Japan	80 (1.2)	82 (1.0)	81 (1.4)	71 (2.9)
Kazakhstan	86 (1.0)	85 (1.2)	92 (0.9)	71 (2.9)
Korea, Rep. of	77 (1.0)	84 (1.3)	70 (1.1)	77 (2.8)
Kosovo	80 (1.0)	75 (1.4)	94 (0.8)	58 (4.0)
Kuwait	90 (1.0)	95 (0.8)	84 (1.7)	92 (1.6)
Latvia	79 (0.9)	86 (0.8)	75 (1.3)	73 (2.5)
Lithuania	89 (0.8)	93 (0.8)	82 (1.3)	96 (1.3)
Malta	78 (0.1)	92 (0.1)	61 (0.2)	82 (0.3)
Montenegro	74 (0.7)	69 (0.5)	75 (0.8)	86 (1.6)
Morocco	62 (1.2)	66 (1.3)	67 (1.4)	39 (3.2)
Netherlands	r 63 (1.3)	r 79 (1.3)	r 40 (2.0)	r 79 (2.8)
New Zealand	83 (0.9)	89 (0.7)	74 (1.4)	89 (1.6)
North Macedonia	90 (0.9)	95 (0.8)	85 (1.4)	90 (2.1)
Northern Ireland	94 (0.8)	98 (0.5)	94 (1.1)	87 (2.4)
Norway (5)	r 70 (1.5)	r 77 (1.7)	r 60 (2.2)	r 78 (3.7)
Oman	92 (0.6)	94 (0.9)	90 (0.8)	92 (1.4)
Pakistan	83 (2.2)	94 (1.3)	78 (3.6)	66 (4.2)
Philippines	93 (0.9)	99 (0.7)	93 (1.0)	78 (3.0)
Poland	68 (1.5)	75 (1.6)	73 (1.7)	40 (3.7)
Portugal	97 (0.3)	98 (0.3)	95 (0.7)	99 (0.5)
Qatar	74 (1.5)	91 (0.9)	60 (2.5)	68 (3.2)
Russian Federation	77 (0.9)	75 (0.9)	76 (1.2)	85 (2.0)
Saudi Arabia	89 (1.0)	r 91 (1.0)	r 85 (1.3)	91 (1.6)
Serbia	83 (1.1)	81 (0.7)	88 (1.3)	75 (3.3)
Singapore	93 (0.3)	99 (0.2)	87 (0.7)	95 (0.7)
Slovak Republic	65 (0.8)	75 (0.6)	50 (1.2)	78 (2.0)
South Africa (5)	88 (1.1)	94 (1.0)	79 (1.6)	96 (1.2)
Spain	76 (1.4)	88 (1.1)	61 (2.3)	80 (2.6)
Sweden	65 (1.5)	72 (1.4)	57 (2.4)	68 (3.7)
Turkey (5)	70 (1.4)	80 (1.7)	61 (1.9)	68 (3.2)
United Arab Emirates	r 84 (0.7)	r 94 (0.8)	r 74 (1.0)	r 84 (1.2)
United States	85 (0.9)	95 (0.5)	76 (1.6)	82 (1.8)
England	x 88 (1.7)	x 94 (1.3)	x 83 (2.9)	x 84 (3.7)
International Average	80 (0.1)	86 (0.1)	76 (0.2)	78 (0.3)
Benchmarking Participants				
Ontario, Canada	r 86 (1.1)	r 84 (1.6)	r 81 (1.6)	r 98 (0.8)
Quebec, Canada	89 (1.1)	91 (1.0)	88 (1.2)	84 (3.3)
Moscow City, Russian Fed.	77 (1.0)	76 (1.1)	73 (1.3)	91 (1.9)
Madrid, Spain	76 (1.2)	93 (0.9)	60 (2.4)	72 (3.3)
Abu Dhabi, UAE	r 80 (1.0)	r 94 (0.6)	r 69 (1.7)	r 75 (2.1)
Dubai, UAE	r 89 (0.7)	r 93 (0.6)	r 84 (1.2)	r 93 (0.9)

() 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 “x” indicates data are available for at least 40% but less than 50% of the students—interpret with caution.